

WATER MANAGEMENT | BLUE GREEN INFRASTRUCTURE | URBAN PLANTING



Blue Green Infrastructure Solutions

Where strategies become real-world solutions

Why Blue Green Infrastructure Matters

Cities are under pressure. Climate change drives heavier, more frequent rainfall, urbanisation increases hard surfaces, and planning policy demands solutions that deliver resilience, biodiversity, and amenity value.

Blue Green Infrastructure integrates natural processes with engineered systems. Sustainable Urban Drainage Systems (SuDS) manage surface water in a way that mimics natural processes. They slow runoff, promote infiltration, filter pollutants, and provide biodiversity and amenity benefits.

Green-tech Specifier helps deliver fully integrated SuDS solutions. We supply soils, planting systems, irrigation, and biodiversity solutions that make SuDS practical, compliant, and successful. We support specifiers with expert advice, CPDs, technical guidance, and on-site project support.

Drivers for Change

- **Climate Change:** Increased rainfall intensity and frequency is driving demand for flood mitigation
- **Legislation:** Schedule 3 of the Flood and Water Management Act in England will require SuDS for new developments (already adopted in Wales)
- **Planning Policies:** The NPPF and local authority mandates increasingly require SuDS in new schemes
- **Net Gain and Biodiversity:** Developers must integrate green infrastructure to meet biodiversity net gain targets

Key Components of SuDS

- **Infiltration:** soakaways, permeable paving
- **Detention:** swales, attenuation tanks, basins
- **Filtration:** rain gardens, tree pits, filter trenches
- **Conveyance:** channels, rills, kerb inlets
- **Green Infrastructure:** green roofs, rain gardens, bioretention



“Green-tech Specifier:
supporting climate-resilient
infrastructure with
site-ready solutions.”

Integrated Solutions for Every Site

SuDS are increasingly implemented across a wide range of projects, from new housing developments to major infrastructure schemes. They are essential wherever surface water needs to be managed sustainably, while also delivering biodiversity, amenity, and urban cooling benefits.

Our Solutions

- **Residential and commercial developments:** Manage stormwater on-site, reduce flood risk, and create attractive green spaces for communities
- **Urban regeneration schemes:** Integrate multifunctional landscapes that combine public amenity with effective water management
- **Local authority public realm and highways:** Streetscapes, verges, and highways can incorporate rain gardens, tree pits, and swales to improve drainage and aesthetics
- **Schools and campuses:** Safe, green outdoor spaces that educate students about sustainable water management
- **Major infrastructure projects:** Rail, highway, and transport hubs can use SuDS to reduce surface water runoff, improve biodiversity, and meet compliance requirements

Specifier Team

Our Specifier Team brings extensive expertise in SuDS, urban greening, and biodiversity. They help deliver complete SuDS solutions, guiding projects from planning and specification through to installation.

We provide technical guidance, CPDs, design advice, technical drawings, and on-site support to ensure schemes achieve the intended performance. Advice covers project planning, installation sequencing, soil selection, and maintenance considerations, giving specifiers confidence that every scheme functions efficiently and sustainably.

Our products work seamlessly to deliver multifunctional benefits, including water management, biodiversity, and amenity. With CPDs, advisory input, and on-site technical support, we help ensure projects are practical, compliant and built to last.

**Blue Green Infrastructure
UK and Ireland Team:**
Alasdair Innes, Seraya Sigsworth,
Richard Wexham and Gavin Saunders



SuDS Tree Pits

TreeParker® cell system is the latest generation of underground structural soil cell systems for trees in hard landscaping. Developed from extensive trials and collaboration with landscape architects, clients, contractors, and nurseries, it provides a cost-effective, fit-for-purpose solution for the challenges of growing large trees in urban environments.

TreeParker® is a modular urban tree pit system that delivers multifunctional SuDS benefits. It captures and filters rainfall, supports root growth, and provides canopy cover. The system can integrate with rain gardens, swales, and drainage networks to create a holistic urban water management solution.

Benefits

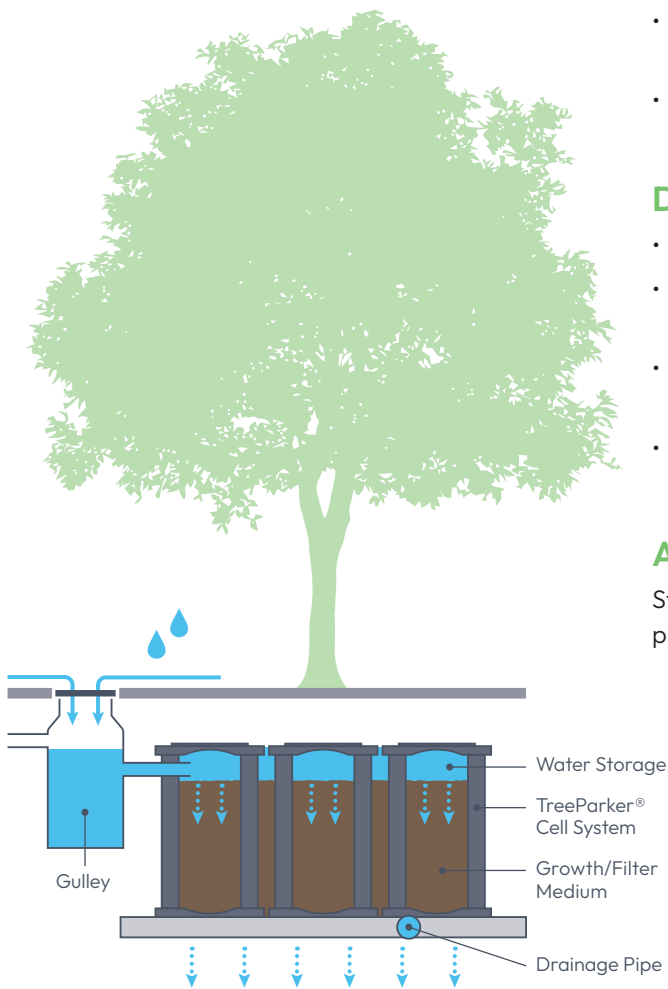
- Reduces surface water runoff and supports infiltration
- Filters pollutants through engineered soils
- Supports long-term tree growth and healthy root structure
- Enhances streetscape and public realm amenity
- Can contribute to biodiversity net gain and multifunctional landscape features

Design Features

- Modular, flexible layouts
- Compatible with bioretention soils, engineered substrates, and drainage cells
- Optional integration with Mona Pluvia irrigation and other water control systems
- Drainage layer allows controlled outflow or infiltration

Applications

Streetscapes, plazas, car parks, public realm, urban regeneration projects



TreeParker® Cell System





Project: Wilton Park Tree Pits

Location: Dublin, Ireland

Products/Services Supplied:
Green-tech TreeParker®

We worked closely with the Wilton Park project team to provide a fully tailored solution for their urban tree pits. Our consultancy began with site assessment and design advice, helping the client balance pedestrian and vehicular load requirements with healthy tree growth and soil protection.

Based on our recommendations, TreeParker® was selected for its strength, adaptability, and ability to protect topsoil from compaction, while supporting paving above. Our team advised on the optimal unit heights and layout to accommodate a variety of pit sizes and to work around existing utility lines, ensuring installation was straightforward and efficient.

We supplied reinforced, recycled polypropylene units in 400 and 600mm heights. The rounded support legs allow the system to straddle pipes and services, solving a common challenge in urban tree pit installation.

Across the park, we supported 21 tree pits, from 28m² to trenches up to 39m long, ensuring that the soil beneath the paving remained uncompacted for long-term tree health.

Feedback from the contractors highlighted the speed, simplicity, and reliability of the system, as well as the value of our technical guidance. By combining expert consultancy with high-performance products, we delivered a solution that meets both ecological and civic design goals.

TreeParker® system helped create a thriving, sustainable urban landscape that will benefit Dublin residents for years to come.

Intelligent Irrigation & Storage

Mona Pluvia and Mona Relief are modular systems designed to store and reuse rainfall for sustainable urban planting schemes. They help reduce peak stormwater runoff, support healthy vegetation, and provide flexible water management across streetscapes, rain gardens, tree pits, planters, and blue green roofs.

Our systems can be linked to smart irrigation controls, enabling precise water delivery and ensuring plants receive the right amount of moisture at the right time. By storing rainfall for later use, they help reduce mains water consumption, improve plant resilience during dry periods, and contribute to multifunctional, sustainable landscapes.

What it delivers

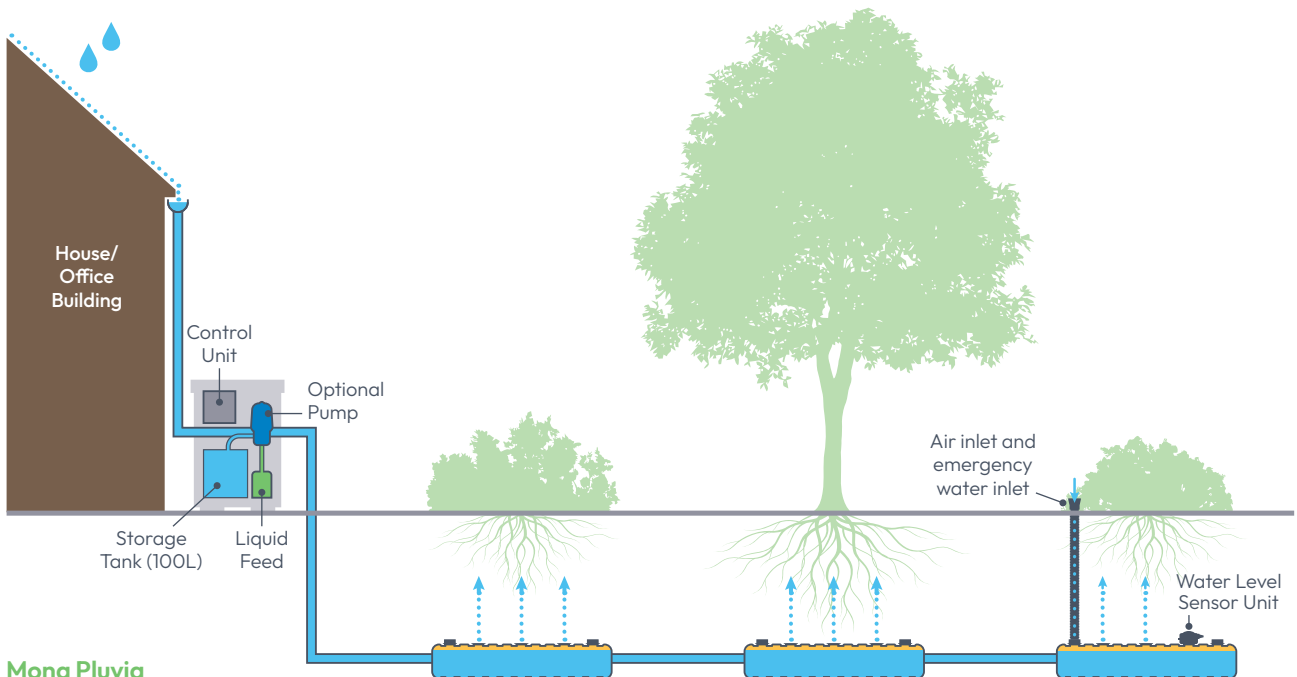
- Reduces peak stormwater runoff
- Stores rainfall for later reuse in planting systems
- Supports smart irrigation for tree pits, planters, and roof vegetation
- Flexible, scalable, and adaptable to site-specific conditions
- Reduces maintenance time and enhances water efficiency

Technical Capabilities

- Scalable tank capacities to suit individual project requirements
- Retention capacity typically up to 50mm per rainfall event
- Can be installed below planters, tree pits, rain gardens, and roofs
- Automatically responds to level sensors, delivering water only when needed

Applications

Streetscapes, rain gardens, blue green roofs, public realm, urban regeneration



Mona Pluvia

Green Roof Systems

Green Roofs are an innovative approach to urban water management, combining vegetation and engineered substrates to manage rainfall at roof level.

They help mitigate the urban heat island effect and contribute to amenity, education, and biodiversity in built environments. These systems offer a multifunctional solution, creating visually appealing, ecologically supportive, and climate-resilient roofs.

Our Green Roof solutions go further than just the product. Beyond reducing stormwater run-off and mitigating urban heat islands, we support specifiers with complete project solutions, ensuring roofs are visually appealing, ecologically supportive, and fully compliant with SuDS and sustainability requirements. Our products for these projects include:

- Engineered lightweight substrates designed for plant health and long-term performance
- Mona Pluvia irrigation systems for reliable plant establishment and maintenance
- John Chambers Wildflower Seeds and matting to create biodiverse, attractive, and resilient planting layers
- Sedum mats and plugs for fast establishment, drought tolerance, and low-maintenance cover

We provide guidance on substrate selection, planting design, water attenuation, and irrigation systems.

The Benefits

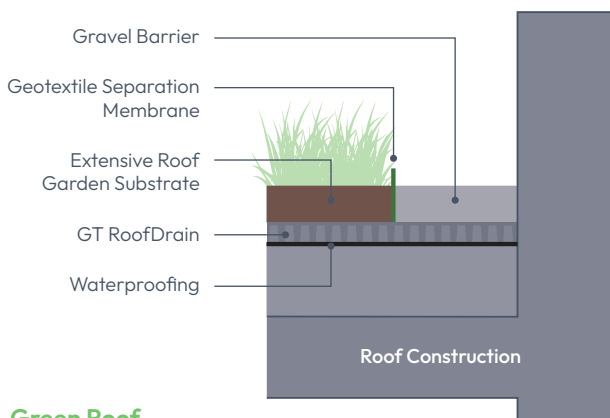
- Reduces stormwater entering drainage networks
- Supports biodiversity and ecological connectivity
- Enhances amenity, recreation, and visual appeal
- Mitigates urban heat island effect and improves microclimates

Specification Guidance

- Substrate depths 100 – 500mm depending on planting type
- Type of substrate required
- Irrigation systems

Applications

Commercial buildings, education campuses, public realm, retrofits



Green Roof



Bioretention Soils

Green-tree bioretention soils are engineered to provide practical, high-performance solutions for sustainable urban drainage systems. Designed to reduce flooding, enhance pollutant removal and support plant growth for sustainable urban greening.

Our soils are optimised for infiltration and healthy root growth, making them suitable for rain gardens, tree pits, swales and attenuation basins. They support vegetation establishment, promote biodiversity, and ensure long-term SuDS performance.

Green-tech Specifier works with project teams to select the right soils for each application, advising on depths, substrate composition, and integration with irrigation systems, and other Blue Green infrastructure products.

Porosity

	Bioretention Standard Performance	Bioretention High Performance
Water and Air		
Total Porosity	38.6%	42.9%
Saturated Hydraulic Conductivity	2.1mm min. 126.0mm hour	6.2mm min. 372.0mm hour

Typical results. For up to date analysis, contact the specifier team.

Key Benefits

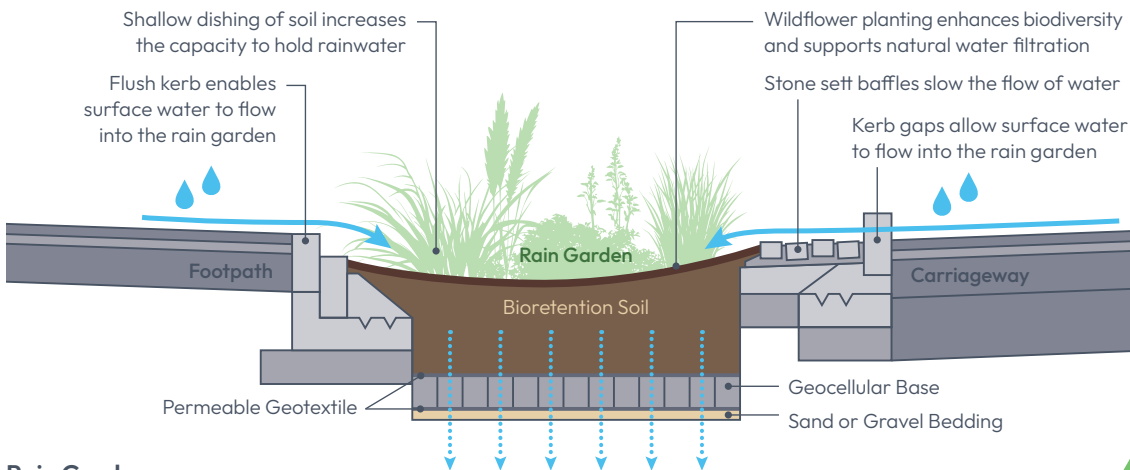
- Improves water infiltration and pollutant filtration
- Supports healthy vegetation growth and root development
- Reduces maintenance requirements
- Compatible with multifunctional SuDS features, including water storage and filtration

Specification Guidance

- Raingarden depths and build up
- Attenuation requirements
- Engineered for permeability, nutrient balance, and plant health
- Soil requirements

Applications

Rain gardens, tree pits, attenuation basins, swales, public realm projects



Rain Garden





Project: Plymouth City Centre Public Realm Regeneration

Location: Plymouth

Product supplied: Green-tree Bioretention Soil

We worked closely with Plymouth City Centre and YGS Landscapes to provide a complete solution for stormwater management and urban greening as part of the city's £1.6 million public realm regeneration. From the start, our team offered technical guidance on soil selection, rain garden design, and installation methods to ensure the project met both ecological and functional goals.

The scheme involved creating three rain gardens, planting 25 semi-mature trees, and installing new greenery islands along Old Town Street and New George Street. Our advice focused on how to integrate Green-tree Bioretention Soil to maximise water absorption, support healthy plant growth, and deliver a sustainable urban drainage system that also enhanced the visual appeal of the city centre.

We supplied 160 tonnes of our specialist bioretention soil, engineered for optimum permeability and nutrient balance. Our team provided guidance on installation, site preparation, and planting, ensuring that the rain gardens could capture 75.5 cubic metres of stormwater while nourishing the vegetation. This approach supports Plymouth's Climate Emergency Action Plan and wider flood management strategy.

By combining our technical consultancy with a high-performance product, we helped YGS Landscapes achieve efficient installation and long-term ecological benefits. The rain gardens now manage stormwater effectively, enhance biodiversity, and provide striking green spaces that improve the cityscape.

Our tailored solutions helped Plymouth City Centre deliver a sustainable, resilient, and visually inspiring urban landscape, demonstrating how expert guidance and engineered soils can work together to achieve ambitious environmental goals.

Wildflowers & Biodiversity

Wildflowers are often a vital part of Blue Green infrastructure, providing ecological value, supporting pollinators, and enhancing visual amenity.

Green-tech integrates John Chambers Wildflower Seed products to create resilient planting solutions for rain gardens, swales, attenuation basins, tree pits, and blue green roofs. Designed to work with engineered soils, irrigation systems, and other SuDS components, our wildflower solutions help specifiers deliver multifunctional landscapes that perform efficiently, contribute to biodiversity net gain, and provide year-round ecological and visual benefits.

Our Products

- **John Chambers SuDS Matting:**
Pre-grown wildflower turf provides an instant wildflower meadow, stabilises soil, and is ideal for swales, basins, and areas with variable water conditions
- **John Chambers 100% Wildflower Mixes:**
Pure wildflower seed mixes tailored to soil type and environmental conditions, including wet/moist soils, loams, and sandy soils. These are ideal for creating biodiverse SuDS features that support pollinators and other wildlife
- **John Chambers Green Roof Wildflower Mix:**
Designed for extensive green roofs, this 100% wildflower mix enhances biodiversity

The Benefits of Wildflowers

- Enhances biodiversity and contributes to net gain targets
- Supports pollinators such as bees, butterflies, and other invertebrates
- Provides flowering from early summer until late autumn (species dependent)
- Reduces maintenance requirements once established
- Works seamlessly with engineered soils, irrigation systems, and other SuDS components

Applications

- Swales, basins, attenuation ponds, and rain gardens
- Tree pit underplanting and verges
- Blue green and green roofs
- High-amenity public realm spaces





Project: Creation of wildflower meadows

Location: Basildon, Essex

**Products/Services Supplied:
John Chambers Wildflower Seed**

We worked closely with Basildon Borough Council to transform public spaces across the borough with sustainable wildflower meadows. From initial site assessment to seed selection, our team provided tailored advice to ensure each area delivered maximum ecological and community benefit.

The council wanted to replace traditional annual planting schemes with long-lasting, low-maintenance wildflower areas that support pollinators, enhance biodiversity, and improve soil health. Our team recommended the John Chambers range of wildflower seeds, selecting mixes suited to specific locations, soil types, and intended outcomes.

Our consultancy extended to planting methods, site preparation, and maintenance. We advised on sowing times, soil cultivation, and techniques such as direct hand sowing or seed drilling, ensuring optimal germination. We also provided guidance on the annual cut-and-collect process, helping maintain a balance between wildflowers and grasses for long-term sustainability.

The project covered a wide range of sites, including Northlands Town Park, Victoria Town Park, Wick Country Park, Beauchamps Meadow Local Nature Reserve, and multiple urban roundabouts.

Feedback from the council and the community has been overwhelmingly positive. The meadows now provide rich habitats for bees, butterflies, and other pollinators, reduce maintenance needs, and transform public spaces with vibrant seasonal colour.

Our guidance, combined with high-quality seed mixes, helped Basildon Borough Council create sustainable, biodiverse green spaces that residents can enjoy for years to come.



Green-tech Specifier is the specification arm of leading landscape supplier Green-tech Ltd.

Our expert team works with landscape architects, contractors, garden designers and nurseries across the UK and Ireland to develop landscape solutions for urban environments.

We've created a portfolio of systems designed to protect, enhance and improve trees and planting in urban settings.

CPD Seminars – Learn with the Experts

Gain valuable insight from the Green-tech Specifier team through our free CPD seminars, available in person or online

No cost. No obligation. Just expert knowledge and a free lunch if we visit you!

Seminar topics include:

- Landscape-led Solutions to Urban Water Management
- Urban Tree Planting featuring TreeParker®
- The Guide to Good Soil
- Green Roof Planting
- Effective Tree and Plant Irrigation
- Introduction to John Chambers Wildflowers
- Rural Planting and Ground Care

Find out more at www.gtspecifier.co.uk



Where Blue Green Infrastructure
strategies become real-world solutions

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