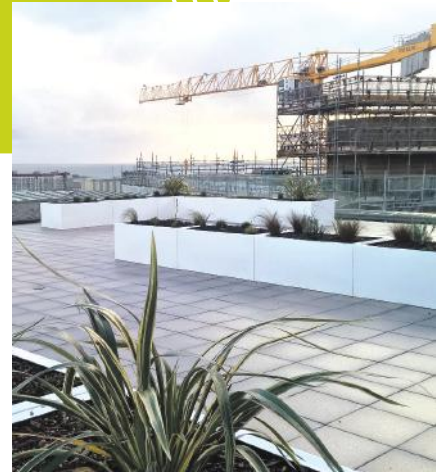




// specifier.

Green Roof Substrates

Welcome to Green-tech Specifier



Green-tech Specifier is the specification arm of the established and experienced landscape supplies company Green-tech. With over 25 years' experience of working within the landscape, forestry and construction sectors, the team behind Green-tech Specifier has a wealth of knowledge of the landscape environment. Covering a broad spectrum of disciplines including urban greening, woodland management, urban tree planting, ecology, conservation and biodiversity, Green-tech Specifier has become accustomed to working with architects and designers on large scale projects that encompass all these disciplines.

The ethos of the team is based on 'solutions' we are very aware of the complexity of landscape projects in terms of design, construction, access and cost and work with architects' practices and clients to find 'solutions' for their vision. As experienced product champions we are able to adapt, tailor and modify products and designs to bespoke situations, we never believe that 'one-size' fits all.

Green-tech Specifier covers the following areas:

- Green Roof Specification
- Soil Specification
- Urban Tree Planting
- Wildflower Specification

As a team we offer CPD Seminars online via video conferencing or face-to-face and site visits to discuss your particular project requirements.

Contact the team today:

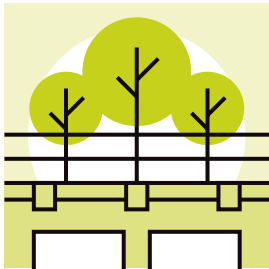
01423 332 114

info@gtspecifier.co.uk

www.gtspecifier.co.uk

Contents

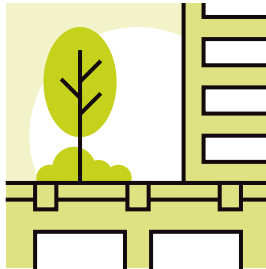
Green-tech Specifier has a wealth of knowledge and experience of green roof construction. As a team we work with Landscape Architects and Designers to recommend the most suitable substrates for green roof planting schemes.



Intensive



Extensive



Podium



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Benefits of Green Roofs

Reaching New Heights

A green roof is typically a partially or completely covered roof with vegetation and growing medium. Many green roofs incorporate layers of drainage and irrigation systems.

Over the last five years, the demand for green roofs has doubled and is expected to continue to increase by 50% across both rural and urban settings throughout the UK.

Some of the many benefits of green roofs:

- **Creates natural habitats:** Green roof vegetation will establish and provide a home for small wildlife, insects and invertebrates.
- **Adds biodiversity:** Green roofs encourage an extensive spread of species including plants, insects, birds and small animals.
- **Provides stormwater management:** Soft landscaping on green roofs can reduce the risk of flooding as the substrates and planting slows the flow of water. Many green roofs are now included as part of wider SUDS schemes.

- **Disguises buildings:** Green roofs help buildings blend into their surroundings and replaces the land lost by constructing the building initially.
- **Reduces pollution levels in an urban environment:** Green roofs can help to absorb noise and take out harmful pollutants from the atmosphere.
- **Acts as an insulation layer:** In Winter, green roofs can improve a building's indoor temperature by 25% and can maintain a consistent temperature in Summer reducing the need for artificial cooling systems.
- **Improves mental health and well-being:** Accessible green roofs can effectively promote social interaction, physical exercise, stress reduction and can contribute to improving mood and attention span.
- **Contributes to the reduction of climate change:** Green roofs help turn down the urban heat island effect by deflecting radiation from the sun and releasing moisture into the atmosphere.

There are many types of green roof soils and substrates which cover a wide variety of applications. Our substrates have been incorporated into high profile projects across the UK, providing the correct amounts of fertility, nutrients and organic matter for a successful green roof.

We can offer:

- Intensive green roofs which are much like a roof garden, providing public access and intricate planting and paving schemes.
- Extensive green roofs generally do not have access, require minimal maintenance and often feature sedum.
- Podium green roofs are typically constructed on top of a car park, residential space or commercial space at ground level.





A Sustainable Supplier

Environmental Credentials

Green-tree Roof Garden Substrates are manufactured using recycled materials, offering an environmentally sustainable product. All ingredients that make up this highly organic growing media are sourced locally to each production site. By sourcing all elements from the UK, the Green-tree brand can guarantee a truly environmentally-friendly product from manufacture to installation.

UK Green Roof Substrate Test Methods

BS8616 is the British Standard code for the Specification for performance parameters and test methods for green roof substrates. This standard is currently only designed to test Extensive substrates meaning Intensive substrates are still to be tested to the guidelines set out in the GRO code.

Characteristics of a good substrate include:

- Lightweight to reduce weight loading on the roof
- Good aeration and water holding properties. It should hold sufficient water for plant growth but enable sufficient water to infiltrate to prevent water pooling on the roof
- Controlled fertility levels. It should be low enough in nutrition to prevent excessive vegetation growth but hold enough nutrition for healthy long-term vegetation
- Having appropriate chemical properties for the intended vegetation

By conforming to the relevant British standards, Green-tree has successfully demonstrated its ability to manufacture a quality substrate that will aid good vegetation growth in a green roof project.

Soil Testing

Each batch of substrate will undergo rigorous testing to ensure its consistency and compliancy before being loaded and delivered to your project.

Reputable and Reliable

Our green roof garden substrates have been installed on many projects across the UK, landscape and roofing contractors find the product easy to work with, of a consistent quality and dependable supply from start to finish.

Bag Sizes

25kg bags: Easy to use on small roof planter projects or where access is required high up on a building and bulk bag weight is an issue.

Bulk bags: Deliveries are available using a 'Tail Lift' or a 'Hiab' offload. Please contact us to book offload in advance and this is not available with standard delivery. This is especially important for deliveries to sites with restricted access or delivery to a domestic site.

Loose: Delivery charges will differ dependent on the size of the load. Please contact us for advice and guidance towards the best options for your project.





Distribution and National Supply

The team behind the Green-tree brand has many years of experience of dealing with bulk products ensuring delivery and distribution is timely and efficient. With production sites nationwide, there is never a site far away to supply your project.

Soil Handling Guidelines

When specifying Green-tree Roof Garden soils and/or substrates, it is important to discuss site access as this can determine what size vehicle can be used for delivery. All deliveries are made via third party hauliers who will deliver the goods on standard UK pallets excluding loose soil orders.

Upon delivery, the substrate will be manoeuvred onto a tail-lift attached to the back of the delivery vehicle, using a pallet truck, and lowered to the ground. Due to health and safety constraints it is impractical to lift substrates over walls, fencing or similar.

Our hauliers use 18 tonne delivery vehicles. If the delivery location has restricted access, whether that is low bridges or overhanging trees etc, this must also be considered.

Articulated Truck

Gross Weight: 44 tonnes
Net Weight: 29 tonnes
Width: 3.2m
Length: 12.8m
Height At Rest: 4ms
Maximum Tip Height: 11m

Rigid Truck

Gross Weight: 32 tonnes
Net Weight: 20 tonnes
Width: 3.2m
Length: 11.5m
Height At Rest: 3.7m
Maximum Tip Height: 6.2m

**Moffat, Hi-Ab and Tail-Lift
Offload available for all soils,
growing media and turfs.
Request a quote today.**



Articulated Truck



Rigid Truck

Green-tree Intensive Roof Garden Substrate

Intensive green roofs typically by design are of a heavy construction with weights varying across the span of the roof. The substrate used in intensive green roofs can vary in depths from 100mm to 1000mm to accommodate large plants and plant groupings.

A blend of lightweight aggregate and the award-winning Green-tree Topsoil, the intensive roof garden substrate is ideal for green roof construction projects and particularly containerised planting. Lightweight in texture with good water holding capacity, Green-tree Intensive Roof Garden Substrate ensures healthy plants and trees in an accessible roof garden environment.

Typical Analysis of Green-tree Intensive Roof Garden Substrate

pH	7.8
Bulk Density at Field Capacity	1.19T/m ³
Total Porosity	45%
Permeability	196mm/hr
Organic Matter (LOI)	5.8%

NBS Clause

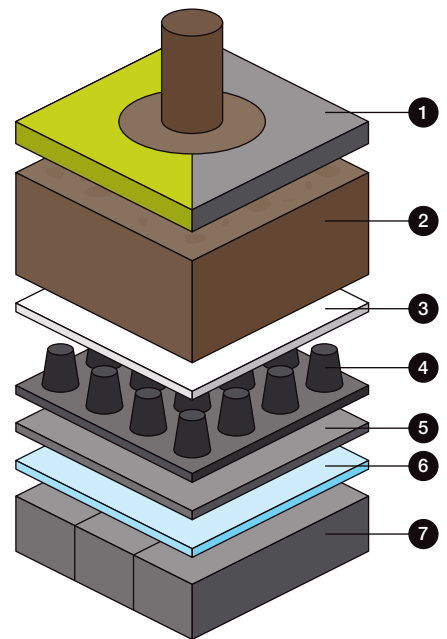
Section	Clause	NBS Clause Title
Q28	330	Imported manufactured topsoil/growing medium
45-40-85	340	Special imported topsoil and growing media



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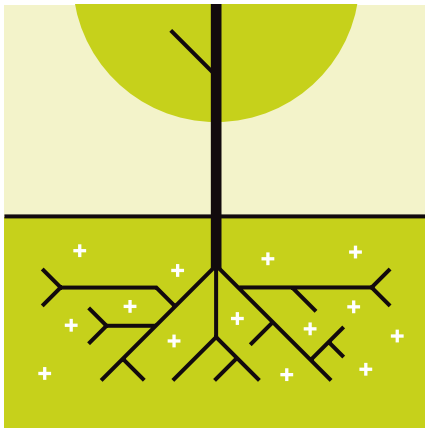
Green-tree Intensive Roof Garden



1. Soft and hard landscaping
2. Green-tree Intensive Roof Garden Substrate
3. Geotextile Filter
4. gtDeckdrain
5. Rootguard
6. Waterproofing Layer
7. Roof Structure



Benefits of Green-tree Intensive Roof Garden Substrate



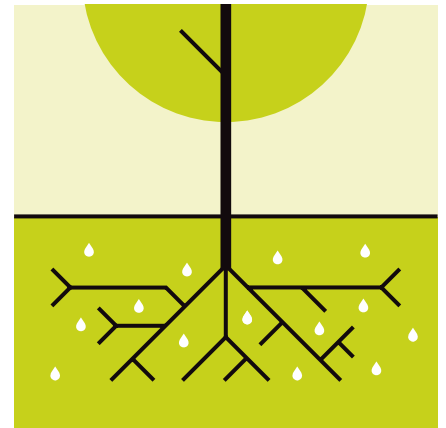
Good levels of fertility

Has the ability to sustain plant establishment and growth.



Excellent aeration properties

Creates holes into the soil to reduce air, water and nutrient compaction to enable these elements to reach the roots.



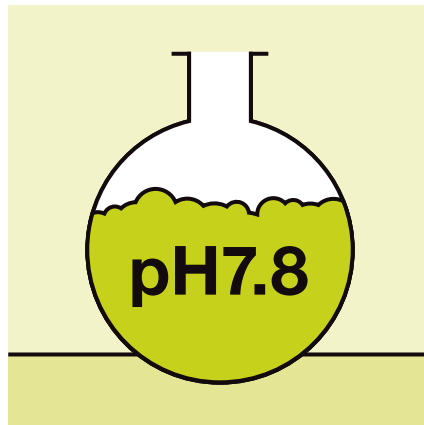
Good water holding properties

Water holding capacity is controlled primarily by soil texture and organic matter. This soil features a large surface area which enables it to hold more water.



Lightweight compared to standard soils

This is critical for roof gardens as lightweight soil decreases density and enhances drainage capabilities.



A typical pH of 7.8

pH 7.8 makes this soil an alkaline soil, ideal for a wide range of planting. It contains sodium, calcium and magnesium that builds strong stems and leaves.



Nationwide availability

We supply Green-tree Roof Garden Substrates across the UK to some of the most complex and impressive green roof projects we have in this country.

Case Study:

Maggie's Centre, Leeds

Green-tech is incredibly proud to have supplied the landscaping materials for the new rooftop garden of the Maggie's Centre Cancer Charity which is situated in the grounds of St James's University Hospital, Leeds.

The charity's 26th UK centre was designed by the award-winning Heatherwick Studios and landscape designers Balston Aguis. It was inspired by Yorkshire woodlands and features native English species of plants, alongside areas of evergreen to provide warmth in the winter months.

BALI registered contractor Swinburne Horticultural Services Ltd undertook the roof garden build and all the external hard and soft landscaping works. Green-tech has worked with Swinburne for many years supplying their projects across England and Scotland.

The outside space at Maggie's Leeds is as important as the inside. Inspired by founder Maggie Keswick Jencks' love of gardening, Maggie's Centres work closely with the architect, interior and landscape designers from the very beginning of each project to make sure there is a strong connection between the outside and inside space. They ask their landscape architects to use plants that will add colour, scent and interest throughout the year.



Green Roof Substrates



Leeds Maggie's Centre is roofed by three overlapping gardens which step down and overhang to shelter communal areas. The challenge was to span and enclose the level changes and reinstate the site's greenery. In this way, the hospital does not lose its last green space – it is lifted up, filled with woodland plants and made more accessible and inviting.

Swinburne Horticultural Services installed the roof garden and helped create the landscape vision over several months. During this time Green-tech supplied 270m³ of Green-tree Roof Garden Intensive Substrate which equates to 150 dumpy bags and gtRoofdrain which provides a lightweight continuous drainage layer across the roof structure. It collects and stores water to irrigate the plants during low rainfall periods

300 tonnes of Green-tree 12mm premium Topsoil was supplied for the general landscaping areas, along with 44 tree anchoring kits, Mona irrigation pipes, compost and bark mulch. In total 23,000 bulbs and 17,000 plants were planted which all help to provide a tranquil environment; a calming space for all to take time out and enjoy the nature around them. Visitors are encouraged to participate in the ongoing care of these.



“ We worked closely with Green-tech as we had to work around challenging delivery restrictions. Being in a city centre and the hospital's own restrictions meant it was imperative that Green-tech made each delivery to a very specific and tight timescale, which they did successfully. They used Moffett equipped artic trailers for easier unloading. The roof top garden looks amazing and has been well received. I would happily recommend Green-tech.

**Brian Watson, Landscape Architect,
Swinburne Horticultural Services Ltd**

Green-tree Extensive Roof Garden Substrate

Extensive roofs are generally thin, lightweight roof systems that typically have a planting media measuring 40mm to 100mm deep. Green-tree Roof Garden Extensive Substrate is ideal for incorporation into expansive green roof projects that require very little maintenance, such as sedum roofs. A proven growing media, that is lightweight in texture and manufactured from the award-winning Green-tree Topsoil. Green-tree Roof Garden Extensive Substrate is rich in nutrients which ensures quick plant establishment of thin lightweight green roof projects.

Typical Analysis of Green-tree Extensive Roof Garden Substrate

pH	8.0
Bulk Density at Field Capacity	0.67T/m ³
Bulk Density at Saturation	1.01T/m ³
Total Porosity	56.3%
Saturated Hydraulic Conductivity	7.3mm/min
Organic Matter (LOI)	2.9%

NBS Clause

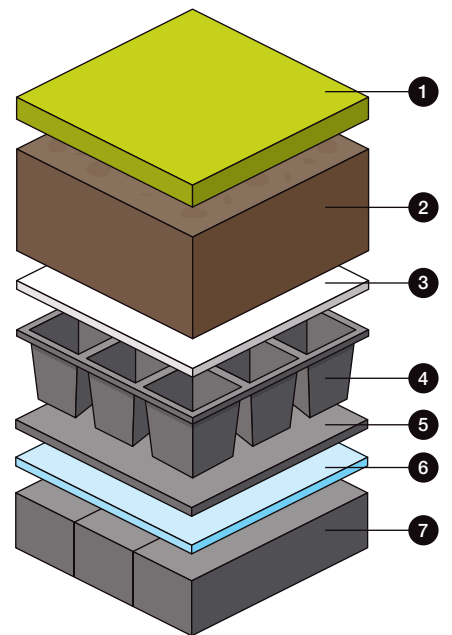
Section	Clause	NBS Clause Title
Q28	330	Imported manufactured topsoil/growing medium
45-40-85	340	Special imported topsoil and growing media



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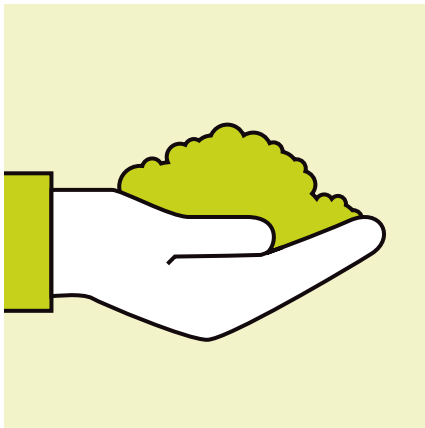
Green-tree Extensive Green Roof Construction



1. Vegetation
2. Green-tree Extensive Roof Garden Substrate
3. Geotextile Filter
4. gtRoofdrain
5. Rootguard
6. Waterproofing Layer
7. Roof Structure

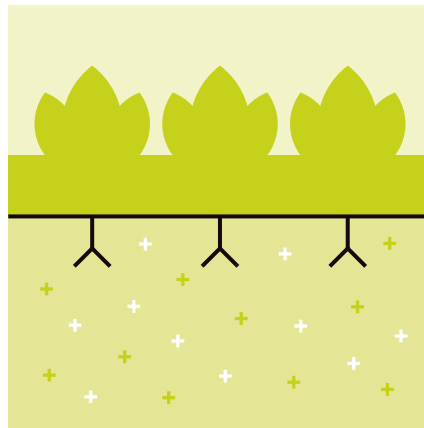


Benefits of Green-tree Extensive Roof Garden Substrate



Lightweight and simple to work with

Lightweight soil reduces density which alternatively enhances drainage performance ultimately making it simple to work with on-site.



Controlled fertility levels

Provides a suitable level of nutrients for the type of vegetation planted in extensive green roof projects such as sedum.



Good aeration and water holding properties

Features good air movement through the soil structure while soaking up rainfall to limit flooding or run off.



Guaranteed consistency

The soil has strong characteristics where the soil materials hold together to resist deformation and rupture, guaranteeing consistency throughout the green roof installation.



Suitable for low maintenance roofs with no/limited access

Extensive green roofs are intended to be viewed from elsewhere as a visual or ecological feature. The vegetation requires low maintenance unless in hot weather conditions where the vegetation may need an extra boost.



Nationwide availability

We supply Green-tree Roof Garden Substrates across the UK to some of the most complex and impressive green roof projects we have in this country.

Case Study: Brontë House School, West Yorkshire

Green-tech donated Green-tree Roof Garden Substrate to an independent school in West Yorkshire, Brontë House School.

The parents and friends of Brontë House School, which is located in a 70 acre campus in rural Apperley, wanted a Potting Shed that would act as a new classroom and form part of the children's outside activities. They raised the money for this through a number of fundraising events.

The potting shed has hay bales for the walls for insulating properties and to continue with the environmental theme the parents and friends of the school wanted a green roof. They approached Green-tech and we were happy to donate the 68 25ltr bags of Green-tree Extensive Roof Garden Substrate that was needed to lay a sedum mat roof straight onto.

Green-tree Extensive Roof Garden Substrate is a lightweight growing media that is manufactured from the award-winning Green-tree Topsoil. It has a balanced nutrient content which is perfect for harsh rooftop environments and requires little to no maintenance.

The addition of the extensive green roof to the classroom will prevent heat loss and provide cooling properties in the Summer months. The use of 10 sedum varieties that bloom at different points in the year also means that the children will be able to observe an ever-changing roof profile throughout the seasons.





“ A huge thank you to Green-tech for all your technical support and donation of materials.

Spokesperson
Brontë House Garden

“ We're always happy to help projects like this. It was great to be on site and witness first-hand the enthusiasm by the volunteers and the children. The potting shed looks great and the Green-tree Extensive Roof Garden Substrate will ensure the sedum mat roof takes and thrives. This will be an educational space that will be used by many children for years to come.

Kate Humes, Marketing Director
Green-tech

Green-tree Roof Garden Subsoil

Roof garden subsoil is a specially designed blend to complement and work in conjunction with our Intensive and Podium Deck Roof Garden Substrates as a base to build up the substrate profile. The product is a blend of lightweight aggregate and specially selected washed silica sand. The sand has been specifically sourced to give the substrate optimum drainage properties, which works well with the drainage needs of the green roof substrate whilst offering good levels of aeration.

Typical Analysis of Green-tree Roof Garden Subsoil

pH	6.7
Saturated Hydraulic Conductivity	720mm/hr
Total Porosity	40%

NBS Clause

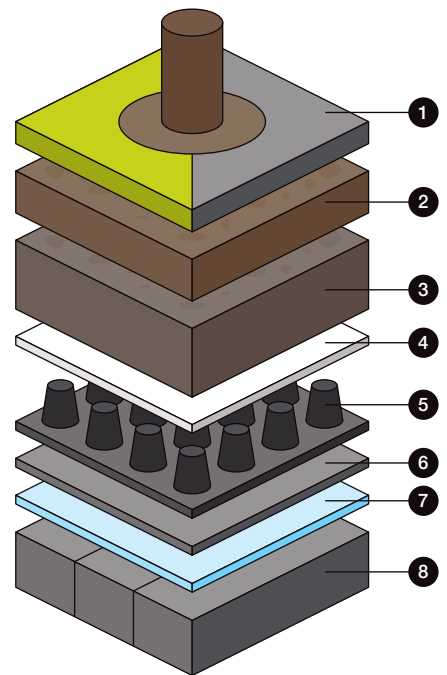
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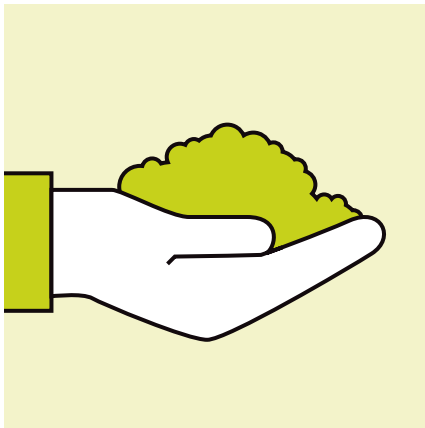
Green-tree Roof Garden Subsoil Construction



1. Soft and hard landscaping
2. Green-tree Intensive Roof Garden Substrate or Podium Roof Garden Substrate
3. Green-tree Roof Garden Subsoil
4. Geotextile Filter
5. gtDeckdrain
6. Rootguard
7. Waterproofing Layer
8. Roof Structure

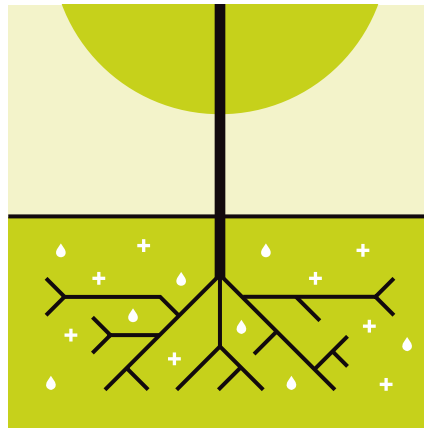


Benefits of Green-tree Roof Garden Subsoil



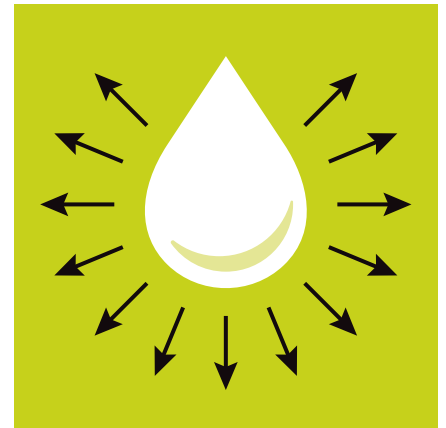
Lightweight and easy to install

Lightweight soils are much easier to manage. They are easier to spread and work with. These soils benefit vegetation establishment due to their open structure.



High quality ingredients

Lightweight aggregate promotes strong root development, improves aeration and drainage. Silica enhances the strength and rigidity of plants to help reduce pest damage.



Optimal drainage properties

Drainage properties enable the water to move freely through, and be soaked up by, the soil and carried to the plant's roots and stems for a healthy and established roof garden.



Good levels of aeration

With lightweight aggregate being incorporated into the blend, this opens up small holes and gaps within the soils structure to allow air, water and nutrients to the plants.



Guaranteed quality and consistency

This blend of subsoil is high quality which provides added reliance to perform exceptionally on a green roof environment under strong and harsh weather conditions.



Nationwide availability

We supply Green-tree Roof Garden Substrates across the UK to some of the most complex and impressive green roof projects we have in this country.

Case Study: Hiscox Roof Terrace, York

Green-tree's Intensive Roof Garden Substrate has been installed in one of the most high profile and newest commercial buildings in the centre of York.

Global insurer Hiscox Ltd has recently completed a £19 million office-build in the city's historic centre, employing 250 people so far.

The impressive building has been designed to offer views of York with natural light at each level of the building. The development is complemented by an expansive roof terrace housing Hornbeam trees and shrubs in raised beds that also double up as seating areas. The roof terrace also provides one of the most impressive views of York Minster in the city.

Over 30m³ of Green-tree's Intensive Roof Garden Substrate was incorporated into the roof garden landscape plan. Specifically selected for its lightweight qualities, green credentials and its proven success with containerised planting, Green-tree Intensive Substrate provides a balanced supply of water, air and nutrients to the tree's roots.





“ The Hiscox Building roof garden terrace had been designed to exploit the stunning views of the surrounding city centre and has been a pleasure to work on. Green-tree's Intensive Roof Garden Substrate was our first choice for this project. We have incorporated it into a number of other landscaped roof garden projects and always find it consistent in its high quality and easy to work with. The substrate was ideal for the landscaped areas of the Hiscox roof garden; it is lightweight in texture with adequate water-holding capacity for the containerised plantings

Adam Palmer, Palmer Landscapes

“ Green-tree's roof garden substrate is the product of many years of development, utilising contractor and architect's feedback to achieve a substrate that is lightweight but also provides the correct balance of nutrients. Utilising this product on the impressive Hiscox building is a great achievement for the brand and testimony to the reliability and proven success rates of this substrate in green roof installations.

Mark Wood, Business Development Director, Green-tree

Green-tree Podium Roof Garden Substrate

Podium green roofs are primarily built on top of a structure such as an underground car park or residential and commercial buildings. They are ideal for roof gardens where weight isn't the biggest issue. This nutrient rich substrate demonstrates a good level of drainage for water management needs. This substrate is consistent in its make up, the product has a high level of fertility and is ideal for supporting the growth of turf, small shrubs, trees and grass seed. It does not require additional feed upon application.

Typical Analysis of Green-tree Podium Roof Garden Substrate

pH	7.8
Organic Matter (LOI)	5.8%
Permeability	196mm/hr
Total Porosity	45%
Bulk Density at Field Capacity	1.19T/m ³

NBS Clause

Section	Clause	NBS Clause Title
Q28	330	Imported manufactured topsoil/growing medium
45-40-85	340	Special imported topsoil and growing media

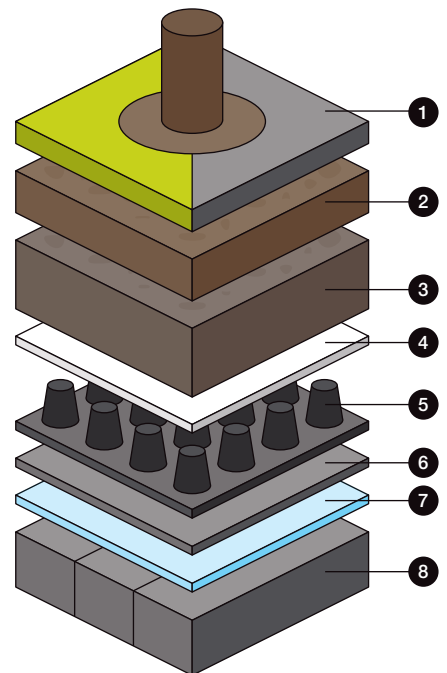
Podium Roof Garden Substrate can be used in association with a SUDS application.



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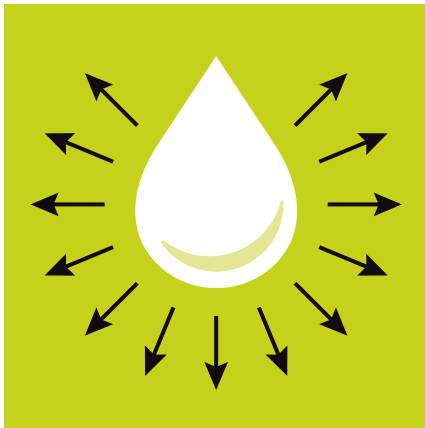
Green-tree Podium Roof Garden Substrate Construction



1. Soft and hard landscaping
2. Green-tree Intensive Roof Garden Substrate or Podium Roof Garden Substrate
3. Green-tree Roof Garden Subsoil
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5. gtDeckdrain
6. Rootguard
7. Waterproofing Layer
8. Roof Structure

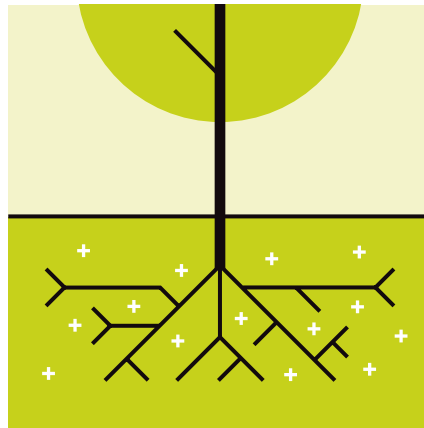


Benefits of Green-tree Podium Roof Garden Substrate



Good drainage for water management

This blend provides exceptional drainage which ultimately controls the movement of water to minimise damage to solid structures, such as buildings.



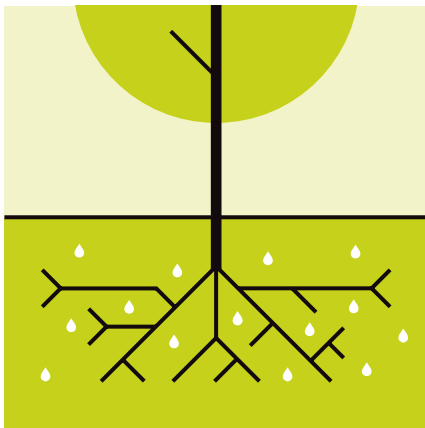
High fertility so no additional feed required

All the nutrients required by the vegetation planted are present in this soil blend meaning that no additional feeds to boost establishment are required.



Supports the growth of turf, plants and trees

Has the ability to support establishment and growth of all living things such as turf, plants and trees.



Excellent at retaining moisture

The soil is able to absorb and retain moisture which can be used by plants during dry spells.



Excellent environmental credentials

Like all green roofs, the presence of living plants and trees in any setting helps the environment and clears the air in busy and highly polluted areas.



Nationwide availability

We supply Green-tree Roof Garden Substrates across the UK to some of the most complex and impressive green roof projects we have in this country.

Case Study:

Leodis Square Apartments, Leeds

Leodis Square, Leeds is a city centre development, comprising four apartment blocks of up to 12 storeys high. It is also home to two podium gardens; situated on the roofs of the on-site car parking.

Palmer Landscapes is a commercial landscape contractor with 50 years' experience behind them. They constructed and landscaped the central podium courtyard gardens to offer an outdoor area that fits with the aspirational design of the overall development. The landscape design for the shared courtyard space contains varied seating opportunities, planting and lawn areas where residents can sit back, relax and enjoy city life.

Palmers have a long-standing relationship with Green-tech and turned to us for landscaping materials for this complex project involved importing 550m³ of Green-tree Lightweight Roof Garden Substrate through narrow walkways up to the Podium courtyard gardens. The Palmers team has a wealth of experience of transporting substrates onto elevated areas and they decided to blow the substrate utilising a specialist topsoil pumping wagon.

Green-tree Roof Garden Substrate is lightweight and free-draining and was purpose mixed for this site. It is manufactured from an environmentally sustainable compost of recycled materials and lightweight aggregate.

The Green-tech team worked closely with Palmers to coordinate timed, scheduled deliveries that adhered to tight city centre restrictions as well as requirements to keep a steady flow of substrate for the topsoil pumping wagon. The teams worked weekends and evenings to adhere to movement restrictions.



Green Roof Substrates



Green-tree substrate was delivered to the site on a grab wagon. The substrate was then transferred to a pumping wagon and over 100m of pipeline was used for the substrate transfer. Overall, it took seven days to complete the import of the substrate. Smaller planted areas employed a conveyor method where the substrate was placed on the conveyor belt tipped over the walls and barrowed to site.

The imported substrate created mounded plant beds and large turfed areas to the central courtyards to create the social spaces between the 4 buildings.

The Leodis Square project took two years to complete and won Palmer Landscapes a BALI Award 2020 in the category Roof Gardens/ Living Wall Installations – Residential Roof Garden or Podium Landscaping – under 250k

“ It was an innovative solution which required extensive planning and many trial runs. There were concerns over the quality of the planting material once it had been blown and we had disaster plans, should any machines breakdown. However, testing off-site and a great team behind us, helped us achieve the import of soil in 7 days. The Green-tree substrate was specifically selected for its green credentials, which appealed to both the client and main contractor. We have used this substrate on other roof gardens and knew that it would offer quick establishment which was exactly what this site needed.

Adam Palmer, Palmer Landscapes

“ I have worked with Palmers for a long time and I was delighted to be involved in this project. We needed to work closely together to make sure the flow of substrate was constant and delivered exactly when they needed it. I am delighted that this project has won them a BALI award. It's a fabulous urban landscaping project that the Palmers team worked incredibly hard to deliver.

Mark Browne, Key Account Manager, Green-tech

Small Project Installation: Green-tree DIY Substrate

This substrate is designed specifically for roof garden applications and is a blend of Sandy Loam BS3882 Topsoil and lightweight sand. This substrate is perfect for biodiverse green roof projects and has been designed with sedum, natural turf and wildflower matting in mind for installation of flat roofs, sheds or bike and bin stores.

Substrate is suitable for:

- Sedum Matting
- Sedum Plants
- Wildflower Matting
- Roof Turf
- Green Roof Garden Plants

Green-tree DIY Substrate thickness example:

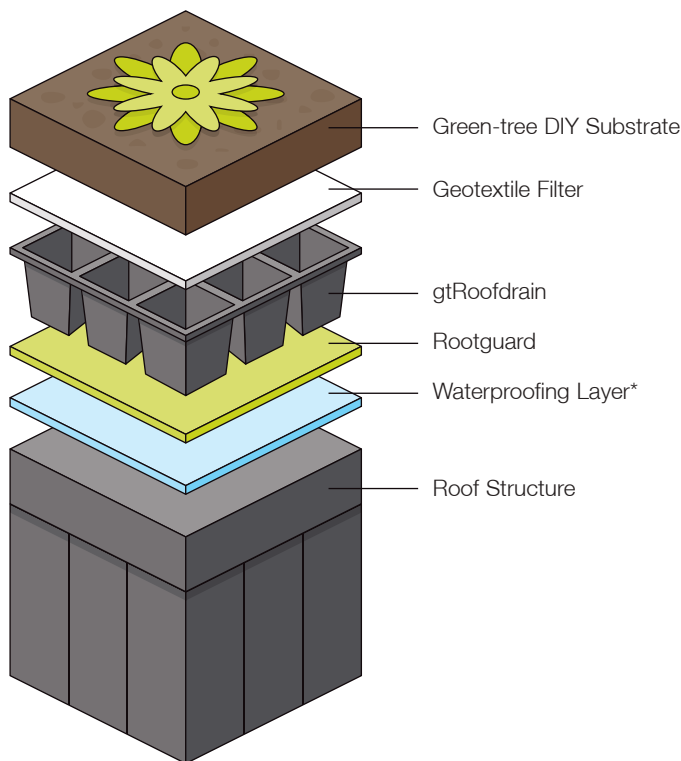
- Thickness for Sedum planted roofs – 40 to 75mm (40mm minimum)
- Thickness for Wildflower, Turf and Garden Plants planted roofs – 75mm to 100mm (75mm minimum)

Typical Analysis

pH	7.7
Extractable Phosphorus	53.4mg/l
Extractable Potassium	1023mg/l
Extractable Magnesium	126mg/l
Dry Density	820kg/m ³
Saturated Density	1380kg/m ³



Small Project Construction



Constructing a Green Roof

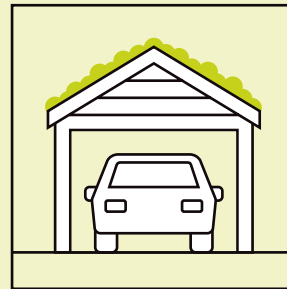
1. Start with a clear roof structure with a waterproofing layer.*
2. Fix Rootguard on to surface.
3. Install gtRoofdrain drainage system which features a geotextile filter attached to it.
4. Spread Green-tree DIY Substrate to required soil thickness depth.
5. Plant up substrate with chosen vegetation.

*Green-tech does not supply waterproofing layer membranes.

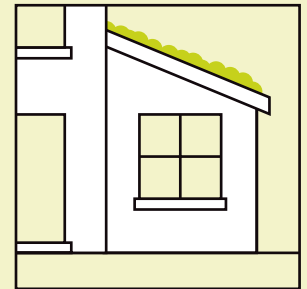
Please note: All green roof projects need to consider the regulations and requirements regarding fire breaks, access, design analysis and structure considerations. For more information, see page 30 which covers the GRO code – a service to help you find green roof regulations relevant to your project.

Data supplied is current at time of printing, for up to date analysis and results please contact us.

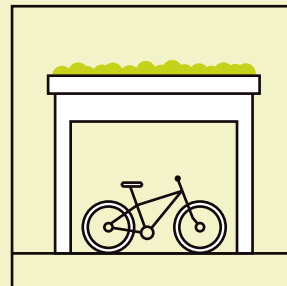
Applications



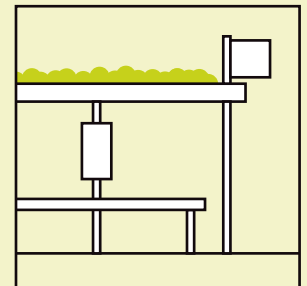
Garage and Car Port



House Extension



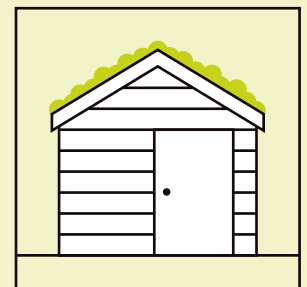
Bike Shed



Bus Shelter



Bin Shed



Garden Shed

Green Roof Ancillary Products



gtRoofdrain

A lightweight and consistent drainage layer featuring a geotextile filter that collects and stores water to irrigate plants during low rainfall periods. The core acts as a water reservoir for plant roots to access in dry intervals.

Benefits:

- Prevents plants from drying out
- Prevents waterlogging
- Assists in roof cooling
- Lightweight and easy to install

A range of sizes are available. Some sizes do not have a geotextile filter layer – please contact us for more information.

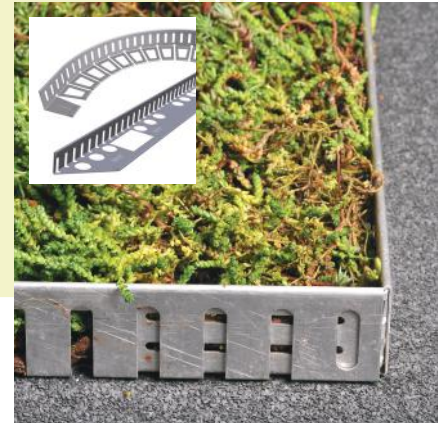


gtDeckdrain

Developed to provide high flow capacity and waterproofing with the incorporated geotextile filter. gtDeckdrain is durable and sufficiently robust to resist mechanical stresses imposed during installation and throughout its lifespan.

Benefits:

- Provides continuous drainage
- Protects the waterproofing layer
- Lightweight, durable and robust
- Consistent irrigation for plants, shrubs and trees



Edge Guard

Preserves the integrity of fire breaks and separates different roof garden materials. Ideal for using with sedum matting or sedum cassettes and holding gravel drainage layers on roofs converted into green roofs.

Benefits:

- Enhances the visual appearance of a green roof
- Lightweight, robust and can be cut to length
- Features a unique connection system
- Provides a neat edge to materials used within the green roof garden project

Angled and straight connectors are also available.

Case Study: Streatham Hub, London



Streatham Hub was an exciting development in South London offering modern apartments and leisure facilities. Building three is set around a landscaped residential courtyard and the entire site boasts exclusive landscaped walkways.

Willerby Landscapes won the landscaping contract and were looking for lightweight soils and drainage materials with specific requirements. They wanted a company that could deliver consistent quality over a period of time. Green-tree supplied 440 bags of Green-tree Intensive Roof Garden Substrate and 25mm gtRoofdrain, a geocomposite drainage and water attenuation layer used for Green Roofs to provide a lightweight drainage layer and water reservoir to sustain plant growth.

The site had many restrictions for access and only 10 (1.7m³) bags could be delivered at any one time. To accommodate this the haulier made 44 visits over a six month period to deliver the full 440 bags.

“ Logistically this job was challenging. Due to access restrictions, we did not have the ability to deliver on traditional flatbed Artics so we needed to come up with a solution. Working closely with our haulier network we managed to source a rigid vehicle capable of hauling an additional trailer with offload facilities. This enabled Green-tech to drop the trailer at a holding point and make delivery of the first load on the rigid vehicle and then reload the additional bags to go back to site. This solution has now become a standard option within our bagged soil haulage fleet.

Mark Wood
Business Development Director
Green-tree

“ Streatham Hub was a project including a third-floor podium landscape installation with very specific logistical requirements. Green-tech was able to meet these challenges which included timed deliveries that were required to ensure the 440 x 1.7m³ bulk bags of light-weight soil and gt Roofdrain arrived on 6 wheeler and drag lorries as and when we needed. We continue to use Green-tech on other schemes and with their high level of service have no hesitation in recommending them as a supplier of products for Landscape projects.

Jason Smith
Willerby Landscapes Ltd

Green Roof Ancillary Products



Sedum Cassettes and Matting

Sedum Cassettes incorporate a minimum of eight types of sedum into each individual cassette. The system is designed to provide an instant and practical green roof solution with minimal maintenance. Sedum is low-growing therefore ideal for harsh, open environments.

Sedum Matting is a drought tolerant green roof vegetation option. It provides biodiversity while providing insulation, improving air quality and increasing habitat creation. The plants also offer a variety of leaf types and flowers which creates a blend of textures when fully planted.

Benefits:

- Excellent drought tolerance
- Does not require a maximal substrate layer
- Suitable for green roofs as they can withstand harsh conditions and open environments
- Requires minimal maintenance



John Chambers Wildflower Matting and Seed

Wildflower Matting is a pre-grown matting that is easy and quick to install, requires low maintenance and grown in a special substrate designed to aid fast establishment and provides an instant wildflower meadow.

Green Roof British Native Wildflower Seed is a wildflower mix specifically developed for installation on green roof environments. This mix contains a mixture of low to medium height native wildflower and herbs suited to growing in low depth, low fertility substrates.

Benefits:

- Low maintenance solution for green roof planting
- Suitable for use in harsh weather conditions and open environments
- Creates new habitats and aids conservation of endangered species
- Increases biodiversity



Bark & Decorative Aggregates

Bark is a range of quality, high performance mulch products that aid the growth and development of newly planted trees in roof garden environments.

Decorative Aggregates include a wide range of gravels, pebbles, cobbles, slate, rockery and paving options to provide a low maintenance solution for roof garden projects.

Benefits:

- Can be used to avert wind uplift pressures on green roofs
- Stops debris and plants reaching the edge of the roof and gutters
- Long lasting and durable
- Aesthetically pleasing and finishes any green roof off immaculately



Green Screens

Ivy green screens provide a practical solution for green roof projects. They can be used as protection from the wind or as demarcation. These screens will survive and withstand even the toughest environments.

Benefits:

- Helps improve air quality
- Easy and efficient to install with low maintenance
- Environmentally friendly and fully recyclable
- Galvanised steel grid with a 10 year guarantee



Rite-Edge

Aluminium edging creates defined borders and edges on green roofs. Rite-Edge offers greater flexibility with the design of a green roof and it will not rot, crack or rust.

Benefits:

- Features little stakes which lock into position for strong, permanent positioning
- Easily formed into different shapes such as circles
- Manufactured from aluminium which is strong, light and durable
- Available in a range of colours (natural, brown, green and black)

Mona Irrigation

A subterranean irrigation system for your roof planting scheme. Mona reduces watering frequency, naturally irrigates and does not require any mechanical fixings.

Benefits:

- Simple to install and is manufactured from recycled materials
- Assists by keeping soil aerated
- Plant roots absorb water from the Mona tanks when required
- Reduces water frequency and eliminates over-watering and wastage

Rootguard – Permeable Solution

Manufactured using a unique coating to make it totally impermeable. Rootguard protects roots and soil structure from invasive growth or pollutants.

Benefits:

- Excellent resistance to root development
- High tensile strength and puncture resistant
- Allows water to permeate
- Resistant to biodegradation

The GRO Code

The team behind Green-tech Specifier are active supporters of the GRO (Green Roof Organisation) Code. The code offers guidance and best practice guides for the installation of a green roof in the UK. It incorporates technical information from manufacturers, distributors and installers from across the UK and considers the effect of the increasing popularity of green roof installations in modern developments.

The GRO code covers:

- The different types of green roofs
- The benefits of green roofs
- Configuration of a green roof
- Structural Design
- Waterproofing
- Drainage and Irrigation
- Fire, Safety and Access
- Site Preparation and Planning
- Installation of all green roof components
- General Maintenance Tips
- All documentation regarding regulations, design, specification and guidance

For more information or to download a copy of The GRO Code, please visit www.green-tree.co.uk



Technical Support

Green-tech Specifier offers a range of green roof solutions for any size project. The team has a wealth of experience of urban greening projects, their range of product solutions are designed to enhance plant growth and longevity.

We can offer:

- CPD Seminars
- Technical Drawings
- Project-specific Guidance
- Installation Guides

Contact the team today:

01423 332 114

info@gtspecifier.co.uk

www.gtspecifier.co.uk



CPD Seminars

Green Roof Systems

Develop an understanding of green roof substrates and the considerations to make at design stage. Learn why green roofs are widely recognised as one of the most effective methods of urban greening, and how they can reduce the ecological impact of a project. We cover:

- The four main types of green roofs and their characteristics
- How a green roof is constructed
- Pre-grown roof cassettes
- Selecting the correct substrate for your roof project
- How to attenuate source runoff
- Key information requirements
- Project examples
- Samples
- Q&A session



CPD Seminars are available online via video conference or face-to-face. Book your CPD online today at www.gtspecifier.co.uk or contact us on 01423 332 114

Other available CPD Seminars:

// The Green-tree Guide to Good Soils

The difference between natural, screened and manufactured soil. Explore the different soil types within the UK and discover how not all topsoils are created equal.

// Effective Tree and Plant Irrigation

Considerations to make when installing an irrigation system. Discover a simple, efficient and cost-effective way to give your trees and shrubs the best start, whilst reducing on-going maintenance costs.

// Tree Anchoring Systems

The benefits of tree anchoring systems and effective installation. How to anchor trees safely and securely without the need for unsightly or damaging tree stakes.

// A Resin-bound Tree Pit Installation

Providing a low maintenance, permeable finish to your project. See how the right treatment can add an aesthetically pleasing, sturdy and permeable surface finish to your tree pits.

// John Chambers Wildflower Seed

Understand the benefits of using wildflower seed in projects, and the factors to consider when choosing a wildflower mix. We'll take you through the considerations surrounding soil type and environment; conservation and the impact on biodiversity.

// Urban Tree Planting System

Provides cost effective support and protection for the pavement above, and guards against soil compaction. Understand how the TreeParker System allows the tree to establish natural, healthy growth in the upper, aerobic soil area, whilst protecting the hard landscaping above.

Green-tech Specifier is the Specification arm of leading landscape supplier Green-tech Ltd. Our team have a wealth of experience developing landscape solutions for urban developments and projects. Working with landscape architects, landscape contractors, garden designers and nurseries from across the UK, Green-tech Specifier has created a portfolio of systems and solutions designed to protect, enhance and improve trees in the urban environment.

- Urban Tree Planting
- Root Protection
- Ground Stabilisation and Support
- Tree Irrigation
- Soft Landscaping
- Roof Gardens
- Street Furniture
- Soils and Growing Media
- Wildflowers

For more information and guidance on the Green-tech Specifier product range and the solutions the team can offer, log onto www.gtspecifier.co.uk



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