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Geosynthetics

Product Brochure

“Creating Innovative Solutions with Outstanding Products”

Specialist Civil Engineering Solutions



Northumberlandia 2012

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Geosynthetics Limited is a successful, dynamic and creative business. Since its incorporation in 1998 the company has grown rapidly into the largest independent geosynthetics supplier in the UK.

The company has earned an excellent reputation for providing high quality products and excellent levels of customer service, all of which are cornerstones of the company's commitment to its customers.

Geosynthetics Limited is committed to holding stocks in excess of £1,000,000 enabling next day delivery.

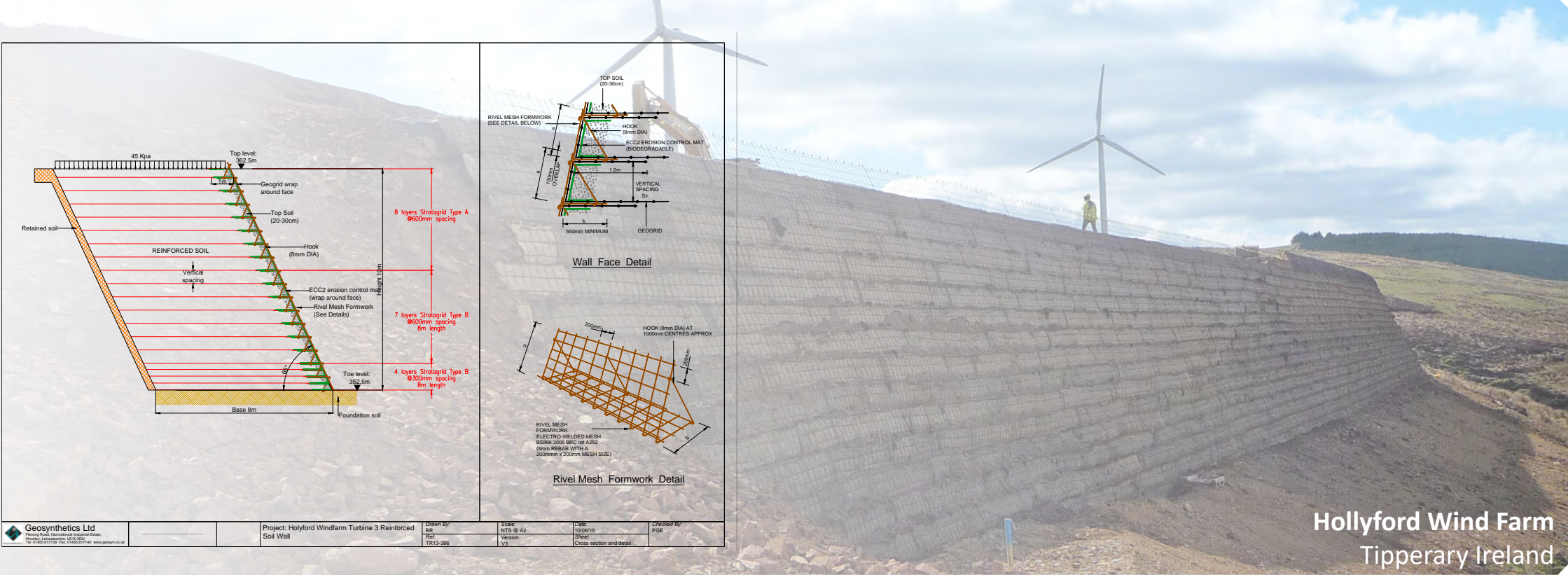
Not just a product supplier, Geosynthetics Limited provides “inspired solutions for civil engineering” through its team of civil and geotechnical engineers. Using extensive knowledge of products and applications, the team are developing an enviable reputation for innovative and sustainable solutions that not only achieve the desired objectives but also save the customer time and reduce overall costs.



**INVESTORS
IN PEOPLE** | Bronze

Geosynthetics Limited

Unique selling points

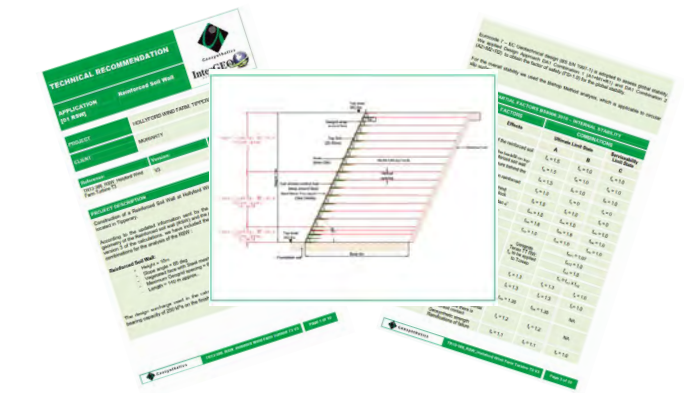


Delivery performance

As a company Geosynthetics Limited has grown its product range and now holds the largest product range of its kind in the UK.

The centrally located distribution centre based in Hinckley, Leicestershire holds over £1,000,000 worth of stock enabling the business to honour its delivery commitments throughout the UK.

Geosynthetics Limited transport team is dedicated to accommodating any special requests customers may have. It is this dedication and attention to service that has enabled Geosynthetics Limited to hit an 'on time' transport figure of 99% for the last two years.



Independently engineered solutions

So much more than just a product supplier, the support and guidance we offer free of charge makes us unique. We will assist you in achieving your desired solution.

Our dedicated Engineering Team offers free preliminary calculations and technical recommendations, free from software restraints, offering truly independent solutions every time. Being independent means that we can use a combination of different products to offer the complete solution according to each projects requirements.

- Specialist applications include;
- Reinforced paved and unpaved roads
 - Working platforms
 - Gravity gabion walls
 - Reinforced earth walls and slopes
 - Reinforced embankments
 - Shallow foundation stabilisation

Commitment to the environment

The industry requires a keen understanding of the adverse effects that can be caused by the application of our products. We actively seek out all opportunities to minimise our impact on the environment and guide customers into choosing the most environmentally sound solution to their application.

We have implemented an environmental management system which has received ISO:14001 accreditation, enforcing our commitment to provide environmentally conscious solutions to our customers applications.

Student Development Scheme

As part of our ongoing work within the local community we are particularly proud of our Student Development Scheme. The award is intended to encourage local students to further their education. Each recipient receives £1,000 during each year of their degree course along with a paid internship every summer.

Local Schools and Colleges

Working alongside local schools and colleges in conjunction with Careers Academy UK, we engage with students encouraging them to be the best that they can be by offering mentoring, work experience placements and open day opportunities.

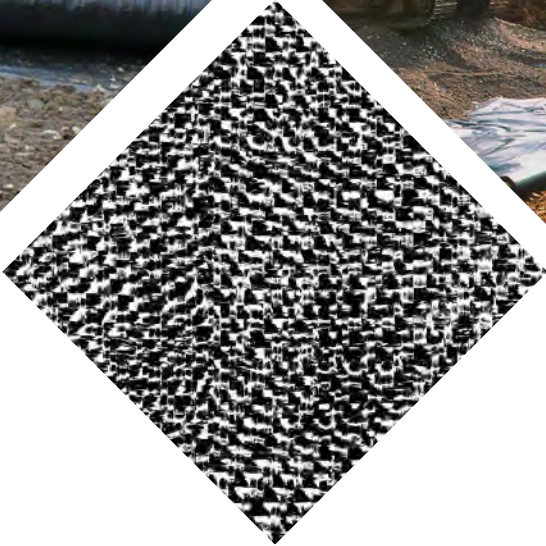
University research programs

We have recently embarked on a programme of collaborations with Universities. As a result we have been able to offer students a range of research and development projects, guest lectures by our experienced engineering team and internships.

Striving for excellence

At Geosynthetics our priority is to provide an exemplary customer experience right from the initial enquiry through to the comprehensive after-sales service.

Our quality processes are accredited to the ISO 9001 standard, meaning our customers can be assured that we have the capability to retain their requirements at the heart of everything we do.



Rhyno® range
Grades and roll sizes

Grade	Roll size
GW609	4.5m x 11.1m
	2.25m x 50m
	4.5m x 100m
	4.5m x 100m Van Roll
GW8123	4.5m x 100m
GW8129	5.25m x 100m
GW8143	4.5m x 100m
GW8161	4.5m x 100m 5.2m x 100m
GW8180	4.5m x 100m
GW8210	5.25m x 100m

Function

- Reinforcement
- Stabilisation
- Separation
- Filtration
- Drainage

Application

- Roadways
- Car Parks
- Haulage yard
- Working platforms

Since its introduction in 1999 Rhyno® has been helping contractors to reduce maintenance costs by extending the life of roadways, car parks, haulage yards, and a wide range of other heavy traffic areas. With its advanced weaving technology Rhyno® gives you the reliability and reassurance of one of the UK’s leading geotextile brands.

As the name suggests Rhyno® woven geotextiles are strong, robust and durable. Made from polypropylene tapes, the industry-leading design has created a geotextile that combines high tensile strength with exceptional puncture resistance to give outstanding performance and longevity.

Already proven across millions of square metres in the UK, Rhyno® reduces the degradation of any surface that relies on an aggregate sub base by distributing loads more evenly and reducing rutting. In addition, due to its resistance to all naturally occurring soil acids and alkalis, Rhyno® woven geotextiles can be relied upon to continue performing underground for many years.



Ekotex® geotextiles form part of the core geotextile range supplied by Geosynthetics Limited. The non woven range is thermally bonded and needle punched to give the fabrics increased performance characteristics.

The Ekotex® ranges are commonly specified as separation, protection, filtration and drainage geotextiles and regularly feature within our Engineering department's technical recommendations. Ekotex® is the non woven of choice throughout our reinforced working platforms, piling mats and gabion walls.

Due to the high demand within the market the white geotextile is currently stocked in a range of grades from 100g/m² up to 300g/m² and can be supplied in various widths. Heavier grades are available upon request. Technical support is available for anyone seeking assistance or guidance on suitability for a particular project or application.

Function

- Reinforcement
- Stabilisation
- Separation
- Filtration
- Drainage
- Protection

Application

- Roadways
- Car parks
- Haulage yard
- Working platforms
- Drainage systems
- Sports grounds

Ekotex® Range

Grade	Roll size
Ekotex® 06	4.5m x 10m (Pack) 2.25m x 50m 4.5m x 100m
Ekotex® 07	4.5m x 100m
Ekotex® 10	2.2m x 100m 4.5m x 100m
Ekotex® 12	2.2m x 100m 4.5m x 100m
Ekotex® 14	5m x 100m
Ekotex® 20	2.2m x 50m 5.5m x 80



Grade	Intensity Level	Roll size
Fiberforce® Arena	Standard	2.2m x 100m 4.5m x 100m
Fiberforce® Extra	Intermediate	4.5m x 100m
Fiberforce® Premium	High	2.2m x 50m 5.5m x 80m
Fiberforce® Select	Professional	6m x 150m

The Fiberforce® range of geotextiles has been developed to provide long lasting performance in all types of equestrian arenas and gallops and is compatible with all types of riding surfaces including silica sands.

The unique manufacturing process both needle punches and thermally bonds the fibres that make up Fiberforce®. This combination creates a geotextile with an increased flow rate for drainage and a very fine pore size to prevent clogging, ideal for use with silica sand riding surfaces.

The total cost of a typical (800m²) 40m x 20m arena is often in excess of £10,000. Whilst the cost of Fiberforce® geotextiles represents a small fraction of the overall cost, they play a vital part in the performance and longevity of the riding surface.



Vosper Thornycroft

The Centenary Quay Project has turned the former Vosper Thornycroft shipyard into a bustling riverside development on the banks of the River Itchen in Southampton.

Geosynthetics Alert® was the obvious choice for practical, commercial and technical reasons.

- Alert is available in large rolls of 450m² to minimise laps and help speed up installation time.
- It is the most popular bright orange contamination indicator geotextile available in the UK.



Function

Separation

Filtration

Drainage

Warning Layer

Application

Contamination indicator

Brownfield sites

With government policy leading to an increase in the development of Brownfield sites the decision is often made to contain hazards underground instead of removing or neutralising them. In these cases it's vital that adequate warning is put into place to protect anyone carrying out future excavations.

Responding to a growing need to address this problem, Geosynthetics Limited have developed Alert®. Produced in a vivid orange colour, Alert® is designed to be clearly seen as a warning barrier. Alert® is manufactured from polypropylene tapes with excellent strength and elongation properties. Alert® excels as both a separator and contamination indicator providing a long lasting and effective solution.



Televev® is a range of polyester woven geotextiles, offering high strength at low elongation and with strengths of up to 1000kN/m. Televev® provides solutions to the toughest reinforcement applications and is utilised in a range of engineered solutions.

Televev® can be used as soil reinforcement within several application areas and is suitable for use under extremely high loads and coarse material i.e. embankments and basal reinforcement. It is also used where the design life requirement is 120 years (DRMB- Design manual for roads and bridges).

Used as a reinforcement layer, Televev® geotextiles prevent the construction layers from mixing with potentially damaging soft sub grade, increasing the strength of the granular layers and soil platforms, thereby preventing the premature failure of the construction. Televev® offers a great advantage where both high-strength reinforcement and separation are needed.

Function

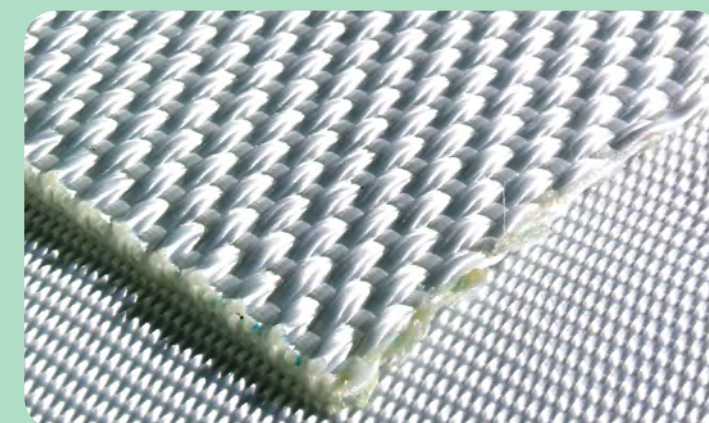
Stabilisation
Separation
Reinforcement
Drainage
Filtration

Application

Coastal defence works
Reinforced soil structures
Retaining walls and steep slopes
Embankments over soft sub-soil
Embankments over piles
Load transfer platforms
Roadways

Material Properties

- High strength at low elongation
- Resistant to UV light, chemical and biological degradation
- Resistant to creep and mechanical damage
- Good friction properties for all types of common fill materials



Fibertex®

Network Rail approved non woven geotextiles



Fibertex® is manufactured from polypropylene staple fibres. The range of non woven geotextiles are resistant to all naturally occurring soil alkalis, acids and fungal attack. They will not decay and are available as UV stabilised materials.

The high water flow and excellent filter properties combined with their exceptional mechanical properties, ensures that fine grained particles are retained at the same time as allowing the free movement of water. As a result of this, stability is improved and the life of the construction is considerably prolonged.

Fibertex non woven fabrics are characterised by high porosity, elongation and energy absorption properties which makes them ideal for a wide range of applications.

The thermal bonding treatment imparts additional strength to the fabric which is particularly beneficial to ground reinforcement and separation applications, thereby reducing the loss of ground material into the subsoil. The high strength, high puncture resistance and elongation properties of Fibertex® provides excellent resistance to installation damage.



Grade	Usage	Roll Size
Fibertex® F-32	Filter	5m x 100m
Fibertex® F-32M	Filter	5m x 100m
Fibertex® F-35	Filter	5m x 100m
Fibertex® F-40	Separator	5m x 100m
Fibertex® F-300M	Separator	5m x 100m
Fibertex® F-46	Separator	5m x 100m
Fibertex® F-50	Separator	5m x 100m
Fibertex® F-400M	Separator	5m x 100m
Fibertex® F-45	Separator	5m x 100m
Fibertex® F-600M	Separator	5m x 100m
Fibertex® F-800M	Separator	5.5m x 50m
Fibertex® F-1000M	Separator	5.5m x 50m
Fibertex® F-1200M	Separator	5.5m x 50m

All grades listed have P.A.D's numbers

Function

- Separation
- Protection
- Erosion control
- Filtration
- Drainage
- Reinforcement
- Stabilisation

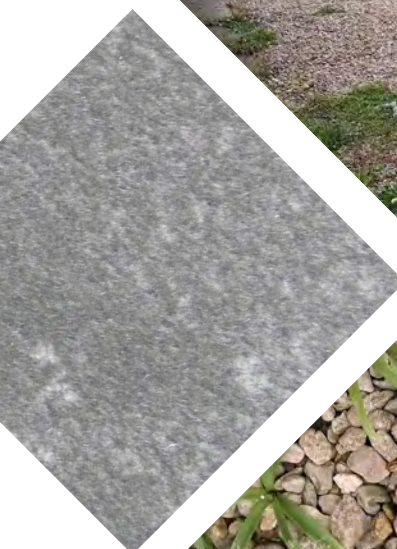
Application

- Railways
- Embankments
- Airport runways
- Roadways
- Coastal protection



2 in 1

Weed suppression fabric



Benefits

- Chemical free
- Effective weed control
- Allows air, water and nutrients to reach the soil and plant roots
- High strength
- Highly puncture resistant
- Highly permeable
- Eliminates more light

Applications

- Driveways
- Paths
- Patios
- Timber decking
- Block paving
- Soft landscaping under turf

Roll sizes

- 1m x 10m
- 2.25m x 25m
- 2.25m x 50m

Geosynthetics 2 in 1 weed suppression fabric is strong and highly puncture resistant and most importantly, exceptionally permeable. 2 in 1 is more permeable than many of its competitors whilst being half the weight, making it the clear choice for any landscaping project.

2 in 1 is black and UV stable creating more shade beneath which allows more water and oxygen to reach the soil below, making 2 in 1 the perfect weed suppression fabric.

One of the many benefits of 2 in 1 is that the product stabilises and strengthens what it is placed upon. It reduces rutting and unevenness, eliminates loss of stone and subsoil and loss of bedding sand.

Combined with mulch or decorative gravel it eliminates light and therefore restricts weeds from growing. Geosynthetics 2 in 1 is a weed suppressant not a weed killer. As with all weed suppression fabrics, 2 in 1 should be used in conjunction with an effective weed killing solution.



Recognised as world leading geogrids, Tenax LBO and TT ranges have a reputation for excellence. Used in a range of different applications, Tenax biaxial and uniaxial geogrids provide strong and durable options for reinforcement.

Our in house engineering team regularly recommend the use of Tenax TT geogrids throughout reinforced soil wall and slope applications. The flexible geogrid provides the perfect solution to intertwine with existing soil to create a stable wall which can be faced to suit the customer’s needs.

The Tenax LBO biaxial geogrids are used primarily for reinforcement on roads which need to take heavy traffic, piling mats and working platforms. Combined with Ekotex® non woven geotextile or Rhyno woven geotextiles, dependant on application, Tenax provides consistent results every time.

Function

- Stabilisation
- Reinforcement

Tenax® TT (Uniaxial) Applications

- Reinforced soil walls
- Flood and noise bunds protection
- Vegetated steep slope embankments
- Landslide repair
- Modular concrete block retaining walls
- Road and railway embankments
- Rock fall protection system
- Containment of dykes for landfill and water basins

Tenax® LBO HM (Biaxial) Applications

- Paved and unpaved Roadways
- Load transfer platforms
- Car parks
- Airport runways
- Industrial yards
- Embankment foundations over soft soil
- Railroad ballast reinforcement
- Soil reinforcement of building foundations
- Working platforms
- Piling mats

Grid	Roll Sizes
Tenax LBO 220	4m x 50m
Tenax LBO HM3	4m x 75m
Tenax LBO 370	4m x 50m
Tenax HM3L	5.3m x 70m
Tenax LBO 440	4m x 50m
Tenax LBO HM4	4m x 50m
Tenax TT045	1m x 100
Tenax TT060	1m x 75m
Tenax TT090	1m x 50m
Tenax TT120	1m x 30m



Stratagrid®
Soil reinforcement solutions



Stratagrid® geogrids reinforce soil with their high molecular weight and high tenacity polyester yarn. The yarns are precision knitted into a dimensionally stable network of apertures providing tensile reinforcement capacity in both principle directions. A black UV stabilized saturation coating provides further chemical and mechanical benefits.

Stratagrid® geogrid is mechanically and chemically durable, within the installation phase, in aggressive soil or in aqueous environments. Stratagrid® is produced in multiple strengths in order to provide the most efficient design possible. Stratagrid® has been proven in the lab and by its installation in thousands of applications over the past decade.

Stratagrid® is the perfect solution in applications such as reinforced slope and walls, basal reinforcement and retaining walls. Stratagrid® can be used with a variety of facings such as modular concrete block, gabions and vegetation.



Benefits of Stratagrid

- Stratagrid® is a fast and all-weather installation solution
- Enables construction of cost effective reinforced soil walls
- Incorporates surrounding and available site won aggregates
- Conventional solutions for slope protection

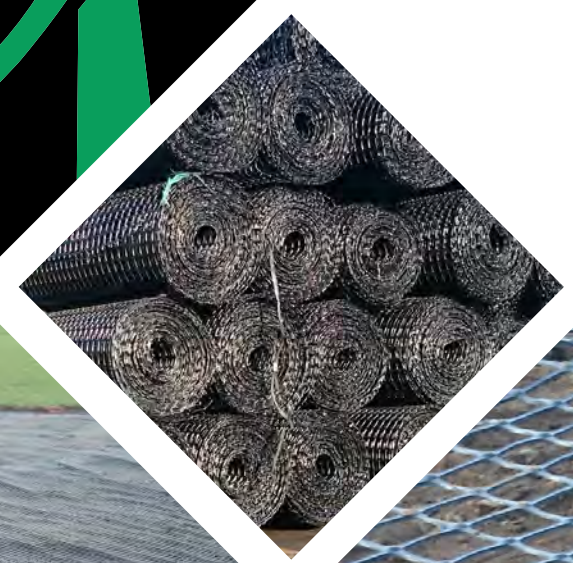
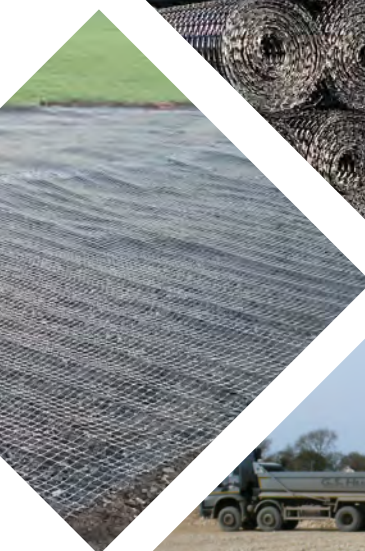
Stratagrid® is
available in higher
strengths up to
1000kN

Product	Roll Size
Stratagrid® 150	1.9m x 100m
Stratagrid® 200	1.9m x 100m



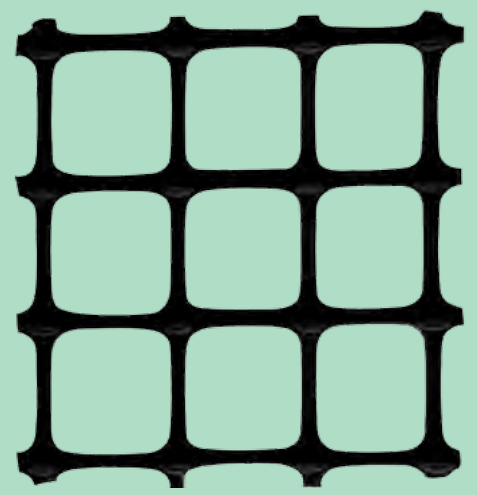
Interlock

Biaxial extruded geogrid



Product	Roll Sizes	Strength
Interlock 20	4m x 50m	20 kN
Interlock 30	4m x 50m	30 kN
Interlock 30G	3.9m x 50m	30 kN
Interlock 40	4m x 50m	40 kN

- Applications**
- Paved and unpaved roads
 - Industrial yards
 - Foundation reinforcement
 - Working platforms
 - Car parks



Industry standard
extruded polymer geogrid
in biaxial strengths
ranging from 20- 40 kN/m.
Available for next day
delivery from stock.

Interlock is a biaxial extruded polypropylene geogrid. Interlock geogrids are designed for soil stabilisation and reinforcement applications. The installation of Interlock within the granular material will increase sub base performance and bearing capacity and reduce the thickness of the granular layers.

Interlock geogrids feature consistently high tensile strength and modulus, excellent resistance to installation damage, chemical attack and environmental exposure. As a rigid extruded material the Interlock geogrid range benefits from excellent junction strength and the superior performance associated with a rigid monolithic construction. High tensile strengths are mobilised at low strains.

Interlock geogrids are available in a various biaxial configuration and can also be supplied as a composite material laminated to a non woven geotextile in the form of Interlock 30G.



Geoglas® is a polymer coated glass-fibre grid for asphalt reinforcement. Its main application is in highway re-surfacing to prevent reflective cracking and extend the life of new bituminous layers. The installation of Geoglas® reinforces the pavement and inhibits crack formation, so the durability of the surface and road is extended.

Extensive research by major road laboratories in Europe have demonstrated the benefits of Geoglas® to eliminate or retard reflective cracking, reduce rutting and extend fatigue life of a pavement. Geoglas® works by preventing strains in the asphalt from reaching a critical level. Laid within an asphalt/bitmac surface Geoglas® provides the three essentials; reinforcement, sealing and good inter-layer bonding. Geoglas® is the cost effective solution to surface or road strengthening.

Geoglas® is compatible with all types of surfacing, including modern thin asphaltic concrete. Geoglas® can be used with a minimum 70mm overlay thickness and SBS modified binders.

Properties of Geoglas®

- Polymer impregnated glass fibre grid
- Maximum elongation 3.5%
- High temperature resistance (800°C)
- High Tensile and tear resistance
- Creep resistant



Applications

New Roads
Crack Prevention and Repair

Product	Roll Sizes	Strength
Geoglas 50/50	2m x 100m	50kN
Geoglas 100/100	2m x 100m	100 kN



Rockbox welded gabions provide a robust and aesthetically pleasing solution for a range of retaining structures and erosion protection applications, where the gabions are required to be a feature as well as a practical solution.

The individual wires are machine welded at each intersection to form a robust panel. The units are formed by hinging each panel together to form a box. Rockbox welded gabions are supplied flat packed to site. Individual units are then constructed using either lacing wire, helical joints or hog ring clips.

Once the units are built and placed they can be filled with the specified stone and a variety of facing materials to provide an aesthetically pleasing feature to the project.

Helicals are now available to coincide with not only the structural sense of the gabions but also making the overall design more aesthetically pleasing.

Aldi UK Headquarters

Aldi UK Headquarters in Atherstone needed to increase their car parking area to facilitate business expansion.

The system, chosen by the client comprised of Rockbox gabions filled with local stone and a layer of Trinter erosion control matting over the top. This created a natural finish that would eventually vegetate and blend into its surroundings.



Applications

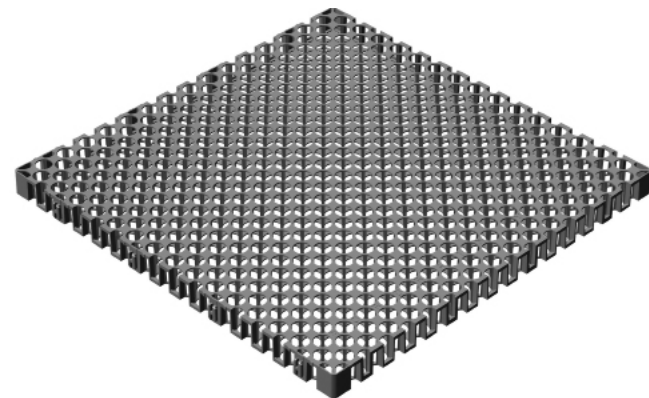
- Retaining structures
- Flood protection
- Reinforced earth walls
- Landscaping
- Architectural cladding

Dimensions

Length	Base	Height
1m	0.5m	0.5m
1m	1m	0.5m
1m	1m	1m
1.5m	1m	1m
2m	1m	0.5m
2m	1m	1m

Roofcell

Sub surface drainage and water storage system



Applications

- Roof gardens
- Landscaped decks
- Paved areas and roadways
- Sports fields and golf courses
- Retaining walls
- Capillary irrigation
- Basement walls
- Pond filtration

Benefits

- Rapid capture and discharge of surplus water
- High water storage capacity
- Effective return of stored water to planting
- Allows greater soil depths for a wider variety of plants
- Able to withstand pedestrian and light vehicle traffic

Size

500mm x 500mm x 30mm

Roofcell is a lightweight, high strength, interlocking module that provides excellent sub-soil drainage and water storage for green roofs, planters and landscaped decks.

As well as improving the appearance of buildings, green roofs give landscape architects many benefits. Green roofs can lower energy costs and improve the comfort of the internal environment. They can also improve air quality by reducing carbon monoxide, increasing oxygen supply and reducing the thermal drafts that draw up pollutants from surrounding areas.

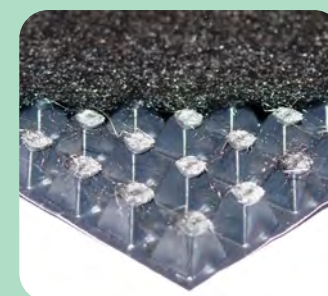
Other benefits include the reduction of storm water run-off and an increase in the life of waterproofing membranes by providing protection from UV, thermal shock and puncture. Roofcell modules can also be used in a variety of other applications as an efficient alternative to traditional pipes and gravels; including retaining walls, bridge abutments, sports fields and buried structures.



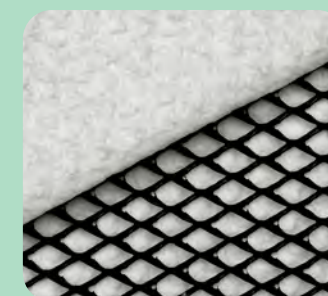
Gas and liquids can be hazardous to any construction project. Drainage and venting systems are therefore a necessary element for all projects in order to remove troublesome liquids or gases. Modern high performance drainage composites have all of the properties required to replace conventional systems with granular fill.

Duodrain® geocomposite consists of a cusped impermeable core or a polymer net, bonded to a non woven geotextile fabric and/or geomembranes. Various thicknesses are available, dependent on flow and compression strength requirements. Duodrain® is supplied in 1 and 2 metre wide rolls as standard. However narrower widths of 150, 300 and 450mm are also available for gas venting, turf drainage and porous paving applications.

Applications



DD Range



GMG



GMF



Stripdrain

- Buried structures
- Landfill capping systems
- Drainage cavity construction
- Erosion control
- Gas dispersal and collection
- Retaining walls
- Green roofs
- Storage reservoirs
- Cut off trenches
- Infiltration control
- Leachate collection
- Highway edge drains
- Tunnels
- Buildings
- Culverts and underpasses
- Bridge abutments



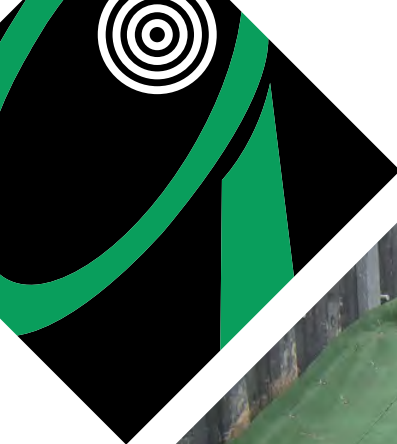
East Coast® Range

Product	Functional Longevity	Material	Sheer Stress
<div>ECSC-2</div> 	24 Months	70% Agricultural Straw and 30% Coconut Fiber	Unveg. 2.02 psf
<div>ECC-2</div> 	36 Months	100% Coconut	Unveg. 2.3 psf
<div>ECC-2B</div> 	24 Months	100% Coconut	Unveg. 2.25 psf
<div>ECC-3</div> 	≥36 Months	100% Coconut	Unveg. 3.7 psf

Geosynthetics Limited offers a complete range of biodegradable ECB’s (Erosion Control Blankets) which are designed to provide slope protection whilst vegetation is establishing. The East Coast® Range outperforms alternative biodegradable solutions in the market.

The East Coast® range of erosion control blankets provide slope protection whilst natural vegetation is establishing for use on slopes up to 45°. The products have a reputation for being high quality and reliable throughout the world.

The East Coast® range can also be supply **preseeded erosion control matting** speeding up growth. This specialist feature enables the sites slope to speed up the process of vegetation allowing for a quicker and aesthetically pleasing solution.



Landlok®
Permanent erosion control







Geosynthetics Limited also offer permanent solutions for Erosion Control applications. The Landlok® Range incorporates a mixture of products providing suitable protection for different extents of Erosion. Landlok® offers a Green alternative to concrete solutions and is aesthetically pleasing in natural settings.

Landlok® permanent range encompasses both 1st and 2nd generation turf reinforcement mats. Unlike erosion control blanket's, Landlok® TRM's are non degradable and when vegetated, will provide twice the erosion protection of vegetation alone.

Using a permanent erosion control blanket allows significant cost savings as an alternative to rock slope protection and soil nailing with shotcrete.

Landlok® Range

Product	Suggested Use	Velocity	Shear Stress
Landlok® 450 	Moderate flow channels	5.5m/s	Veg. 479 Pa
Landlok® 300 	High-flow storm water channels	6.10 m/s	Veg. 575 Pa
Pyramat 	Demanding slopes and storm water channel applications	7.6m/s	Veg. 766 Pa
Amormax® 	Combines Pyramat with earth percussion anchors to lock soil in place in high flow areas.	7.6m/s	Veg. 766 Pa



Strataweb is a three-dimensional cellular confinement system manufactured from high-density polyethylene (HDPE) strips that are ultrasonically welded together to create a strong, lightweight expandable panel.

Applications

- Slopes
- Channels
- Vegetative soil filled channel
- Aggregate filled channel
- Concrete filled channel
- Embankments
- Retaining walls
- River banks

Initially developed by the US Army Corps of Engineers to construct unpaved roads over weak ground, Strataweb dramatically improves the performance of infill materials across a range of applications. Strataweb confines and reinforces vegetation on steep slopes by increasing the soils natural resistance to erosion and protects the root zone layer during germination.

Its' unique hoop strength and interconnecting cell walls form a durable composite mattress that can be filled with common materials. The perforated cell walls encourage lateral drainage and frictional interlock, increasing the structural performance of the system. Strataweb is the ideal solution for the most demanding load support and erosion control applications.

Green faced retaining walls can be constructed using Strataweb, forming a more aesthetically sympathetic solution for retaining applications. Extremely versatile and adaptable, Strataweb provides effective and economical solutions in a wide variety of applications including ground stabilisation, slope protection, retaining walls and channels.

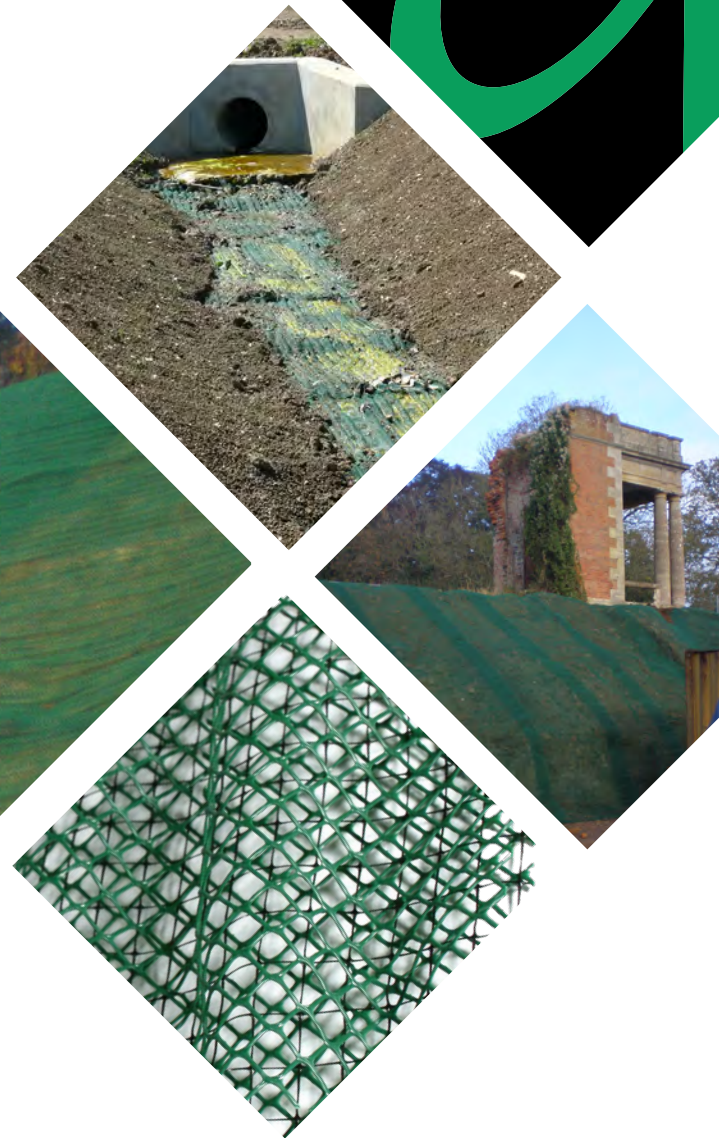


Benefits

- Good permeability and soil retention properties
- Allows the establishment of vegetation through the fabric and is therefore environmentally desirable
- UV stabilised and resistant to attack from chemicals and bacteria
- Low priced and easily installed
- Particularly suitable for use on vertical banks and for river narrowing

Nicospan is a product used for vertical bank protection. It provides a high-quality and very economical form of erosion control. Nicospan is a prefabricated, double weave revetment fabric made from strong UV stabilised monofilament yarns. The fabric is installed using 150mm (max) diameter posts.

Nicospan is available in 100 metre long rolls in standard widths of 0.5m and 1.0m. Wider widths can also be made to order. Nicospan is easily installed without special equipment. It is especially useful where access to the bank is limited and is the ideal low cost bank protection for use in streams, small watercourses, lakes and ponds.



Trinter™ is an erosion control netting made of strong polyethylene and polypropylene. It offers permanent protection against soil erosion from the moment it is installed.

Easy to use, very strong and durable with a high resistance to degradation, Trinter™ can be used on all kinds of slopes. Easily rolled out and pinned onto the slope, it traps newly laid soil and seed, preventing it from being washed or blown away.

Trinter™ allows germination to take place, encouraging vegetation to flourish. Within several months the root system becomes interlaced with the Trinter™, stabilising the top layer and allowing a stronger, deeper root system to establish itself over time.

The attractive green vegetation not only reinforces the slope but enhances its appearance and results in a healthy green environment. It is ideally suited to demanding applications such as very steep slopes and areas subject to high water flows.

Construction Properties

- Cost effective solution
- Superior soil retention capability
- High quality strong and durable
- Rot proof and lightweight
- Easily adapts to most slopes
- Effective protection from installation
- Easy to install



Applications

Road and motorways
Railway cuts and fills
River bank and channels
Irrigation canals
Reservoir embankments
Dams and lagoons
Grassed spillways
Culvert inlets and outfalls
Golf courses and lawns

Flexitex

Double woven textile shuttering



Flexitex is a double woven textile shuttering for erosion control and underwater concrete work. Made of high-strength polyamide or polyester yarn, using Flexitex reduces installation times offering a cost effective solution for a range of water-side applications.

Flexitex Range:

Flexitex with rectangular filter points:

The double-weave mattress has been woven together at regular points which act as a filter to even out water pressure.

Flexitex with distance threads:

This mattress has no filter points. The upper and lower sections are connected by means of spacing yarns to ensure that the concrete-filled mattress is of even thickness.

Flexitex sacks and bags:

Sacks and bags can be prefabricated for specific applications. Inlet points for pumping in concrete can be positioned on the Flexitex units to order.

Benefits

- Cost effective solution compared to traditional concrete made reinforcements
- Easy installation following geographical contours
- Fast installation times up to 700m² per day

Size

- Roll widths from 3.75m to 5.3m



Applications

Harbour walls
River bank stabilisation
Steep slopes
Reservoir and dams
Coastal defence works
Recasting of and repairs to piles
Pipe support and coverings
Silt bags and containers for underwater concrete works

Golpla®

Grass and gravel reinforcement



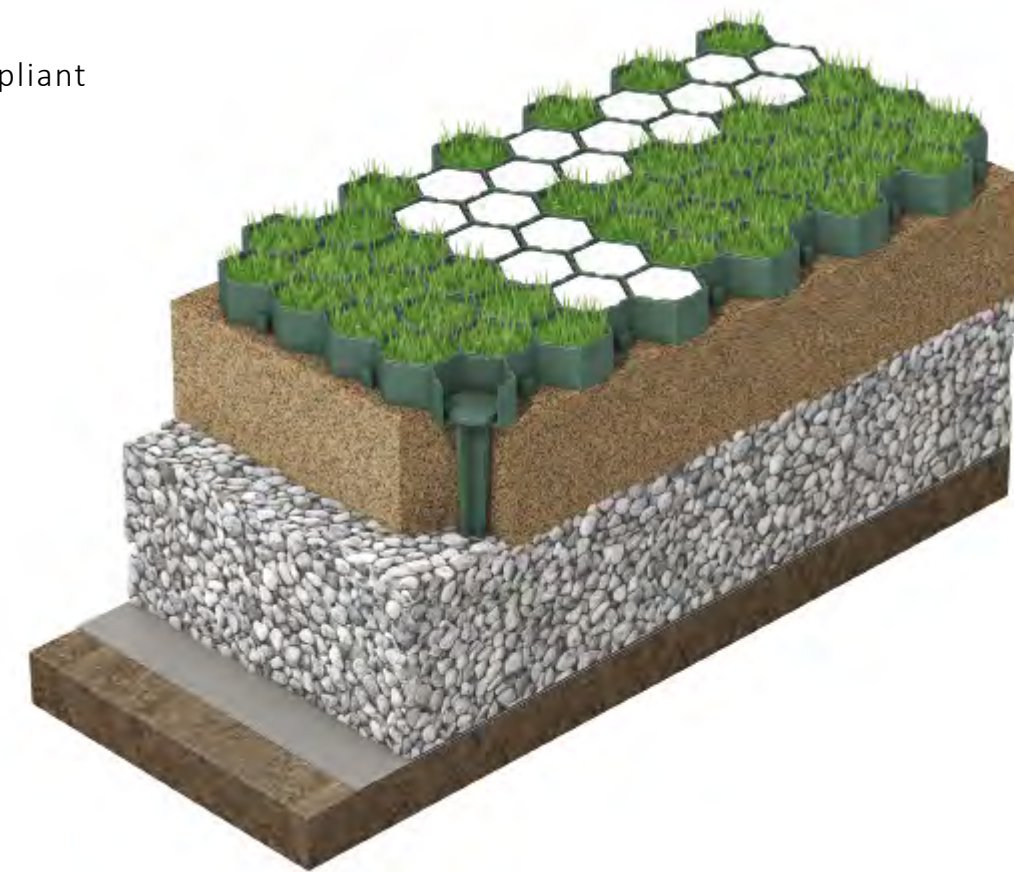
Golpla® is designed to reinforce grass or retain gravel for pedestrian or vehicle access applications that involve cars and light vans.

Uniquely it can be supplied Pre Grown with living grass to speed up installation and is also available in a range of colours to suit gravel fill. Whatever the requirement comprehensive engineering and technical advice is available for sub-base design.

Golpla® can be combined with Cellweb® to offer a total solution for tree root protection areas (RPA's). It makes an ideal surface for creating a sustainable SuDS alternative to asphalt or concrete paving.

Features and Benefits

- Pre-Grown grass option
- Range of colour options
- 95% infill area
- High infiltration and SuDS compliant
- Rapid, reduced-dig options
- Demarcation inserts available
- Contains recycled plastic
- Minimal simple maintenance



Total Traffic Exopave (TTE®)

Heavy duty paver



Total traffic Exopave (TTE®) is a grass or gravel permeable paving system designed to accommodate HGV use. The Interlocking system effectively reduces shear loads and can comfortably withstand loads of up to 40 tonnes.

TTE® is perfect for use within a SUDS system for both permanent and overspill parking applications as well as access roads. The speed and ease of installation offers significant benefits over traditional precast concrete alternatives. The jointing system ensures that wheel loads are effectively spread across the system and offer a superior design life over butt jointed solutions.

TTE® combines both high compressive and shear strength. This enables the system to effectively withstand the dynamic loadings incurred when HGV vehicles accelerate, brake and turn on the system. The units are produced with a textured surface to improve grip and increase user safety.

System Benefits:

- High shear strength reduces limitations under acceleration, braking and turning
- Easy to install and maintain
- Reduced subbase depths
- Cost effective alternative to concrete and asphalt surfaces
- Textured surface for improved grip
- High water permeability
- Wheelchair access compliant
- Sympathetic to the natural environment

Applications

HGV and coach parking
Lay-bys and verge reinforcement
Intensively used car parks
Service yard and industrial estates
Access road for emergency vehicles
Farm and rural roads
Private road
Hard standing areas for motorhomes
Light aircraft apron



Turfmesh is a range of extruded plastic grass reinforcement products ideal for use in the landscaping, leisure and educational sectors. Being flexible, Turfmesh can be laid onto existing or newly laid turf and reduces ground rutting and grass damage. This makes it a practical solution for overspill car parks and access routes through grass fields.

All grades are UV stable, resistant to chemicals and can be enhanced with parking markers to identify parking bays and access routes.

The grade of mesh and application will depend on the ground conditions, frequency of use and types of vehicle using the surface. Some examples are listed but please call our office to discuss individual requirements.

Application by Grade

Turfmesh 1:

- Lawn protection
- Embankment stabilisation
- Anti-ball plugging mesh on Golf Driving Ranges

Turfmesh 2:

- Regular pedestrian use
- Wheelchair access
- Emergency access LGV only
- Occasional car parking

Turfmesh 3:

- Heavy pedestrian use
- Occasional LGV use
- Regular overflow car parking

Turfmesh 4:

- Heavily used overflow car parks
- Occasional HGV

Cellweb® TRP

Tree root protection



Cellweb® Tree Root Protection System provides a flexible and permeable solution for protecting tree roots whilst creating a robust and stable platform when creating vehicular or pedestrian access paths.

Cellweb® TRP has a unique cellular structure and perforated cell walls which reduces the vertical load pressure on sub soils to tree roots, therefore preventing damage. With clean granular materials as infill, air and moisture can reach the roots to encourage healthy prolonged growth.

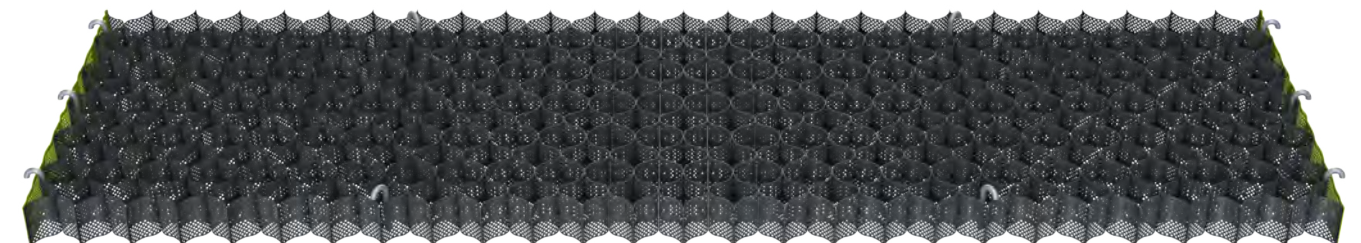
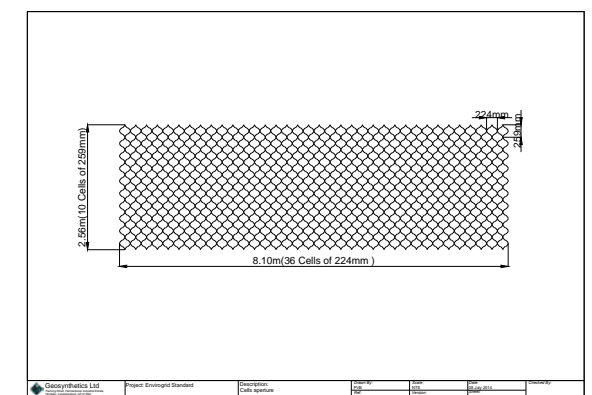
With no-dig solutions being the preferred option, Cellweb® TRP is ideal as only the surface vegetation need be removed. As well as avoiding disruption to the roots, this reduces construction times and costs.

By using the Cellweb®TRP, sub base depths can be reduced significantly, in most cases by as much as 50%, providing further cost savings. The use of Cellweb®TRP also prevents surface rutting; increasing the long-term performance and aesthetics of the final surface.

Geosynthetics Limited provides a full engineering service, including the provision of surveys, structural designs, CAD drawings and installation supervision at no cost to the client.

Benefits

- No dig solution
- Prevents compaction of sub soils
- Only guaranteed system of its kind on the market
- Provides moisture and air paths
- Reduces sub base depths
- Independently tested
- Environmentally friendly
- Simple to install





Bentotex® GCL

Geosynthetics clay liner



Benefits

- Easy to install
- Self sealing
- Excellent slope stability
- High chemical resistance
- Excellent climate resistance
- Resistance to differential settlement

Applications

Ponds
Lakes
Lagoons
Wet systems
Reed beds
Landfill (caps and lining)



Bentotex® is a Geosynthetic Clay Liner (GCL). It is an innovative composite product manufactured using the naturally occurring Bentonite clay resource. The powdered Bentonite clay is sandwiched between a woven and non woven geotextile, resulting in a very strong robust product.

The Bentonite clay gives the Bentotex® its unique 'self-healing' properties. Once the product is hydrated and confined under the required minimum of 300mm cover material; if the product is punctured by an object, Bentotex® seals around it, healing itself. This is one of the main reasons it is specified for a large proportion of public works contracts and landfill applications. Bentotex® is not compromised by root penetration and is ideal for reed beds and wet systems.

The installation of the material is not dependent on prevailing weather conditions, unlike man made (HDPE/LDPE/Rubber) liners it can be laid in cold inclement conditions. The material needs no specialist welding or power on site during installation, there by offering large savings on labour and plant costs. A comprehensive installation guide and expert advice is available on request from Geosynthetics Limited.

Geomembrane

Impermeable membrane



Rootblock

Rootblock is a high performance root barrier developed for use in a broad spectrum of indigenous trees and shrubs. The product has been specifically designed for use as a root barrier, where an ultra strong, durable and robust membrane is needed.



Knotblock®

Knotblock® is a Japanese Knotweed barrier that complies fully with the knotweed code of practice document released by the Environment Agency. Originally introduced as an ornamental plant, the Japanese species Knotweed has become a nationwide problem due to its virulent invasive nature.



Carbonblock

Hydrocarbon barrier prevents the ingress of latent hydrocarbons into a development used on Brownfield and redevelopment sites such as old petrol forecourts and former industrial sites.



Voltblock

Dielectric geomembranes are used extensively on modern electric transport lines. It prevents stray current from transferring to the passenger platforms.



Aquablock®

Geosynthetics Limited offer various standard roll sizes for lining and containment applications. Examples of uses for Aquablock® include are waste water treatment lagoons, landfill, leats and slurry lagoons. HD and LD polyethylene grades, EPDM and butyl rubbers are available in various sizes.

Geosynthetics Applications

Soil Reinforcement and stabilisation

- Roads / Highways
- Paved and unpaved roads
- Airports
- Industrial / Commercial yards
- Brownfeild sites
- Car parks
- Embankments / Basal reinforcement
- Working platforms
- Piling mats
- Hardstanding areas
- Wind farms
- Earthworks and foundations
- Equestrian
- Sports fields / grounds
- Railways
- Load transfer platform

Separation and protection

- Roads / Highways
- Industrial/Commercial Yards
- Brownfield sites
- Car parks
- Working Platforms
- Wind Farms
- Earthworks and Foundations
- Equestrian
- Sports fields/grounds
- Railways
- Contaminated land
- Landfills
- Tree root protection areas
- Driveways
- Attenuation systems
- Reclamation areas
- Silt Fence

Tree root protection areas

- Access Roads
- Car parks
- Driveways
- Landscaping
- Traffic areas
- Footpaths
- Cycleways
- Permeable pavements

Grass and Gravel reinforcement systems

- Access roads
- Car parks
- Driveways
- Lay-bys
- Grass protection

Erosion control and slope protection

- Bunds
- River banks
- Embankments
- Slope protection
- Coastal protection
- Canals
- Channel protection
- Flood protection
- Landscaping

Retaining walls and slopes

- Reinforced Soil Walls
- Reinforced Soil Slopes
- Segmental modular walls
- Gabions
- Marina / Harbour walls
- Green Walls / Slopes
- Bunds for flood protection
- Bunds for noise protection
- Embankments

Impermeable and contamination barrier

- Landfills
- Mining
- Aquaculture
- SUD's
- Attenuation systems
- Gas systems
- Contaminated land
- Leachate collection
- Leak detection
- Lakes and ponds
- Reservoirs
- Dams
- Lagoons
- Tunnels
- Control Expansive soils
- Buried structures / pipelines
- Green roof systems

Drainage and filtration

- Drainage systems
- Sports Fields / Grounds
- Buildings
- Retaining walls
- Roads / highways
- Foundations
- Car parks
- Soakaways
- Green roof systems
- Tunnels
- Buried structures



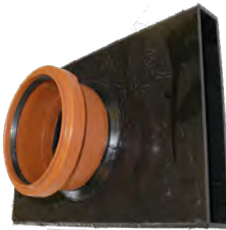
Single Sided Girth Tape

To protect the joint and prevent the ingress of debris when tape joining our impermeable Geomembranes.



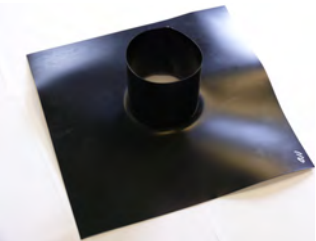
Double Sided Jointing Tape

For joining two geomembranes together. Effective down to 5°C.



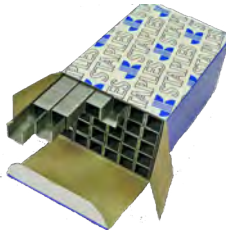
Duodrain Stripdrain Outlet

Enables the quick and easy connection of 110mm pipework to duodrain strip drainage composite.



Top Hats

Geosynthetics Top Hats are available in all popular pipe sizes. To enable pipe penetrations through impermeable Geomembranes.



Staples

10mm galvanised steel staples. 500 per box. For use with Cellweb® TRP and Envirogrid systems.



Stapler

Rapid heavy duty stapler. For use with Cellweb® TRP and Envirogrid systems.



Glue

Ideal for use with any non woven geotextiles. Recommended for use in equestrian arenas with our Fiberforce® range.



Fixing Pins

300mm and 700mm long for anchoring of Erosion control mats, Envirogrid, Cellweb® TRP Etc.



J Pins

For use with Erosion control mats to pin them down.



Turfmesh Fixing Pins

Used with our Turfmesh system to pin it to the ground



Biodegradable Fixing Pin

A biodegradable alternative to traditional pins. Perfect when used in conjunction with any of the East Coast® range of biodegradable erosion control mats.



Golpla Pin

Used within the Golpla system to secure the panels to the ground



Golpla Demarcation Cap

The perfect solution for marking parking bays or access routes within the Golpla system



Geosynthetics
Engineered Solutions

Stormwater Management Limited

“Design, Supply and Installation”



Stormwater Management Ltd are specialists in the design, supply and installation of surface water and sustainable drainage systems, whether the requirement is for landscaped, hybrid or more engineered drainage systems, Stormwater Management Ltd are able to offer a solution.

All Stormwater Management operators are T.W.I certified, CSCS registered and meet the exacting standards demanded by current guidance and testing requirements.

- Attenuation systems
- Lagoons / Balancing ponds
- Ornamental lakes and ponds
- Landfill Lining
- Gas protection to buildings
- Porous Paving Systems
- River / channel re-alignments
- Floating covers
- Anaerobic digestion ponds

Lid and base units available

Specialist products

As market leaders in our field we are conversant with the changing requirements instigated by the Flood and Water Management Act and other devolved legislation. Our team of fully qualified civil engineers, together with our technical representatives are able to assist in the design of individual drainage components.

Our range of specialist products enables our designers to provide the best solutions for volume and source control and stormwater treatments. Whether your scheme uses soft, engineered or hybrid drainage systems Stormwater Management have a range of product and system solutions to allow you to meet your requirements.



D-Rainclean - Bio Retention Channel

D-Rainclean channel system is a 300mm polypropylene channel filled with a unique engineering bio retention filter media that treats runoff from any impermeable surface. Using the processes of separation, adsorption and absorption, D-Rainclean allows contaminated runoff to be treated to a sufficient quality to allow infiltration back into the ground at the closest point to its generation thereby meeting the first requirement in the drainage hierarchy of 'source control'.



Elevator - In-situ concrete stormwater storage systems

Elevator is an innovative plastic former system used to create an 'adoptable' in-situ cast concrete attenuation and water storage tanks for storm-water management. Its patented design allows engineers and contractors to create an immensely strong concrete vault suitable for a wide array of site ground conditions.



Drenning - Modular arched storage chamber

Drenning is a modular arched storage chamber for stormwater infiltration or attenuation. Its open design makes it easy to inspect and maintain, an important consideration if the system is to be adopted. Manufactured from HDPE it is a robust injection moulded chamber with a storage volume of 310 litres per linear metre. It has a unique nestling design that minimises transport costs, whilst its modular design makes it quick and easy to install.



Innolet - Point drain cartridges which treat stormwater runoff

Innolet is range of point drain cartridges that treat stormwater runoff and comprise aerobic and anaerobic filters to remove priority pollutants such as heavy metals (zinc, cadmium, copper, and lead), hydrocarbons, PAH's and phosphates. The cartridges can be retrofitted into existing road gullies depending on the individual road gully design, or can be supplied as a complete gully with integral filter.

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INVESTORS
IN PEOPLE

Bronze

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