



GeoGrow[®]

GG-Rootlok-UK23



Think Greener Infrastructure

Rootlok - The Engineered, Environmentally Friendly System.

#BuildingGreener

Sustainable Construction



Innovative green solutions for sustainable erosion control and earth retainment

You can expect expert knowledge on earth retainment solutions along with great personal service. Our team will help you understand how the system works and how it can be used.

To ensure you get the best solution for your application, we provide a full design service, ensuring our product and designs are tailored to your requirements. We offer solutions for every project we work on, allowing you to visualise how a Rootlok wall will fit in to your scheme. Where a formal design is required, our engineers will provide drawings and calculations to prove your structure is fit for its intended purpose.

We provide a full turnkey package: manufacture, design, supply, install and vegetate, providing reassurance of on-hand expertise right through to completion.



Let's help reduce carbon emissions together.



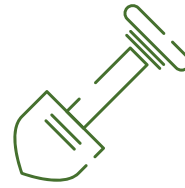
Manufacture



Design



Supply



Install



Vegetate

GeoGrow manufacture in the UK, the Rootlok Vegetated Retaining Wall System, a soft engineered modular geotextile bag and interlocking plate system that vegetates to provide an encapsulated facing to a permanent reinforced earth solution for both land and water applications, that delivers a sustainable green finish.

We offer a full turnkey design and build package for each unique application. We adapt the principles of MSE utilising BBA Certified Stratagrid Geogrids for reinforced earth structures, retaining walls, slope stabilisation with slope angles up to 70° and 10M high, with a 120-year design life.

Our in-house technical team provide market leading, innovative solutions, budget costs and formal designs all in accordance with BS8006-1 backed calculations, sections, and layout drawings for specific site requirements with PI, if required.

Rootlok installation teams have a proven track record and expertise to quickly install the optimum Rootlok system, executed safely and to see the project to a successful conclusion. GeoGrow is fully certified to work in various markets including rail, road, infrastructure, construction, building, environmental and river & flood protection works.

Our focus is to deliver an engineered solution that's cost-effective, environmentally friendly, low impact, that adds to the ecosystem providing major benefits and advantages over traditional hard engineered structures. GeoGrow's Rootlok Vegetated Wall System is the go to product choice for clients, specifiers, consultants and contractors who want to specify a more natural, green solution for their projects.

Regards,

**Christopher Ansell,
Managing Director**



**Helping to reduce
the carbon footprint.**



Before



After

Rootlok is an engineered environmentally friendly system specifically designed for earthen structures. The system provides a reinforced facing for walls and slopes, protecting surfaces from erosion and offering an ideal medium to achieve a sustainable green finish.

Rootlok is a soft modular system providing flexible solutions that offer the same benefits of a 'hard engineered system': permanent, strong, robust. However, unlike hard revetment alternatives, the system offers many more benefits that have a real impact on our environment:

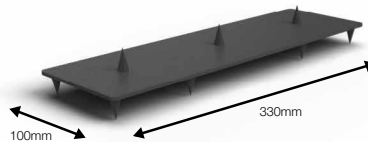
Features & Benefits

Save Time & Money

- A green solution with high performance levels
- Water flows and filters through the system rather than being redirected
- The system vegetates - roots grow within the structure to provide further structural support
- A long-term and permanent solution - the vegetation protects the structure from UV degradation and the effects of harsh weather
- Enhances the natural environment - creates natural habitats providing real biodiversity net gains
- Saves time and reduces cost- walls are installed very quickly with minimal labour and equipment
- Can be used in restricted spaces - no large equipment required
- Withstands differential settlement
- Made from recycled material



Rootlok Non-woven geotextile bag
Filled bag weight:
Approximately 35kg



Rootlok Interlocking Plate
100% Recycled Polypropylene
3 top spikes
8 bottom spikes

Manufactured in the UK

We are committed to our customers

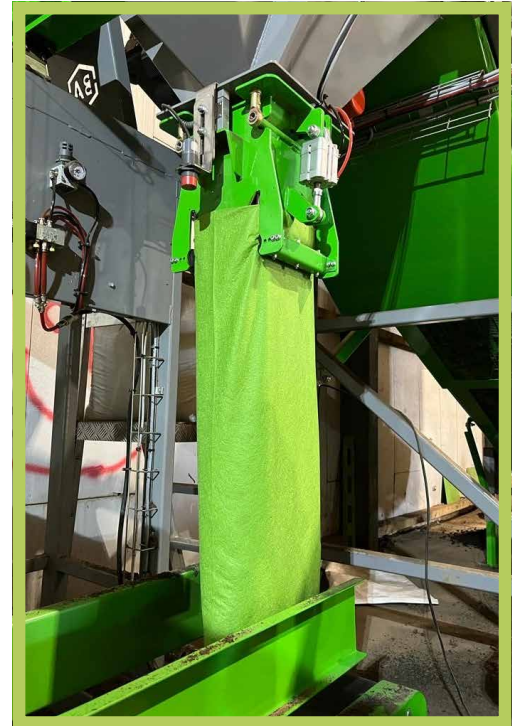
We believe in building good long-term relationships and giving our customers the chance to meet the Rootlok manufactures face to face. This promotes a positive communication stream and shows we mean business.

Giving you more control

With greater communication comes greater control. You can check on progress, on quality control and be able to see first-hand what's going into your green solutions.

You can develop ideas with our technical team based in Cannock, Staffordshire.

Being able to meet with us in person opens up the opportunity for you to share your experience and ideas you have for your next project. Lets talk planting techniques that may improve your aesthetic finish and installation.



Choice of product

We have a strong heritage of design and manufacturing in the UK. You can be proud that your choice is British-made and the knowledge that it will add value to your clients projects.

Help Great Britain becomes a nation of manufacturers again

You are reinforcing the manufacturing sector by making a choice of a British made product. If you can choose 'Made in the UK' – you should. We don't want to lose the manufacturers and the skills needed to make the high quality products that we are known for here in the UK.

Available from stock

Fast delivery is possible to anywhere within the UK. No more waiting for new stock arrivals from overseas. You can have your product off the shelf, ready to install, straight away.



Design

From concept to completion of your Rootlok Solution, our experienced team of designers and geotechnical engineers deliver sustainable engineered techniques that challenge soil erosion, wall retention, habitat creation and river and flood protection to name a few.

Initial design

We will provide you with technical advice and a free initial design and quote. This initial detail / solution and costings will show you what we would expect the solution to be.
(This can alter based on the formal design & site visit)

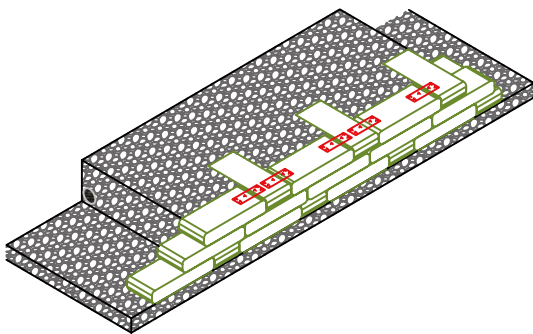
Formal design

Our design team can complete in-house formal designs to help optimise the required solution. Included with this are design drawings, a design report detailing methodology and geotechnical analysis confirming the solution is British Standard and Eurocode compliant. As standard all our designs come with £5 million of professional indemnity insurance, with collateral warranties available at an extra cost.

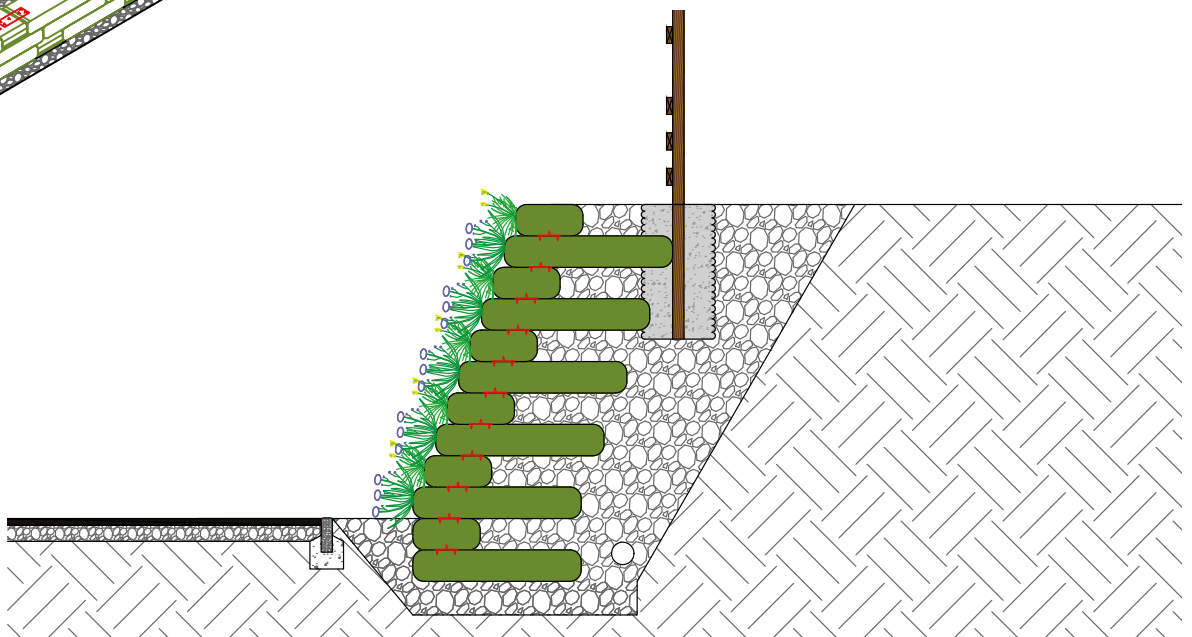
Technical advice is provided throughout the design process and up until the completion of the build.

On completion of a formal design, a formal quote will be provided for supply only, or a supply and install price for GeoGrow's in-house team to provide a full installation service.

Past projects have demonstrated major cost savings by using the Rootlok system in place of hard revetments and our environmentally sensitive structures are often more durable.



With you every step of the way. Our in-house technical team are on hand to provide support during, and after, installation of your Rootlok project.



Supply



If you wish to install the Rootlok system yourself, you can, and we will supply the installation guides as standard to help you complete the build with ease.

Furthermore, if you are looking for that extra support, we can also organise for one of our experienced supervisors to provide daily supervision at an extra cost.

Our products are manufactured in the UK and the bags arrive to site prefilled on pallets for immediate installation on-site, along with the correct quantity of interlocking plates required for your project.

Unfilled bags are available should you wish to fill yourselves on-site, attention must be taken to fill the bags correctly and to the medium specification, so the wall can be constructed to the correct design and achieve a sustainable green finish.

A proven, green alternative to concrete, gabion and other stone filled wall systems.

Install



Our system is a specialised geotechnical engineered solution, our in-house teams & approved installers have installed 100's of Rootlok solutions throughout the UK. Please take advantage of our full turnkey package.

- Once your structure is designed, we can cost for our in-house construction team or one of our approved installers to fully install your Rootlok wall.
- Our fully trained site staff specialise in the construction and vegetation of the Rootlok system and have gained expertise having worked in many of the UK's market sectors.
- We will install the system in a safe and timely manner ensuring a high-quality construction, saving you time and money.
- We also provide a post construction and after care service. We can supply you with as built information and can produce operation and maintenance manuals, if required.
- Our hydroseeding team are more than happy to provide advice on the correct vegetation type needed to produce a sustainable green finish on your project.

Vegetation

Enhancing our Natural Environment

Rootlok enables end-users, engineers, and contractors to increase green infrastructure within their schemes and projects. The system can be vegetated using local grasses and plants that allow the structure to blend seamlessly with native flora. The Rootlok System brings numerous benefits to the local eco-system, delivering major biodiversity gains in both urban and rural applications. Features such as bat boxes, pipe inlets through to back soils for voles and birds can be added during the design stage helping to create habitats for local wildlife whilst enhancing the natural environment.



Rootlok's segmental design allows the integration of many plant species within the structure. It creates an environment for vegetation to thrive*, resulting in a strong root system that enhances the structural integrity of the system and its green credentials.

*Special attention needs to be taken to the location of your application, ensuring a more sustainable green finish and successful biodiversity net gain.

There are several vegetation methods to allow you to achieve the green benefits offered by the system:

Hydroseeding – an ideal method for vegetating medium to large Rootlok Walls, a seed mix is sprayed onto the bags after completion achieving an even establishment of vegetation across the structure.

Seeded Rootlok Bags – a seed mixture of your choice is inserted into the Rootlok bag during the filling process – often the preferred method for smaller installations and areas where hydroseeding would be difficult.

Live Planting - plant plugs and live stakes can be inserted into the Rootlok bags or placed in-between the bags. Live planting can be completed during or after installation and can achieve a more decorative finish.

Turf Pinning – turf can easily be pinned to your Rootlok wall allowing for an instant green finish to be achieved.



Hydroseed



Pre-Seeded



Turf



Plug-Planting

Case Study

Leeds Flood Alleviation Scheme, Phase 2



GeoGrow were invited to provide a formal design for the supply & installation of a Rootlok vegetated wall system to part of the riverbank along the river Aire corridor between Wellington Bridge and Viaduct Road.

GeoGrow's design engineers worked along side BAM Nuttall & Mott MacDonald who were to carry out a range of works along the river Aire including areas where major flood events hit Christmas 2015. GeoGrow provided a design for an earth reinforced structure utilising geogrids with a Rootlok geotextile bag facing to provide a sustainable green finish. The wall measured approximately 44 metres long x 3 metres high and had a geogrid wraparound face to provide extra factors of safety.

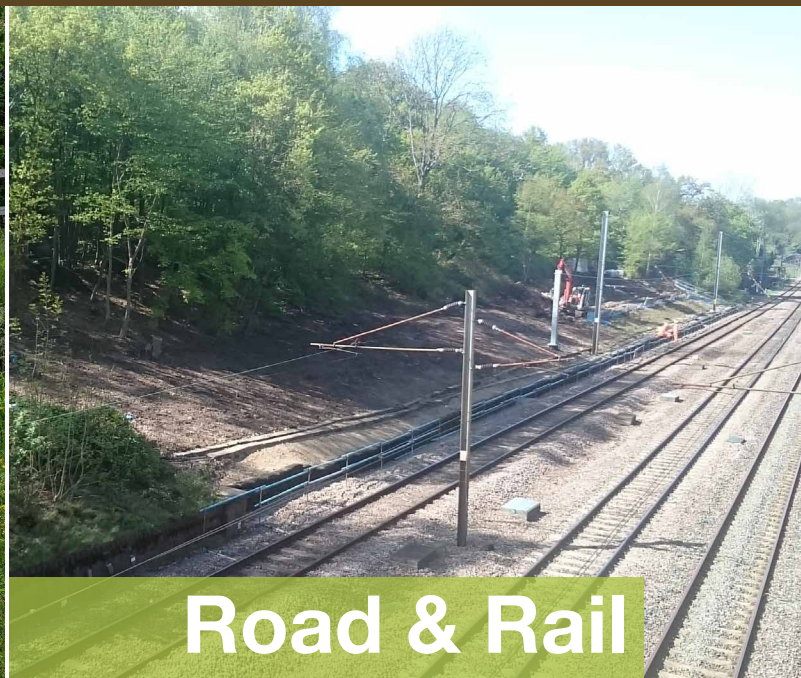
Rootlok was chosen to provide a softer, engineered system to promote a more natural structure that provides more benefits for the environment, wildlife habitats and a vegetated finish, all stone was sourced locally to help reduce the schemes carbon footprint.

The wall was installed within a 6-week period, on completion in December 2020, the front face of the Rootlok system was hydroseeded with a riverbank seed mix and planted with a range of herbaceous flowering plants. Over winter, the seeds were protected by our high-performance mulch mix and successful germination took place in spring 2021, grass and plants started growing and gave a colourful pleasing vegetated finish for the remainder of 2021. Eight meters back from the top of our wall BAM Nuttall built a brick & block flood wall to further protect the local businesses & residents.

BMMjv were delighted with the Rootlok system and approval from the client Leeds City Council and the Environmental Agency will lead to other installations of the Rootlok system.



Residential



Road & Rail



River & Flood



Commercial



**Landscape
& Gardening**



Wetlands & Habitat

Solutions

The Rootlok System can be used as a solution for many construction, commercial and private applications.

The Rootlok Vegetated Wall System offers engineers, architects, contractors, home owners and others an engineered solution for building retaining walls quickly and easily with a focus on green infrastructure and carbon reduction. Rootlok can be used to build standard gravity walls in small / medium sized applications, as well as reinforced structures that are 10m or more in height, depending on ground conditions and surcharges.

Rootlok applies standard soil stabilisation practices and engineering methods to build retaining walls at near vertical angles. The systems simple design creates a modular wall face that easily integrates vegetation into the systems performance.

Applications

The Rootlok Vegetated Wall System is extremely versatile, allowing it to be used in many applications;

- Erosion control
- Slope stabilisation
- River and flood protection
- Landscaping
- Headwalls
- Earth reinforced structures
- Retaining walls
- Gravity Walls
- Watercourses
- SUDs - Ponds - open attenuation walls

Rootlok has been successfully used in several watercourse applications, including river, stream and storm water channel works connected to rail projects.

Reinforced walls

A range of geogrids can be used within the Rootlok system and locking plates in reinforced slope applications, with the possible advantage of using site won material. One of the key benefits of Rootlok is how fast and easy it is to install unlike hard edge structures such as concrete, stone, block, panel and gabion systems. This allows it to be used in locations with difficult and varied terrains that are not suitable for traditional methods.

Alongside our team of fully qualified engineers we can provide a solution specific to your requirements. Our initial solution is free of charge, and we provide engineered formal designs, calculations and CAD drawings at an extra cost.

Photo Gallery



Before



After



Before



After



Before



After

Photo Gallery



Rootlok[®]



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The information presented in this publication is for general information only. While every effort has been made to ensure its accuracy, this information should not be relied upon for any application without verification of accuracy, suitability, and applicability for the use intended, which is the sole responsibility for the user. A final, project specific design should be prepared by a qualified, licenced, professional engineer based on site conditions.

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Sustainable | Green | Vegetated | Ecological