Biotecture

part of mitie

External

BioPanel® Living Walls

CONTENTS

Warner Stand, Lords Cricket Group

1.0

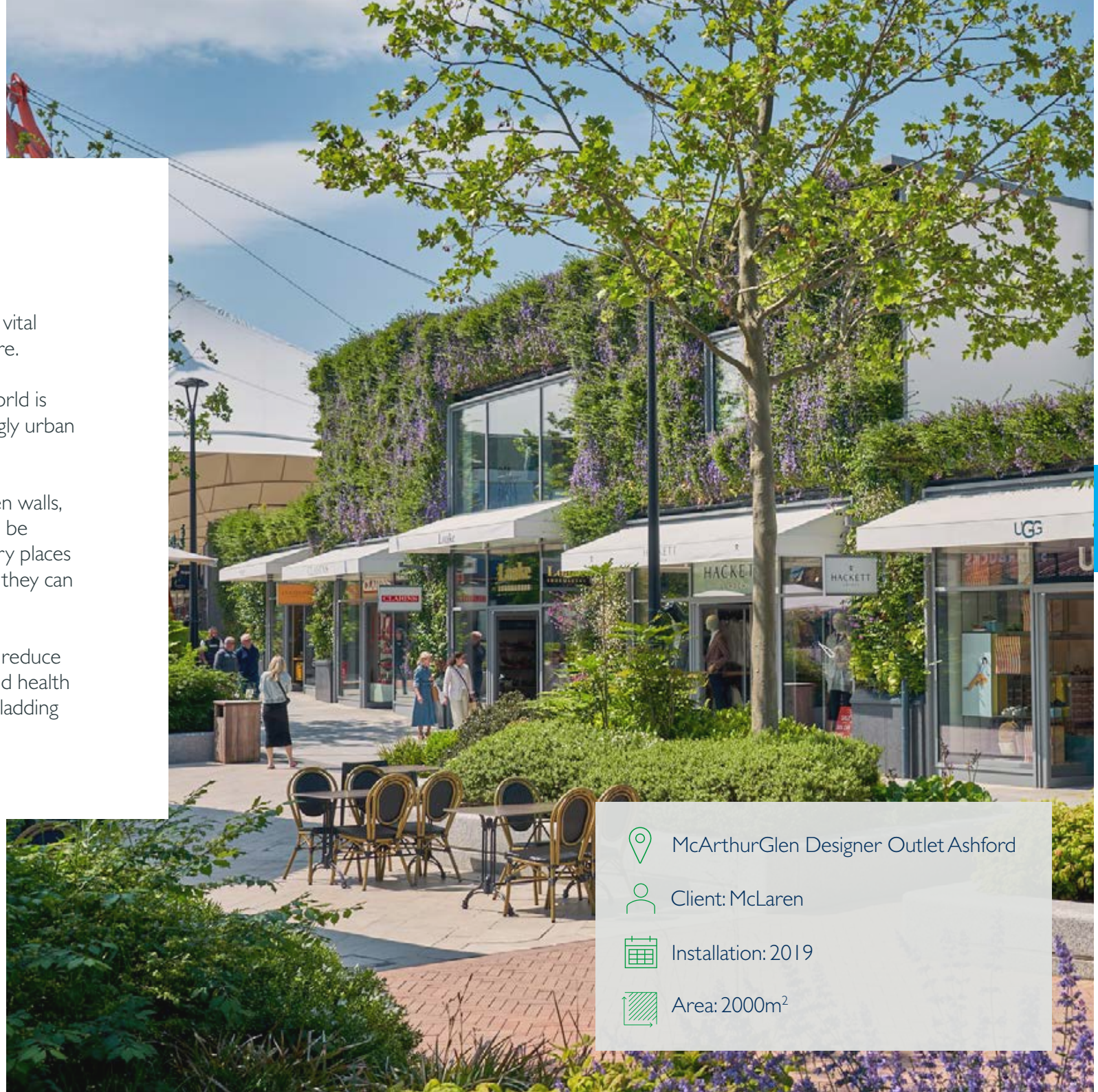
Why living walls?

Bringing nature into our cities is a vital component for a sustainable future.

Our connection to the natural world is often overlooked in this increasingly urban world.

Green infrastructure such as green walls, green roofs and pocket parks, can be targeted to bring plants to the very places where we need them and where they can add value.

Living walls are proven to help to reduce air pollution, boost biodiversity and health & improve well-being. No other cladding system can do all this.



McArthurGlen Designer Outlet Ashford

Client: McLaren

Installation: 2019

Area: 2000m^2

Space saving greenery

In cities and urban areas space is literally and financially at a premium.

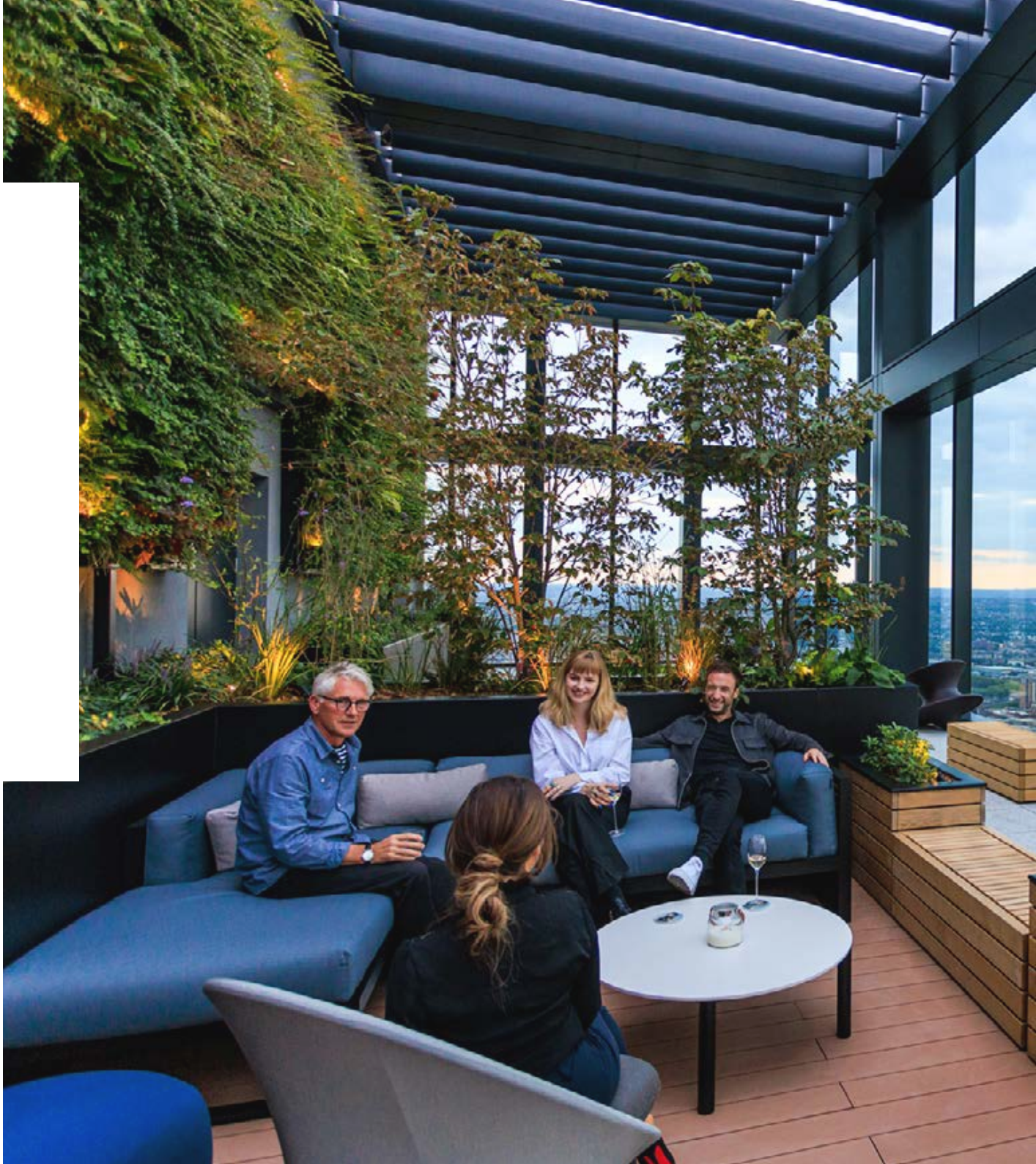
Installing a living wall is a space-saving way to get the benefits of greenery which sacrificing valuable floor space. They also create beautiful backdrops for internal or external spaces such as public realm, offices and retail areas.

Level 75, Landmark Pinnacle, Canary Wharf

Client: Chalegrove Properties Ltd

Installation: 2022

Area: 190m^2



Millbrook Roundabout, Southampton

Client: Balfour Beatty

Installation: 2019

Area: 260m^2

Better air quality

According to Defa, air quality is the largest environmental health risk in the UK. (Defra Clean Air Strategy, 2019). During photosynthesis, plants absorb CO_2 and other gases like oxides of sulphur & nitrogen (SO_2 & NOx), ozone (O) and airborne ammonia(NH3) through their stomata.

Plants also reduce air pollution by intercepting suspended particulate matters (SPM) and aerosols and retaining them on the leaf surface.

In densely populated areas of high-rise development pollutants can become trapped in urban street canyons. A study carried out in 2012 showed that 'planting of vegetation in Street Canyons can reduce street-level concentrations by as much as 40% for NOx and 60% for PM (Particulate Matter).' Pugh, MacKenzie, Whyatt and Hewit (2012).

Cooler streets

Anyone spending time in a large city during summer will know that urban areas are often hotter than rural ones. Buildings, roads, and pavements absorb heat during the day, which is released at night.

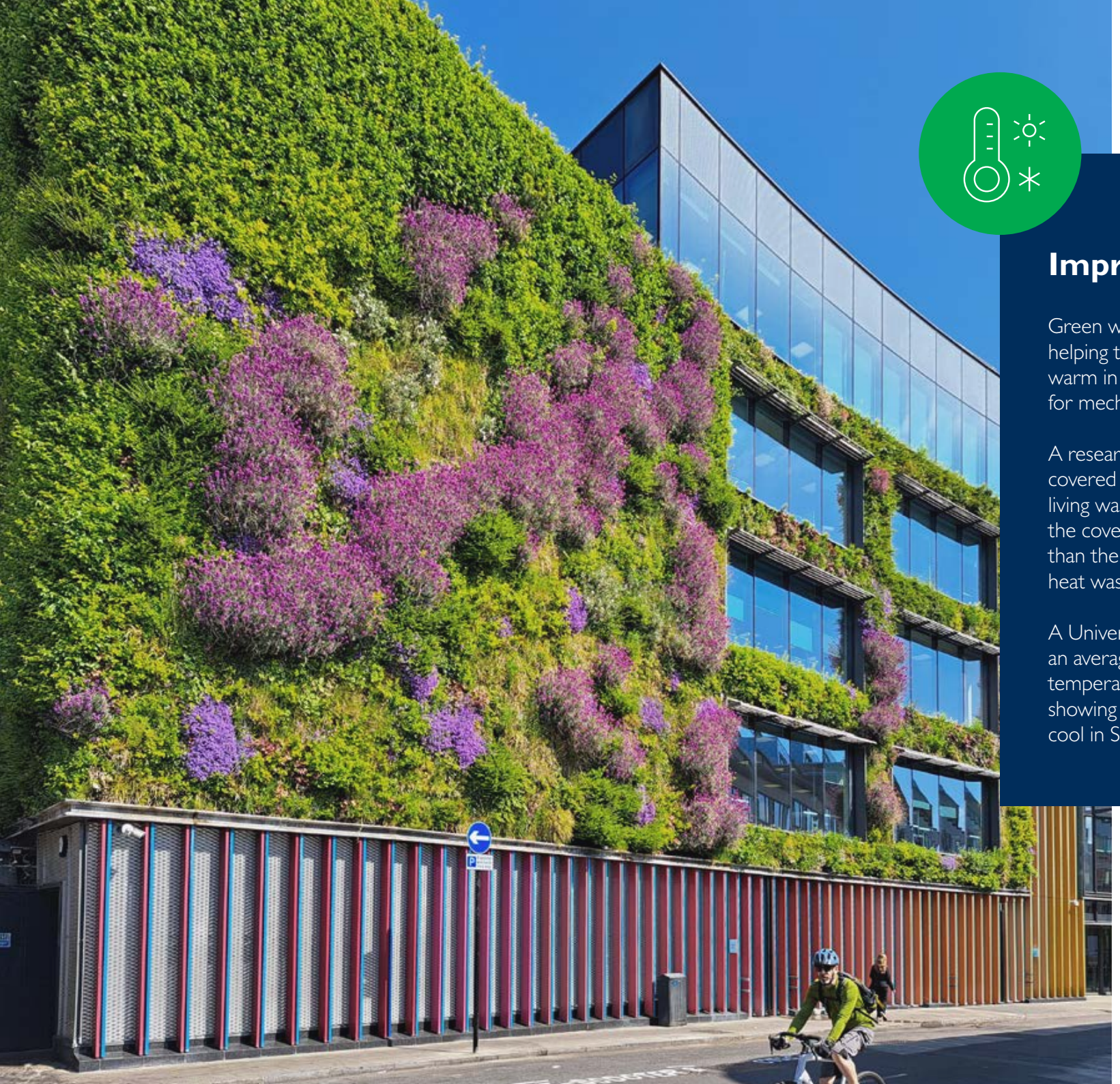
Cities also produce more air pollution, which can trap heat within the city, exacerbating the impact of heatwaves.

A living wall can cool the surrounding area by reducing the amount of heat buildings absorb and by releasing moisture into the air, helping to create a more comfortable microclimate.

Kings Cross, London

Installation: 2011, Photo 2025

Area: 240m^2



Improved insulation

Green walls provide additional insulation helping to keep buildings cool in summer and warm in winter. In turn this reduces the need for mechanical heating and cooling.

A research team at the University of Plymouth covered a section of their 1970s building in a living wall. They found that temperatures inside the covered section remained more stable than the exposed area and that 31.4% less heat was lost compared to the bare wall.

A University of Nottingham Study showed an average 2.5 degree reduction in internal temperature behind a section of living wall, showing that living walls can help keep spaces cool in Summer.

Paramount Studios, London

Client: Viacom

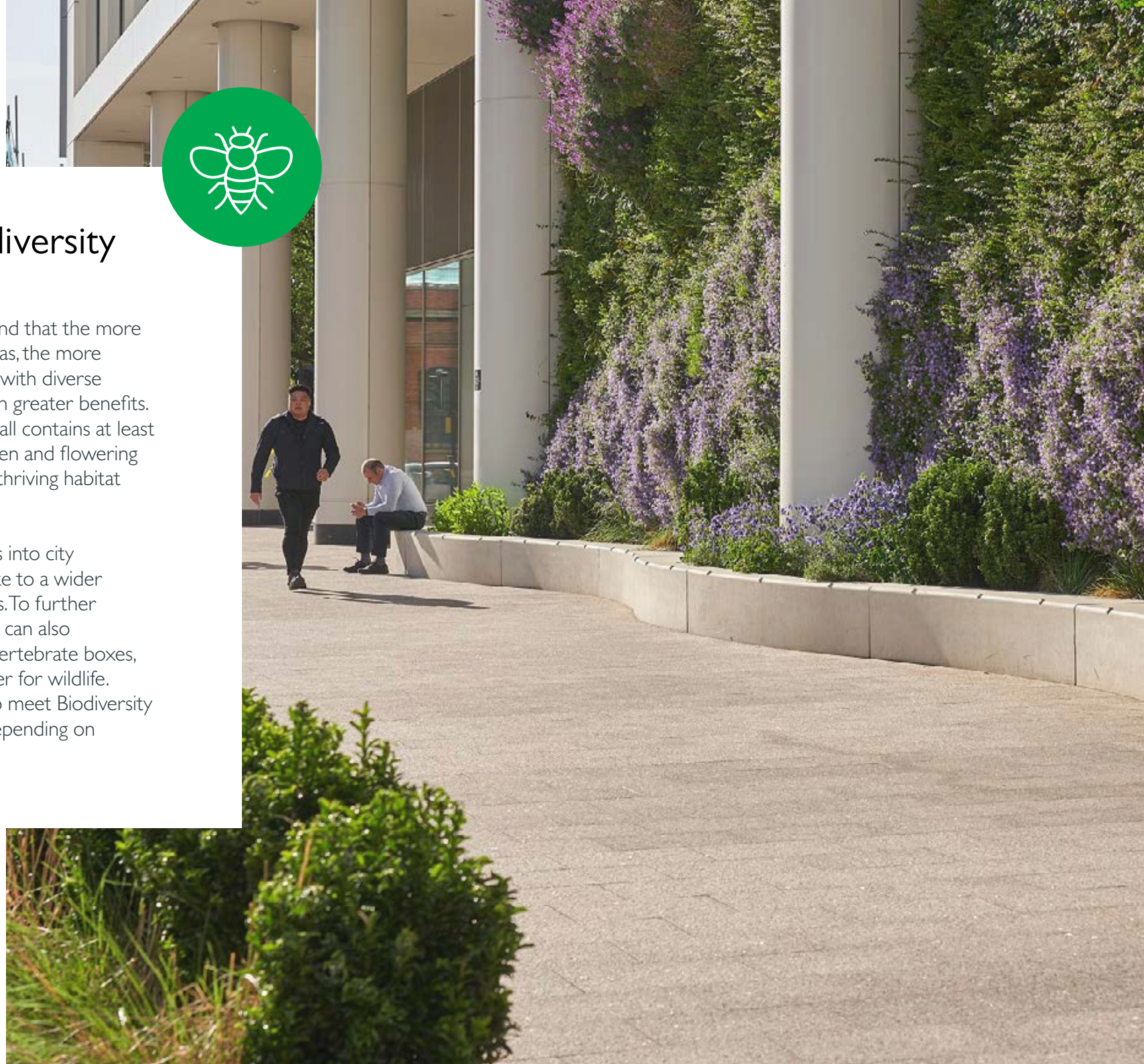
Installation: 2015, Photo 2025

Area: 300m^2

Greater biodiversity

A recent RHS study found that the more vegetation a living wall has, the more invertebrates it attracts, with diverse plant mixes offering even greater benefits. Typically, a single living wall contains at least 10–15 different evergreen and flowering plant species, creating a thriving habitat for pollinators.

By integrating living walls into city landscapes, we contribute to a wider network of green spaces. To further enhance biodiversity, we can also incorporate bee and invertebrate boxes, providing essential shelter for wildlife. Living walls can also help meet Biodiversity Net Gain calculations depending on the starting score.



One & Five Bank Street

Client: Canary Wharf Group

Installed 2019

Improved well-being

We have an innate connection to nature which is often overlooked in an increasingly urbanised world. Multiple studies show that exposure to greenery reduces stress, lowers blood pressure and improves mood and cognitive function.

Postal Museum, London

Installed: 2017, Photo 2025

Area: 63m^2

Recycling and energy recovery facility, Leeds

2.0 THE BIOPANEL® LIVING WALL SYSTEM

In 2007 Biotecture's founders saw a niche for a reliable living wall system suitable for the construction industry.

The development of BioPanel, along with the founder's expertise helped transition green walls from a novelty landscaping feature into a mainstream cladding system.

BioPanel (BioTile in international markets) has since been used to create hundreds of living walls across the UK and beyond.

3.0 Applications

BioPanel is suitable for external or internal use. It can be retrofitted to an existing structure or integrated into new-build façades.

BioPanel is the only evergreen green wall system to have undergone CWCT (Centre for Window and Cladding Technology) testing for water tightness, impact resistance and wind resistance, making it suitable for use as a rainscreen cladding system.

External

New-build

Internal

Retrofit

External new build: IMPACT building, Swansea

External retrofit: Regal House, Covent Garden

Internal new build: Legal & General, Cardiff

Internal retrofit: Centrica Offices, Windsor

4.0 System build-up

The BioPanel living wall system consists of patented modular panels which include a water retentive, non-combustible stone wool growing medium, held in place by a recycled polypropylene (or aluminium) shell.

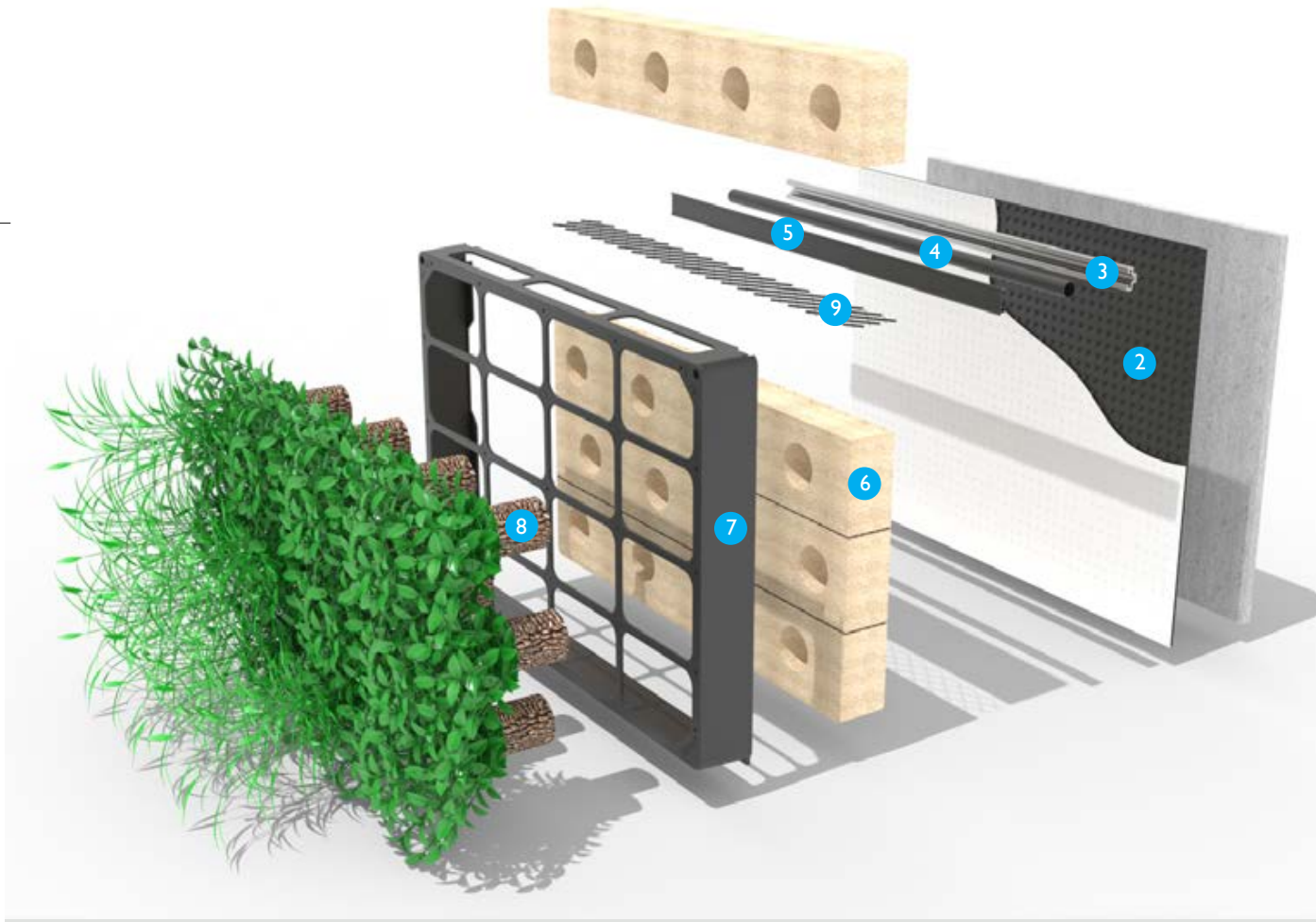
Standard panels are 600 x 450mm and can be cut down to suit. Biotecture will work with you on the panel layout.

Fully comprehensive rainscreen cladding system

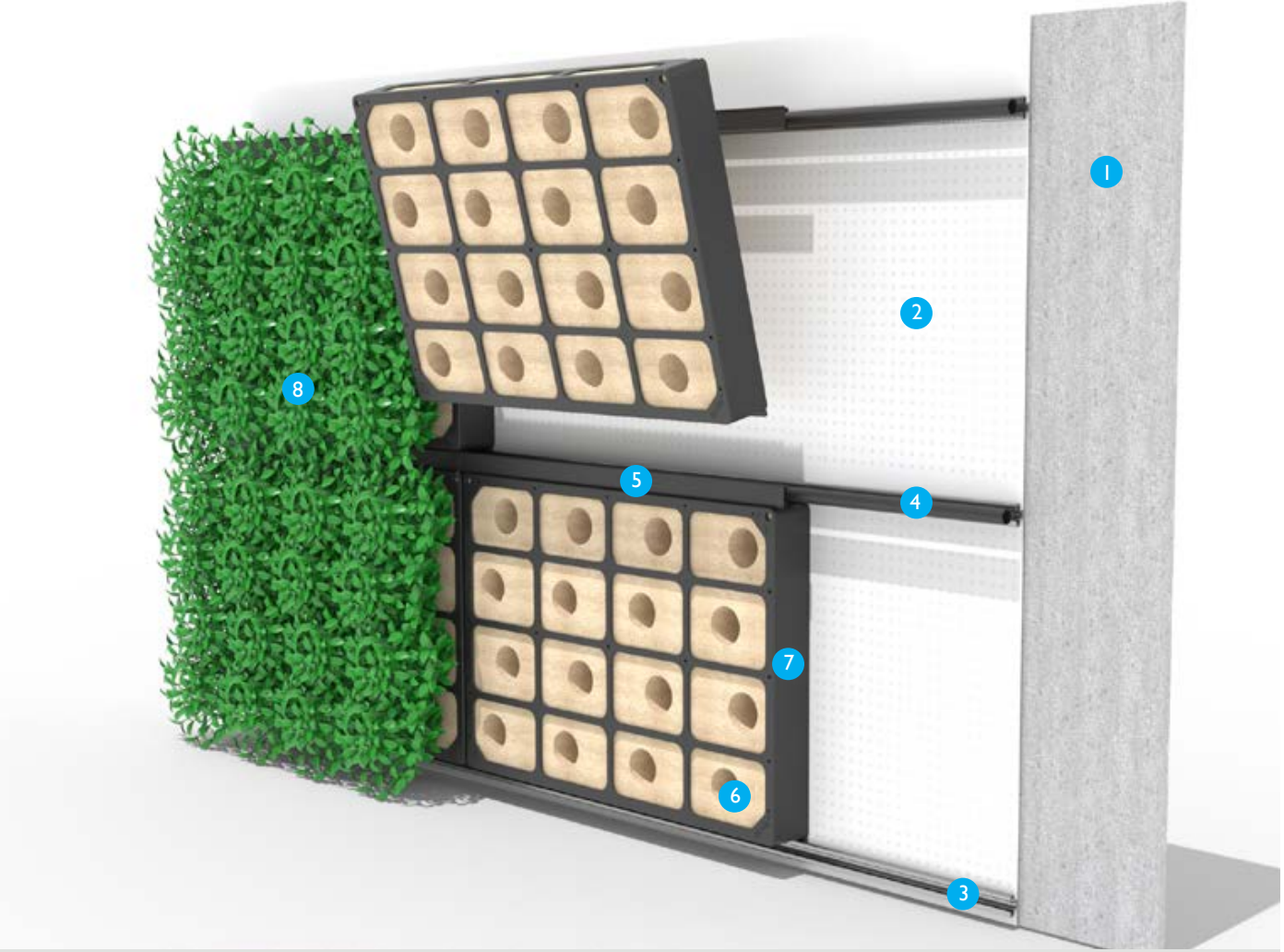
CWCT (Centre for Window and Cladding Technology) Tested for water tightness, impact resistance and wind resistance

Hydroponic

Water retentive growing medium combined with automatic irrigation system



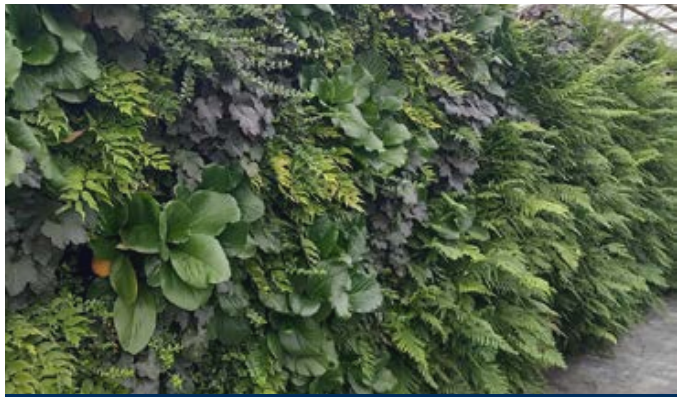
1. A1/A2/B rated 12mm water resistant cement particle backing board - provides barrier between the building cavity and the living wall
2. Geotextile drainage layer
3. Aluminium cladding rail
4. 16mm polypropylene pressure compensated irrigation pipeline
5. Recycled polypropylene cover
6. Growing medium - Grodan PP/100/100 - inorganic, chemically inert and dimensionally stable 'stonewool'
7. Recycled polypropylene shell
8. Robust evergreen planting - planted as plug plants and allowed to mature in our nursery
9. Capillary breaks - slows down the flow of water through the wall



1. A1/A2/B rated 12mm water resistant cement particle backing board
2. Geotextile drainage layer
3. Aluminium carrier rail
4. 16mm polypropylene pressure compensated irrigation pipeline
5. Recycled polypropylene cover
6. Growing medium - Grodan PP/100/100
7. Recycled polypropylene shell
8. Robust evergreen planting

Unplanted panels

9mm plug plants planted up in our nursery and allowed to mature



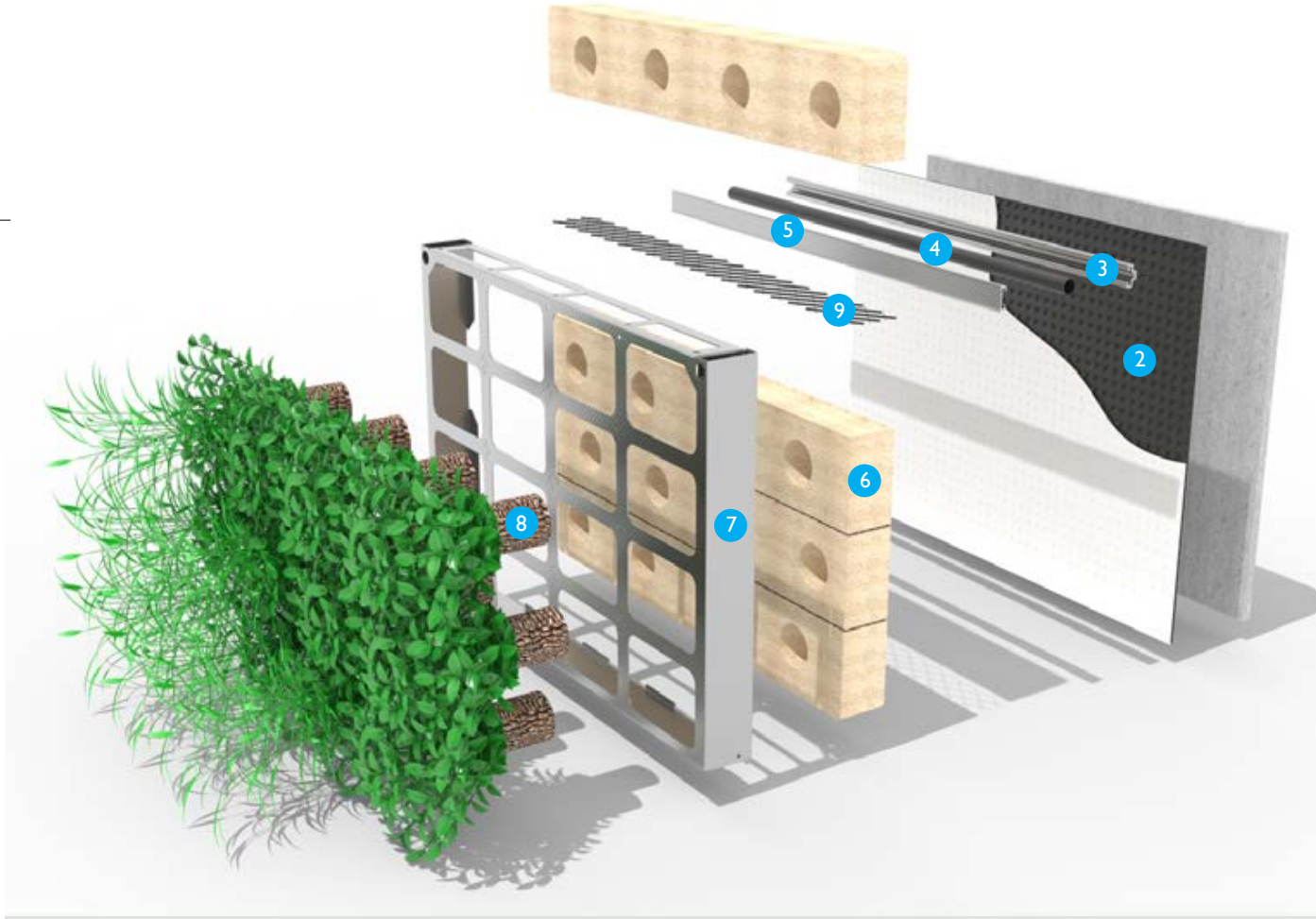
Fully mature living wall ready to be installed on site.

5.0 BioPanel Aluminium

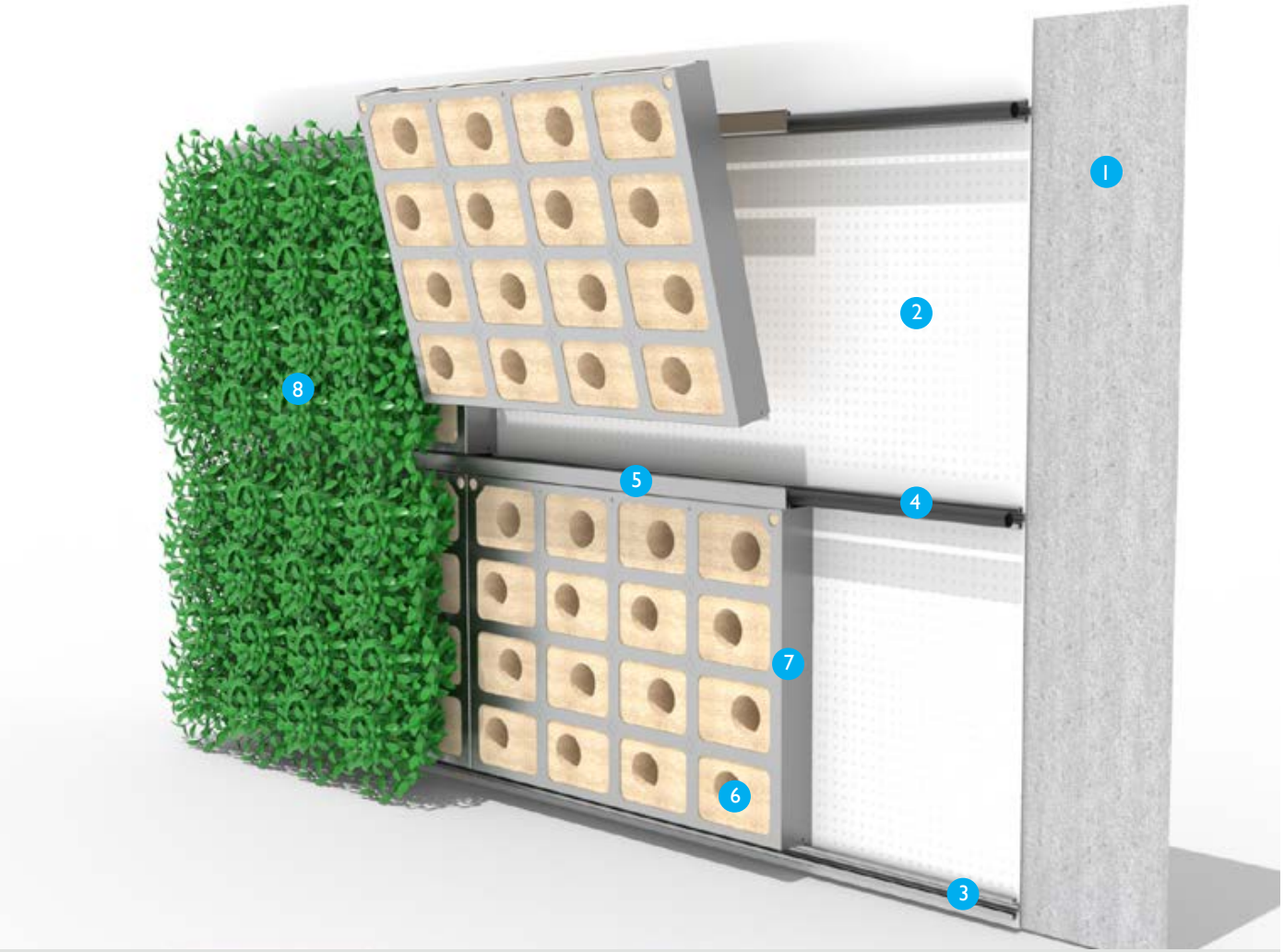
This BioPanel variant includes minimal combustible materials making it ideal for higher risk projects.

Minimal combustibles

Designed with fire safety in mind



1. A1/A2 rated 12mm water resistant cement particle backing board - provides a non combustible barrier between the building cavity and the living wall
2. Geotextile drainage layer
3. Aluminium cladding rail
4. 16mm polypropylene pressure compensated irrigation pipeline
5. Self-coloured aluminium cover
6. Growing medium - Grodan PP/100/100 - inorganic, chemically inert and dimensionally stable 'stonewool'
7. Self-coloured aluminium shell
8. Robust evergreen planting - planted as plug plants and allowed to mature in our nursery
9. Capillary breaks - slows down the flow of water through the wall



1. A1/A2 12mm water resistant cement particle backing board
2. Geotextile drainage layer
3. Aluminium carrier rail
4. 16mm polypropylene pressure compensated irrigation pipeline
5. Self-coloured aluminium cover
6. Growing medium - Grodan PP/100/100
7. Self-coloured aluminium shell
8. Robust evergreen planting

BioPanel Specification

General description: Fully comprehensive, irrigated living wall system made up of 'backless' modular panels, containing an inorganic growing medium surrounded by a recycled polypropylene or aluminium shell. Panels are mounted to a waterproof backing board through a void former drainage layer and held in place by aluminium carrier rails.

System weight: 75kg per m^2 fully saturated

Structural support: Secondary support required at 600mm centres as per structural assessment requirements

Waterproof backing board
Durable water-resistant board 12mm thickness – Versapanel Eco sheet or similar fixed to the support structure.

Carrier rail
'T' profile rail carrier system to carry the BioPanels

BioPanel (BioTile in international markets)
Injection moulded recycled polypropylene shell or folded self coloured aluminium panel box to support the growing medium. Standard panel module dimension 600mm wide x 450mm

Growing medium
Inorganic, chemically inert and dimensionally stable growing medium with a nominal dry density of 16.8kg/m^3. Material 'stonewool' – high alumina, low silica wool product reference Grodan PP 100/100.

4 strips of Grodan per standard panel with a capillary break between each section

Each Panel to have 16, 50-65mm diameter planting holes (4 per Grodan strip)

Capillary breaks
Geocomposite drainage layer formed using extruded high-density polyethylene (HDPE) net drainage core with non-woven polypropylene (PP) geotextile filter/separator bonded to one side and an extruded (PE/EVA) geomembrane bonded to the other.

Rear drainage layer (void former)
Geocomposite drainage layer comprising a high-performance single cuspated HDPE (High density polyethylene) core with a geotextile filter thermally bonded to one side to provide a drainage layer to the rear of the vegetated planted panels and a waterproof layer in front of the backing board.

Dripline
Polypropylene round dripline, 16mm diameter, with flat pressure compensating drippers (4 drippers per standard BioPanel) giving dripper flow rate of not less than 1.6 l/h. Dripline fixed to the carrier rails using proprietary injection moulded polypropylene clips. Self coloured aluminium cover strip cover strip to provide improved visual appearance, solar protection and fire barrier.

6.0 Testing and compliance

CWCT Tested

The BioPanel system is the only evergreen living wall system to have passed the Centre for Window and Cladding Technology (CWCT) façade testing criteria. This process tests how rainscreen cladding panels perform in extreme weather conditions, testing includes air infiltration, water penetration, wind loads and impact testing.

Structure

To provide independent assurance we commissioned a comprehensive analysis and report on the structural performance of the BioPanel living wall system. We always design and install our living cladding system in accordance with the recommendations of the Evolve Structural Assessment.

Fire

Biotecture's standard BioPanel system complies with fire classification B-s3,d2 in operational conditions. The aluminium BioPanel is currently undergoing extensive fire testing; including in worst case scenario conditions.

7.0 Why grodan?

While the idea of growing in soil seems natural, it poses challenges when growing vertically.

Soil, in such environments, lacks the self-regulatory systems found in natural landscapes, leading to a decline in its ability to promote plant growth over time.

That's why we use grodan in our BioPanel system. Grodan is a horticultural grade of Rockwool, and is the number one choice for large-scale commercial growers.

It's hydrophilic nature, dimensional stability and predictability make it a superior choice for thin substrate applications like living walls.

Water retentive

With a pore volume of 97%, Grodan absorbs and holds water for several weeks. This provides additional reassurance in case of irrigation failure

Dimensionally stable & chemically Inert

Maintains structure over time, providing a firm anchor for roots. Inert composition avoids nutrient lock-in

Non combustible

Unlike traditional growing mediums like soil and compost, Grodan is non-combustible and does not pose a fire hazard

Long lasting living wall: Installed in 2011, Photo 2025

8.0 Irrigation

BioPanel living walls include a fully automatic remotely monitored irrigation system.

Hydroponic living walls require a 'little and often approach.' Each wall is irrigated 3-5 times a day depending on the season.

As part of a maintenance package, we remotely customise the irrigation schedules including duration, frequency and timing to align with seasonal changes. We can also pick up any issues before they affect the plants.

BioPanel's patented panel design allows us to carefully control the flow of water through the wall avoiding 'pillowing' in certain areas.

BioPanel living walls require a plantroom or roadside cabinet to house the pump, controller and nutrient dosing system.

This should be located near the base of the wall or one level below.

The Biotecture team will provide additional guidance during the design process.

Fully integrated automatic irrigation system

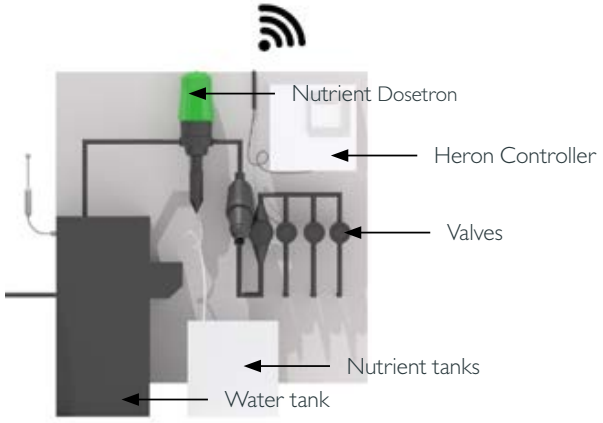
Irrigation zones
ensure even water distribution across the wall

Remote irrigation monitoring

Low water usage
Average water use 1-2 ltr/m²/day with 10% water run off

Additional moisture sensors available on request

Enlarged section



BioPanel's unique patented design prevents excess water from one panel traveling into the panel below. This avoids water build-up at the bottom of wall, an issue common with all other systems.

Specification

Integrated Irrigation

Pumping is to be via a reliable pump set capable of delivering the correct pressure at all drip locations.

Water is to be distributed from the pump through zoned solenoid valves via a ring main and header pipes with control being via a remote sensing computer controller.

System is to include a fail-safe pump start relay.

Irrigation water is to be precisely applied via irrigation driplines of no less than 16mm diameter. The drippers are to be in-line, self-flushing and self-cleaning pressure compensated drippers each operating at minimum of 1.6 litres per hour. The system will include the ability for each dripline to be easily flushed on a regular basis.

WRAS approved high density polyethylene break tank with integral submersible pump.

Irrigation fittings
Wall/array fittings all barbed, Couplers, elbows and T pieces with non-return valves if required, to suit the installation
Water feed pipework and irrigation pipework

- 20/25mm LDPE water feed pipe (pipe diameter varies according to the distance between the plant and the living wall)
- Irrigation pipework – 20mm HDPE hoseline with barbed fittings

Irrigation controls

Multi-wire controller to operate the solenoid valves.

Manufacturer: Heron or similar approved.

The controller will be programmed with flow-rate parameters for each zone and will be set to monitor the flow-rate at prescribed intervals (usually 30 seconds). It will also be set with a deviation percentage.

When the controller monitors a flow-rate that deviates from the expected flow rate by more than the input deviation percentage it responds by, firstly shutting off the pump and secondly sending an alert by email.

GPRS signal or LAN connection required in order for the controller to communicate remotely with the Biotecture server.

101 Moorgate roof terrace, London

9.0 Our approach: Creating a living wall

9.1 CONSULTANCY & FEASIBILITY

When considering a living wall it's best to talk to us at concept stage.

We can advise on appropriate locations and orientation and recommend the best value solution.

We can also advise on compliance and access considerations and assist with meeting targets and metrics such as biodiversity net gain.

Purpose and goals

Location & Orientation

Adequate light levels

Building regs compliance

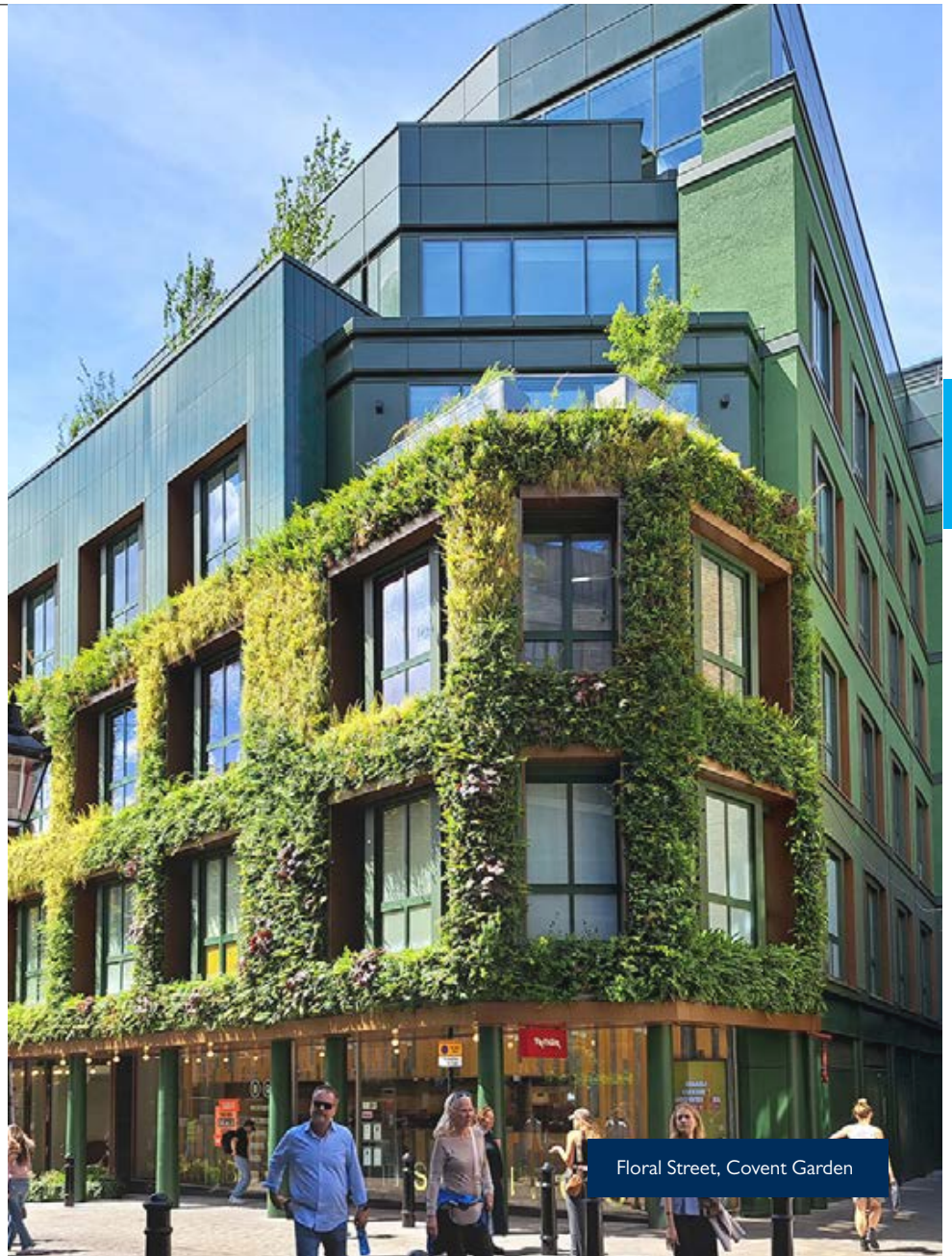
Cost planning

Biodiversity Net Gain calculations

CGI visuals

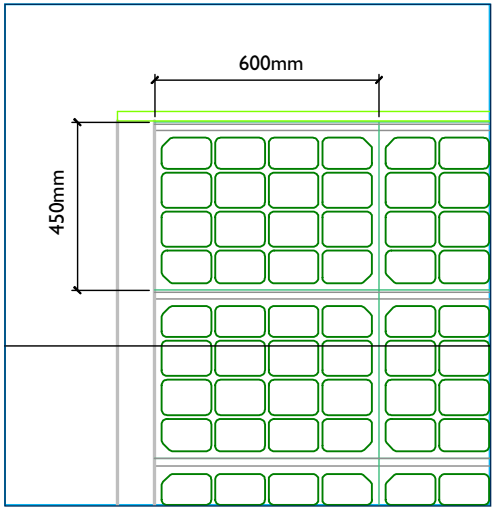
Construction Access

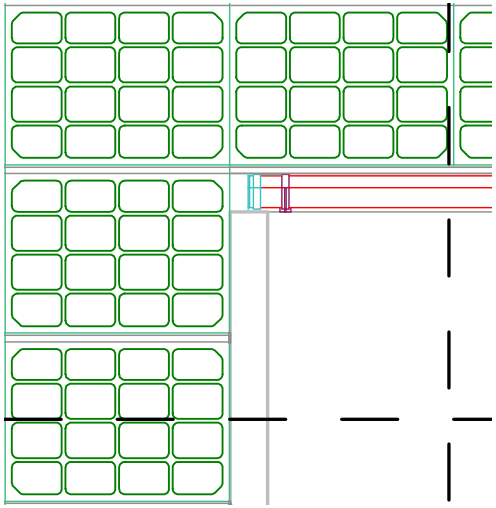
Maintenance Proposals

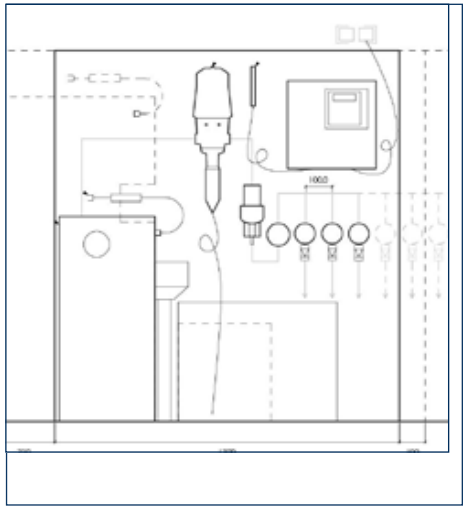


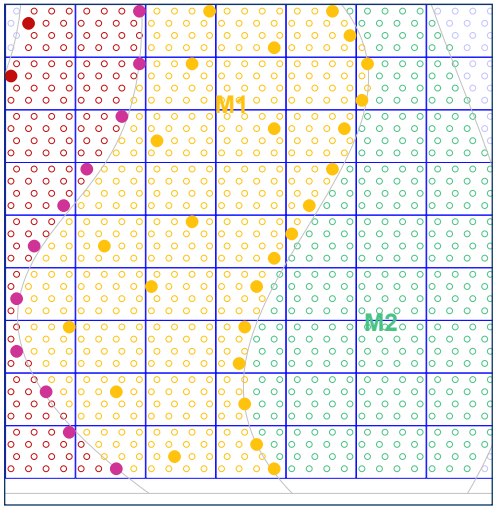
Floral Street, Covent Garden

9.2 DESIGN & PROJECT MANAGEMENT









Panel layout

Panels designed to fit your project. Standard panels are 600mm x 450mm. These can be cut down as required.

Interface design

The Biotecture design team will pay particular attention to interfaces with other facade elements such as windows and doors

Irrigation design

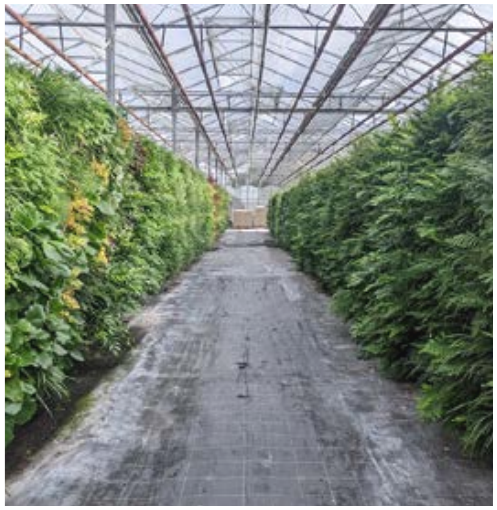
We will confirm the irrigation requirements including reviewing and designing pipe routes and looking at drainage management.

Planting design

Every wall is designed with its surroundings in mind.

9.3 HORTICULTURE / GREENHOUSE WORKS

BioPanel living walls are pre-grown in our West Sussex nursery for 8-12 weeks before being installed on-site. This ensures full green coverage from day one.



Panel assembly

BioPanels are assembled at our nursery in West Sussex

Panel installation

The BioPanels are installed on purpose built structures in the nursery ready for planting

Planting

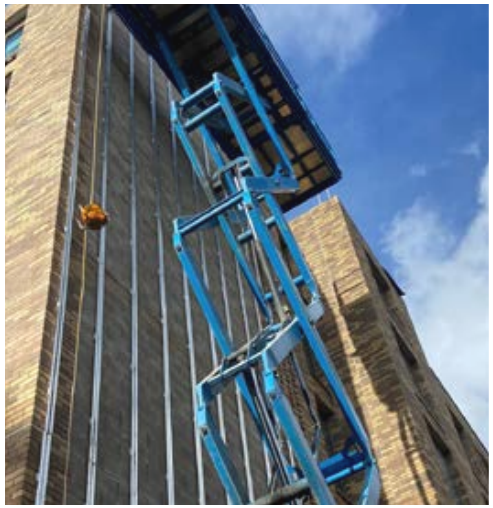
9mm plug plants are planted up in accordance with the planting plan

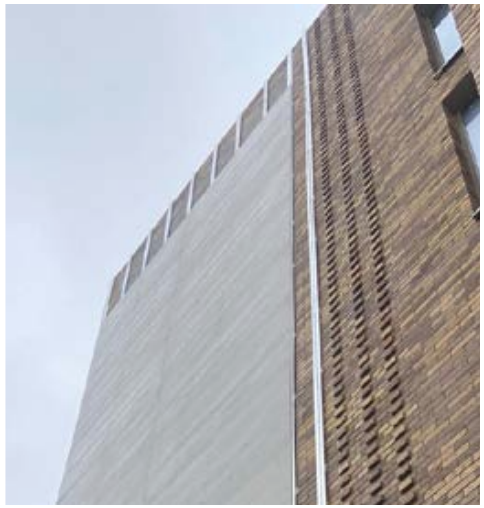
Plants nurtured

The plants are allowed to fully mature in our nursery for 8-12 weeks before installation on site.
Clients are welcome to visit our nursery at any time.

9.4 INSTALLATION ON SITE

In this example the BioPanel living wall system is being installed onto an existing block-work structure using the Omega Top Hat System. BioPanel can also be installed into a steel frame with 600mm centres.





Support Structure

Installation of cladding rail support structure at 600mm centres. Omega Top Hat System or Hilti Helping Hand Brackets.

Backing board

Installation of A1/A2/B rated cement particle backing board

First Fix

Installation of geotextile drainage layer, aluminium carrier rails, and irrigation pipeline

Second Fix: Planted Panels

Installation of planted panels. Second fix and first fix can be done at separate times to accommodate the construction schedule

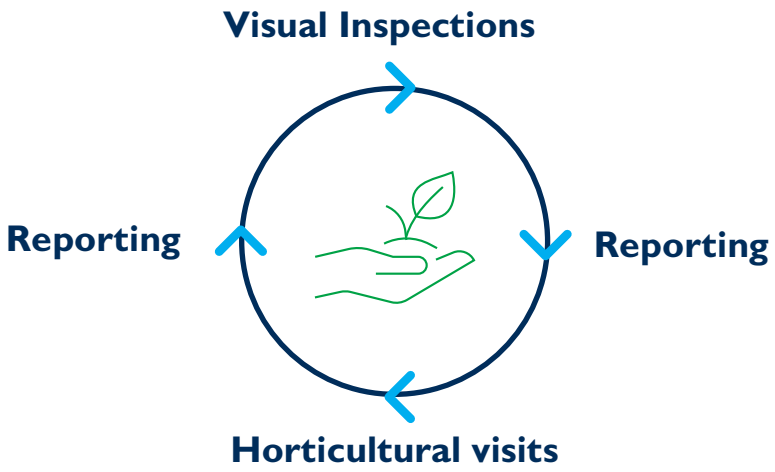
9.5 MAINTENANCE

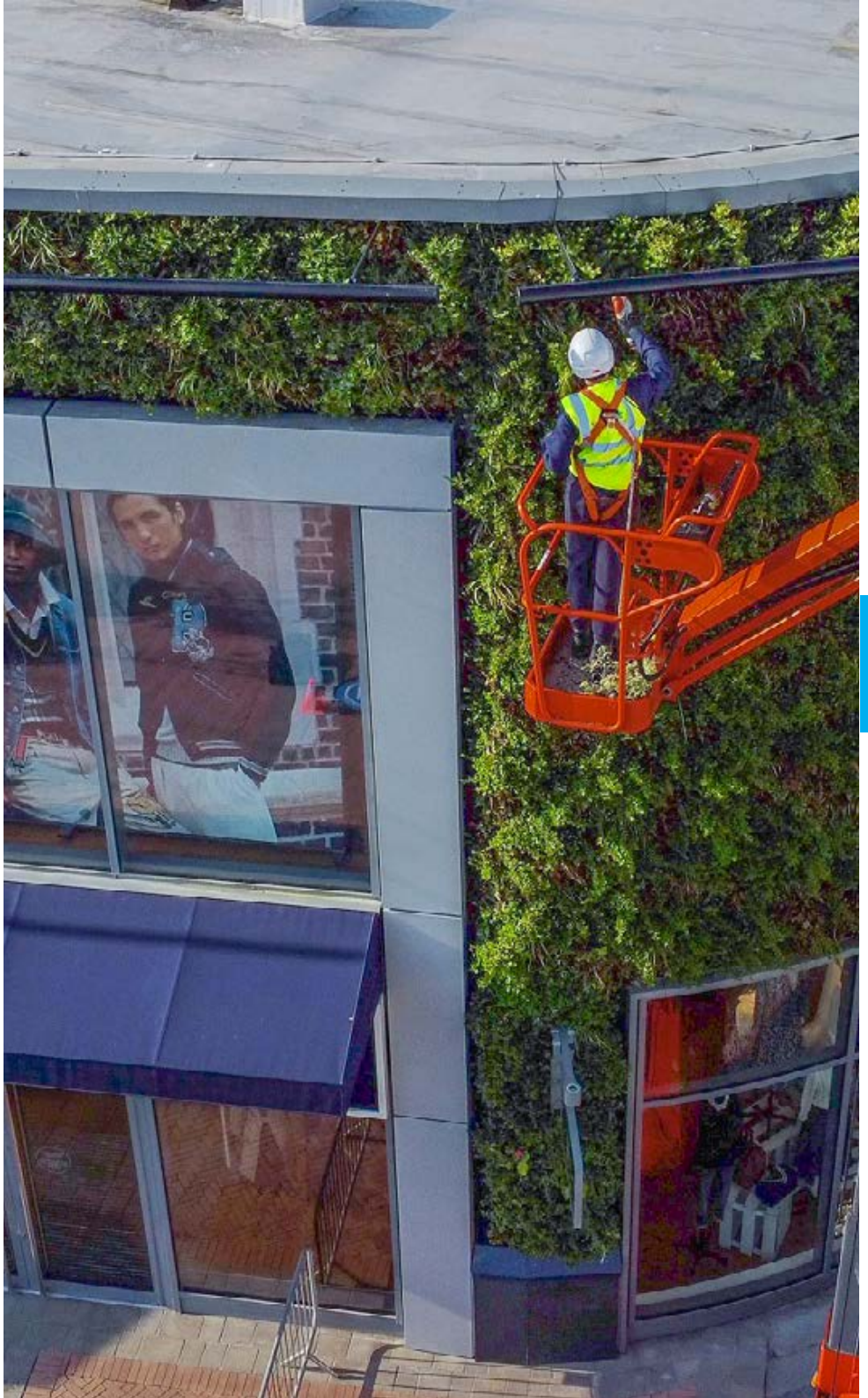
Living walls like any other landscaping feature need regular maintenance.

We pro-actively look after over 300 living walls in the UK and that number is always growing.

Our maintenance packages include regular visual and horticultural visits to keep walls in great condition and we also offer full remote monitoring for peace of mind.

Access for maintenance should be considered at an early stage and discussed with the Biotecture team. Living walls can be accessed by MEWPs, BMU system fixed access walkways and abseil.





10.0 Design features & technical considerations

Regal House, Covent Garden

10.1 Structure and panel layout

Secondary support structure

The BioPanel system requires support fixings at 600mm centres.
We recommend the Omega Top Hat system or Hilti Helping hand system.
New or existing structures should support 75kg/m^2

Panel layout

Each BioPanel measures 600 x 450 mm
Our in-house design team will create a panel layout to suit the project.
Panels can be manufactured in smaller sizes.

Corners & curves

Corner panels can be used to wrap around multiple elevations.
This creates a seamless sweeping corner.

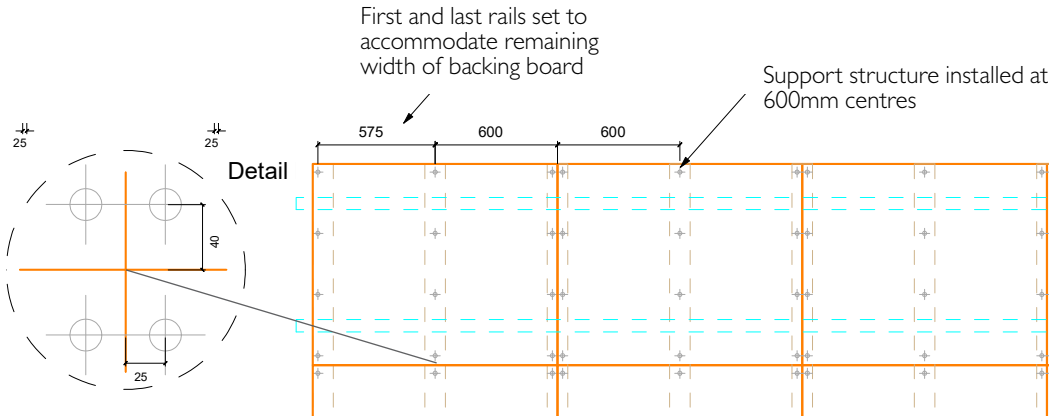
Curves can also be created by faceting the panels around a corner.

Flashings and coping

Aluminum flashing and copings create a smart surround for BioPanel living walls and hide the irrigation pipework

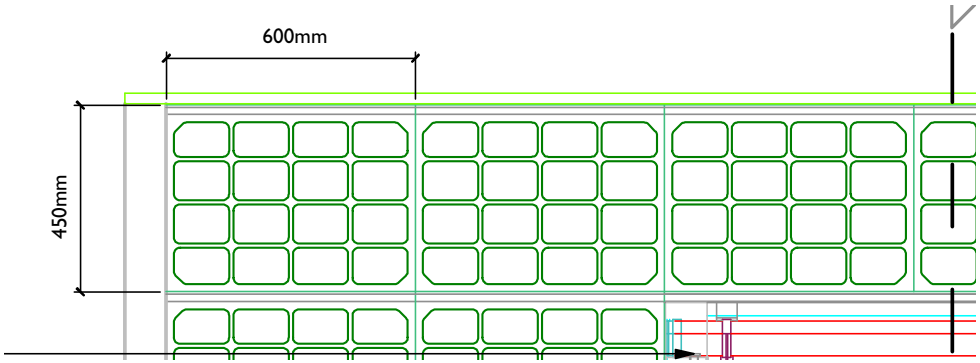
Drainage

Drainage is typically via PVC gutters. We recommend all living wall runoff be directed into wastewater drains.



Option 1) Omega Top Hat System

Option 2) Hilti Helping Hand System underwritten by Hilti



10.2 Planting Design

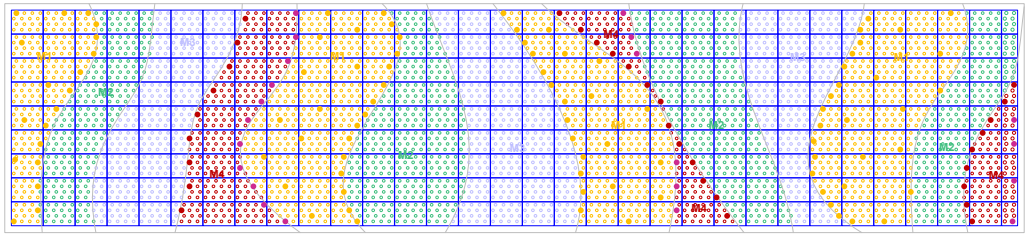
Plant Density
BioPanel living walls have a plant density of 60 plants per square metre, offering full coverage green walls.

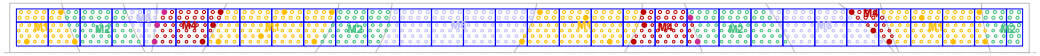
Location and aspect
Plants are selected to suit their location and climatic conditions. For example North facing living walls will get little direct sunlight and will need a shade tolerant plant palette. South facing walls, get a good amount of sunlight and can accommodate more seasonal planting. The bottom of a living wall may be more shaded than the top.

Native vs Non-native planting
We use a range of plants in our living walls, including native, naturalised and non-native species. It's important to note that we don't use any invasive species, these are non-native plants that spread rapidly, out-competing local flora and disrupting ecosystems.

Matrices
Biotecture use plant matrices to ensure that living walls are not only visually appealing but also resilient and sustainable. By incorporating a variety of plant species within each zone, rather than relying on single-species block planting, we enhance the wall's ability to withstand environmental stresses, such as pests, diseases, and changing weather conditions.

Biodiversity
The key to fostering biodiversity is using a wide variety of plant species. Including flowering plant species ensures a continuous food source for pollinating insects, with staggered blooming times to maintain nutrition. Incorporating habitat boxes into living walls also offers safe havens for pollinators and other insects.

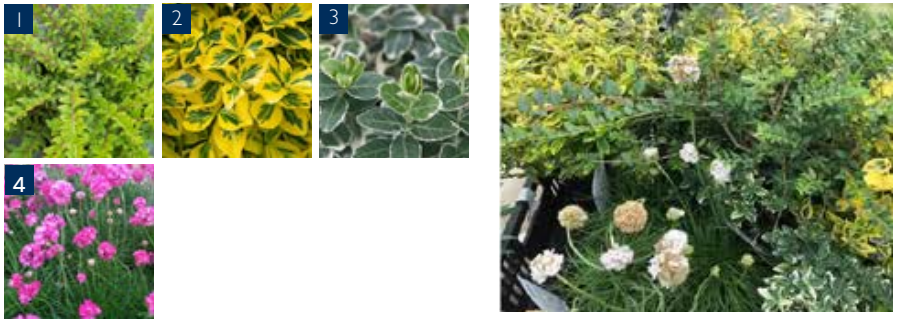




10.3 Example planting selection: Full / partial sun

Nottingham Trent University, School of Art & Design
South facing aspect

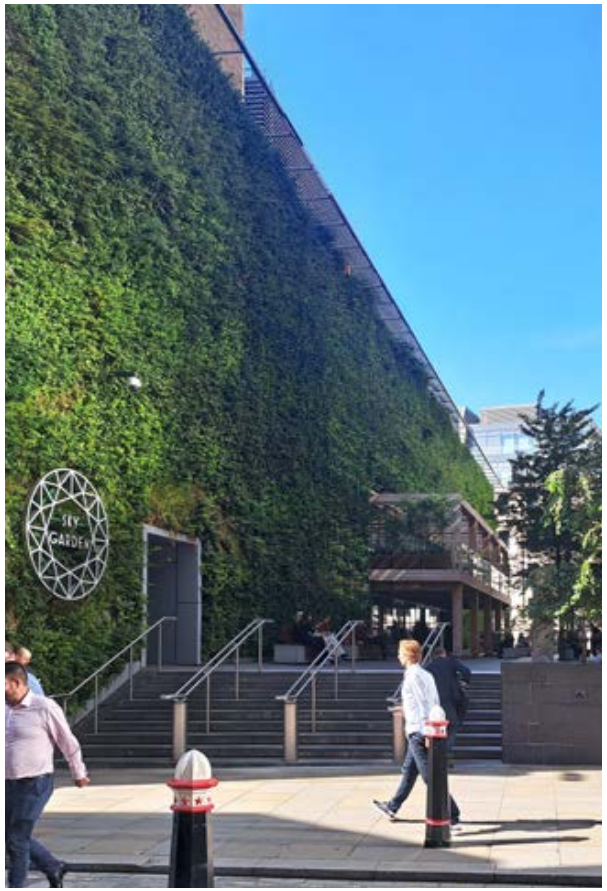
Sun Matrix - Option 1		
	Plant	%
1	Lonicera nitida maigrun	31
2	Euonymus fortunei 'Emerald 'n' Gold'	31
3	Euonymus fortunei 'Emerald Gaiety'	25
4	Armeria Maritime 'Splendens'	13
	Total	100%



Sun Matrix - Option 2		
	Plant	%
1	Euonymus fortunei darts blanket	25
2	Carex 'Ice Dance'	25
3	Hedera helix wonder	19
4	Pachysandra terminalis variegata	19
5	Euonymus fortunei 'Emerald Gaiety'	12
	Total	100%

Potential Statement Plants	
1	Acorus Gramineus 'Ogan'
2	Heuchera Lime
3	Heuchera Marmerlade
4	Heuchera 'Green Spice'
5	Heuchera 'Fire Chief'
6	Heuchera 'Palace Purple'
7	Polystichum polyblephorum
8	Bergenia 'Baby Doll'
9	Uncinia rubra
10	Viola hederacea
11	Erysimum 'Bowles Mauve'
12	Euphorbia wulfenii
13	Convolvulus cneorum
14	Lavandula 'Hidcote'
15	Erigeron KaNinskianus
16	Hypericum calycinum
17	Santolina rosmarinifolia
18	Santolina chamaevyparis

10.4 Example planting selection: Full shade



20 Fenchurch Street, London

Full Shade Matrix - Option 1		
	Plant	%
1	Hedera helix shamrock	25
2	Lonicera nitida maigrun	25
3	Euonymus fortunei 'Emerald Gaiety'	25
4	Asplenium scolopendrium	13
5	Liriope big blue	12
	Total	100%

Full Shade Matrix - Option 2		
	Plant	%
1	Euonymus fortunei darts blanket	31
2	Lonicera nitida maigrun	31
3	Hedera helix wonder	25
4	Polypodium vulgare	13
	Total	100%

Potential Statement Plants	
1	Carex 'Ice Dance'
2	Acorus Gramineus 'Ogan'
3	Polystichum setiferum
4	Heuchera Lime
5	Heuchera Marmerlade
6	Heuchera 'Palace Purple'
7	Polystichum polyblephorum
8	Bergenia 'Baby Doll'
9	Sarcococca
10	Uncinia rubra
11	Viola hederacea

Cannon Park Car Park

Installation: 2021

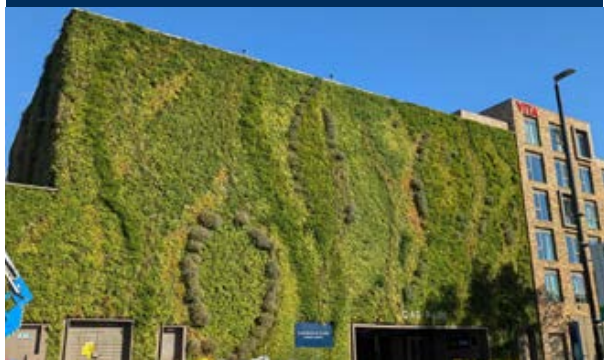
Area: Over 690 m^2

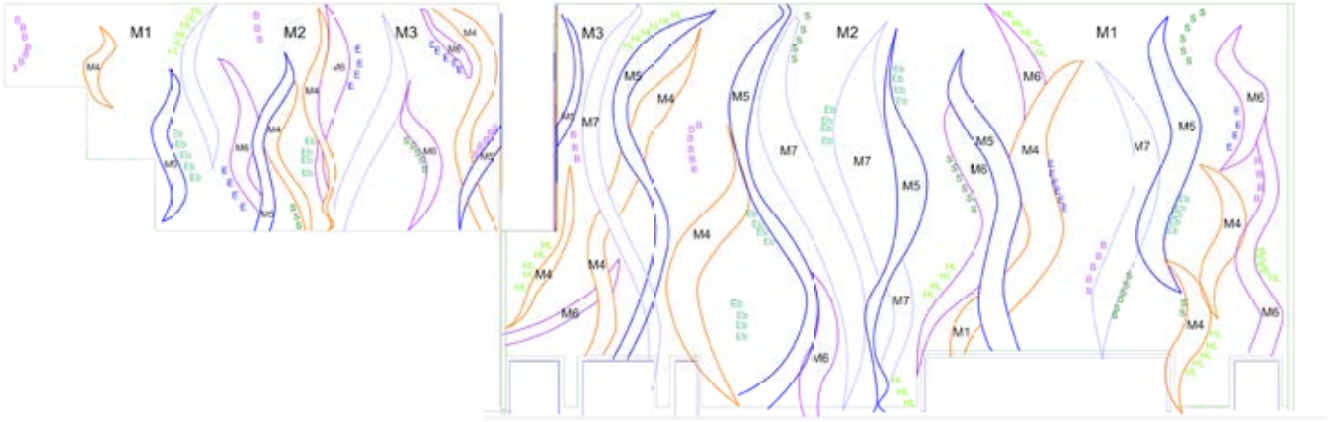
34,900 plants

North & West Elevations

> Biotecture worked closely with us in the early stages to guide us in selecting the most appropriate variety of plants that would meet our specific vision for the project. The results are truly stunning, and the living wall turns what would be an ordinary car park design into something quite extraordinary.

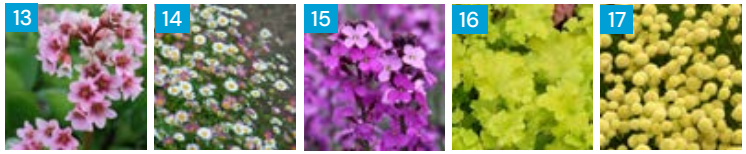
David Watkiss, Director,
Parkhood Landscape Architect





M1	Euonymus fortunei 'Dart Blanket'	1
	Lonicera nitida 'May Green'	2
	Hedra Helix 'Green Wonder'	3
	Liriope muscari "Big Blue'	4
M2	Euonymus fortunei 'Dart Blanket'	1
	Hedra Helix 'Green Wonder'	3
	Euonymus 'Emerald Gaiety'	5
	Pachysandra terminalis 'Variegata'	6
	Campanula portenschlagiana	7
M3	Euonymus fortunei 'Dart Blanket'	1
	Euonymus 'Emerald Gaiety'	5
	Euonymous 'Emerald n Gold'	8
	Hedra Helix 'Green Wonder'	3
	Carex morrowii 'Ice Dance'	9
M4	Euonymus fortunei 'Dart Blanket'	1
	Euonymus 'Emerald Gaiety'	5
	Euonymous 'Emerald n Gold'	8
M5	Carex morrowii 'Irish Green'	10
	Carex morrowii 'Ice Dance'	9
	Carex oshmensis 'Evergold"	11
M6	Hedra Helix 'Green Wonder'	3
	Hedra Helix 'Green Ripple'	12
M7	Lonicera nitida 'May Green'	2
	Hedera Helix 'Green Ripple'	12
	Euonymus fortunei 'Dart Blanket'	1

Spot plant	Bergenia 'BadyDoll'	13
	Erigeron Karvinskianus	14
	Erysium 'Bowles Mauve'	15
	Heuchera 'Lime'	16
	Sarcoccocca confusa or humilis	17



6.0 Case studies

Warner Stand, Lord's Cricket Ground

McArthurGlen Ashford Designer Outlet

2024

Client: McLaren

Installation: 2019

Area: 2000m^2

Biotecture's statement living walls are integral to the architectural look and feel at the McArthurGlen Ashford Designer Outlet. They were designed to enrich the retail experience and strengthen the outlet's position as a flagship shopping destination.

Working collaboratively with the design team and the main contractor, Biotecture designed and installed over 2,000m^2 of living wall to create a rich vertical garden. The project is one of Europe's largest living walls and demonstrates how living walls can be delivered at scale to enhance the urban environment.

Project Highlights

- Exemplar project for large scale living walls
- Key part of the architectural aesthetic
- Integrated design process at all stages
- Over 120,000 plants and 30 + different varieties
- 5 year maintenance contract with McArthurGlen

> Realising the vision at Ashford was always going to be a demanding project but having tackled the hurdles early in regard to managing Client and Centre Managers expectations I have to say that it has gone smoother and looks better than we ever hoped for and that is down to the proactive and experienced involvement from all at Biotecture.
>
> **Kim Jones**
> **Principal, Applied Landscape Design**

McArthurGlen Paris-Giverney Designer Outlet

Client: McArthurGlen

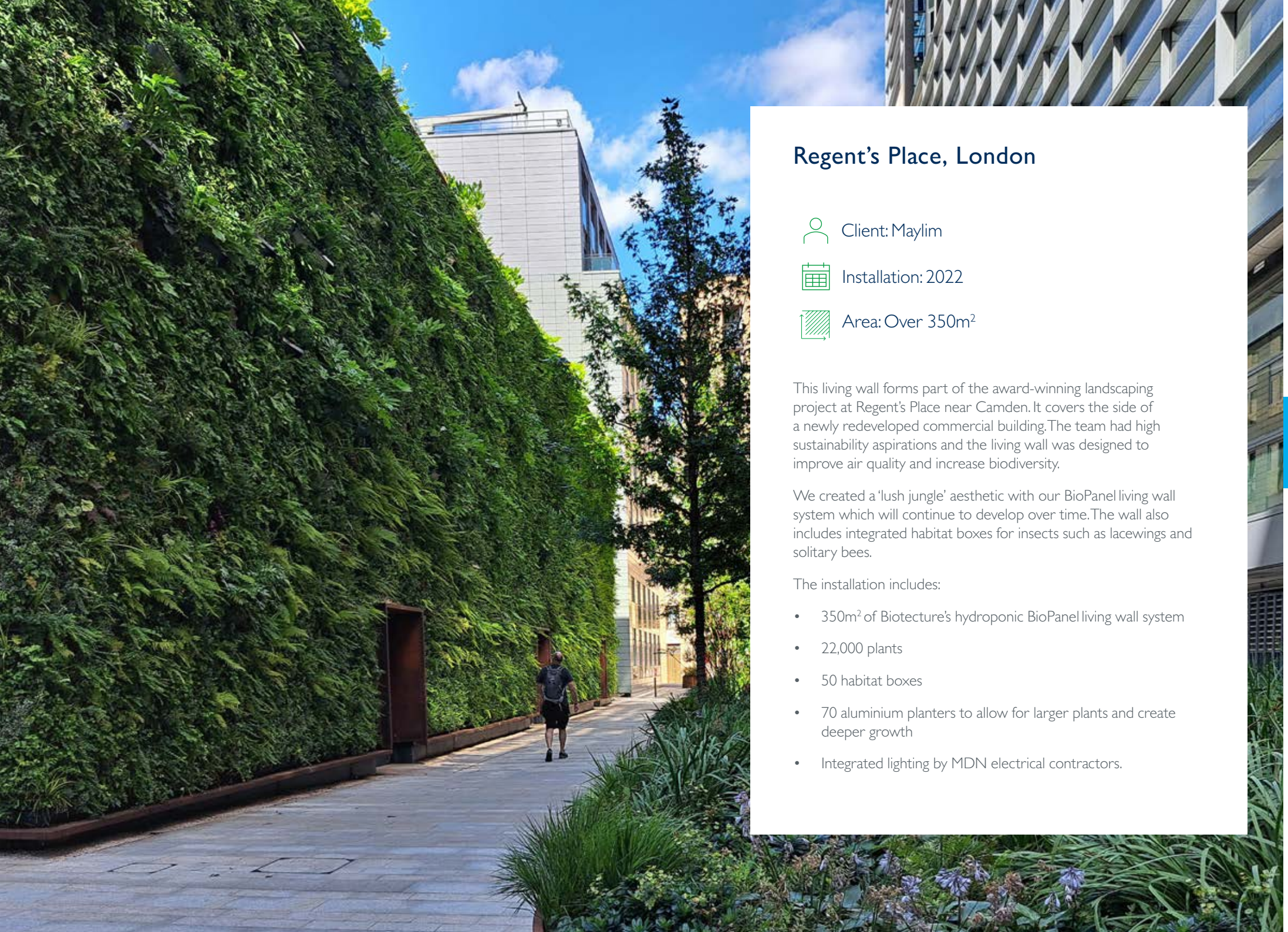
Installation: 2023

Area: Over 1,000m^2

Building on the success of our previous work at the McArthurGlen Designer Outlet in Ashford, we were appointed to design and install living walls at the heart of McArthurGlen's new Outlet near Paris.

Biotecture worked collaboratively with the design team and contractor from an early stage to deliver the client's vision.

The planting design was a collaboration with living wall pioneer and renowned botanist Patrick Blanc.



Regent's Place, London

Client: Maylim

Installation: 2022

Area: Over 350m^2

This living wall forms part of the award-winning landscaping project at Regent's Place near Camden. It covers the side of a newly redeveloped commercial building. The team had high sustainability aspirations and the living wall was designed to improve air quality and increase biodiversity.

We created a 'lush jungle' aesthetic with our BioPanel living wall system which will continue to develop over time. The wall also includes integrated habitat boxes for insects such as lacewings and solitary bees.

The installation includes:

- 350m^2 of Biotecture's hydroponic BioPanel living wall system
- 22,000 plants
- 50 habitat boxes
- 70 aluminium planters to allow for larger plants and create deeper growth
- Integrated lighting by MDN electrical contractors.

Regal House, Covent Garden

Client: Capital & Counties Properties PLC

Installation: 2017

Area: Over 200m^2

To coincide with the 500th anniversary of Covent Garden we were commissioned by Capital and Counties to create a vertical park at the gateway to the area.

This project required a bespoke steel frame fixed back through the brick facade to support the BioPanel living wall.

The scheme was originally granted temporary planning permission for 2 years as the client's long term plan was to replace the building. After seeing the transformation the client applied for, and were granted permanent planning permission and put their plans to redevelop the site on hold.

> The living wall on Regal House has totally transformed the building. It's going strong and we're currently working with Biotecture on several other proposals for living walls which is itself an endorsement.
>
> **Amanda Stevenson**
> **Head of Sustainability, Capital and Counties Properties PLC**

Photos: 2025

20 Fenchurch Street

Client: Land Securities

Installation: 2014

Area: Over 700m²

Biotecture was appointed by Willerby Landscapes to design and deliver this 700m² living wall for Land Securities.

Positioned opposite the entrance to the Sky Garden, it forms a striking green frame around the café entrance and a lush backdrop for pedestrians.

The living wall acts as the building's rainscreen cladding, secured to a bespoke steel frame.

Its north-facing aspect called for a shade-tolerant plant mix featuring ferns, shrubs and grasses.

The installation contributed to the building securing a BREEAM Excellent rating.

Biotecture

part of mitie

Ask us for our internal living walls brochure

The Shard, Level 12
32 London Bridge Street
Southwark
London
SE1 9SG

110 Batchmere Road
Almodington
Chichester
PO20 7LE

www.biotecture.uk.com | enquiries@biotecture.uk.com | 01243 572 118

A July 2025