



[Request your printed copy ▶](#)

# GEOSYNTHETICS

GEOTEXTILES ▼ GEOGRIDS ▼ GEOMEMBRANES  
GEOCELLS & GEOCELLULAR PAVING ▼ GEOMATS

**CATALOGUE 2023**

## HELLO.

Whether you are looking to create strong infrastructure or a new landscape, we have the civil engineering expertise and broad range of geosynthetic solutions to bring your vision to life.

We are a leading UK designer, manufacturer, and supplier of specialist products for the civil engineering industry, including geosynthetics, ductile iron manhole covers and gully grates, steel access covers and bespoke steel systems .

I am proud to say we are a family business, with 40 years' experience in the sector. We have grown in every one of those 40 years, and plan to continue to employ the best people, design and make reliably outstanding products and offer the kind of customer service we like to receive ourselves.

We believe sustainable manufacturing is good manufacturing. At the heart of our culture is sustainability, built on our three core business pillars – resources, prosperity and our people.

Our friendly teams will help you discover which intelligent civil engineering product is right for your project. Contact us today to talk it through.

### **Simon Turner**

Commercial Director - Wrekin Products



## GET IN TOUCH

01543 440 440



[wrekinproducts.com/geosynthetics](https://wrekinproducts.com/geosynthetics)



[geosynthetics@wrekinproducts.com](mailto:geosynthetics@wrekinproducts.com)



# CONTENTS

## Geotextiles

MultiTrack (Nonwoven), FasTrack (Woven)

Page 18

## Geogrids

E'GRID, SX Grid, SX Composite

Page 26

## Geomembranes

Geosynthetic Clay Liner, Geomembranes

Page 38

## Geocells & Geocellular Paving

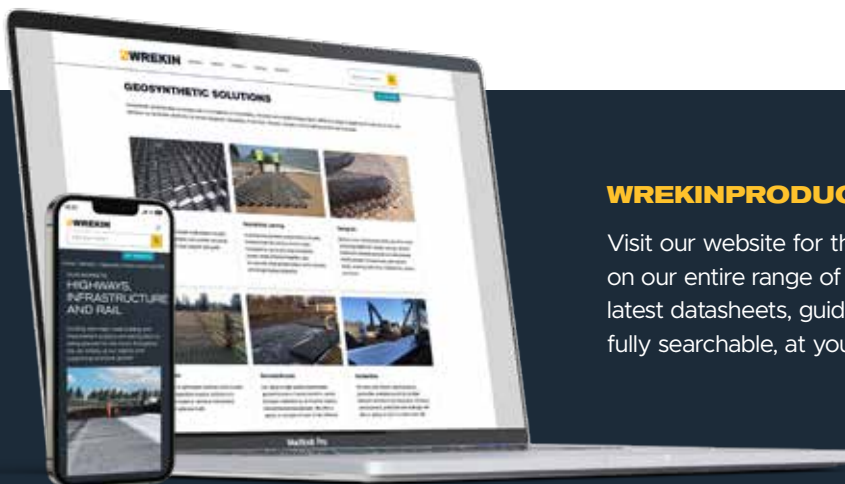
Celltrack, ProtectaWeb

Page 46

## Geomats

Trinter, Turfmesh

Page 54



**WREKINPRODUCTS.COM**

Visit our website for the very latest information on our entire range of products. Access the latest datasheets, guides, videos and more, all fully searchable, at your fingertips.



Scan to visit



# A LITTLE BIT ABOUT US

**We are a leading UK designer, manufacturer, and supplier of specialist products for the civil engineering industry, including geosynthetics, ductile iron manhole covers and gully grates, steel access covers and bespoke steel systems.**

Our innovative approach to product design and commitment to quality and service has firmly established our position as a market leader in safety critical civil engineering solutions.

With more than 40 years of technical expertise and leadership, we have an established range of unique, patented products to perfectly suit both specifier and contractor.

A significant area of our business is geosynthetic products, which play an integral role in the majority of building, civil and marine engineering projects. We offer geosynthetic solutions for an array of functions including but not limited to - reinforcement, drainage, separation, filtration, protection and barrier / containment.

Our total geosynthetic package has been continuously developed and expanded since 1995, providing all our customers with technical support, specification and design services, helping you find the solution to all your geosynthetic requirements.



### Responsive

We see the opportunities before others do and take the initiative.



### Straightforward

We ensure we are uncomplicated, easy to deal with and understand.



### Curious

We are always looking for new ways of thinking and exploring new ideas.



### Experts

We figure out the best way to deliver the most productive solutions.



### Collaborators

We connect and create with others, treating them fairly and respectfully.



### Trusted

We ensure reliability, take responsibility, and strive to do the right thing.

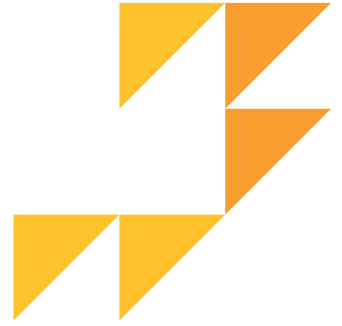


### Accountable

We learn and improve upon our processes to deliver results and value.



# GEOSYNTHETICS FUNCTIONS



Our total geosynthetic package has been continuously developed and expanded since 1995. We provide our customers with technical support, specification and design services, helping you find the solution to all your geosynthetic requirements.

Geosynthetic products play an integral role in the majority of building, civil engineering and rail projects. While the range of applications and uses is vast, the functions can be broken down into six broad categories: Filtration, Separation, Reinforcement, Drainage, Protection and Containment.



## FILTRATION

Allows the passage of water while restricting the movement of soil.

Our high quality geosynthetics can provide a good level of filtration for the majority of soil types, allowing water but not soils to pass through.

**Applications:** Landfill, drainage, earth embankments

## PRODUCTS

- ▶ FasTrack
- ▶ MultiTrack
- ▶ SX Composite



## SEPARATION

Prevents different soil layers from unwanted mixing.

Using our geosynthetic products can avoid aggregate bases or sub-bases mixing into soils, and will save costs by removing the need for additional granular layers.

**Applications:** Compounds, haul roads, horse ménage, piling and working platforms

## PRODUCTS

- ▶ FasTrack
- ▶ MultiTrack
- ▶ SX Composite



## REINFORCEMENT

Resists stresses, reduces deformations, and can support weaker subgrade.

Base or sub-base reinforcement can be achieved with the use of a geosynthetic at the bottom layer, increasing support of the ground whilst reducing the amount of soil or gravel required.

**Applications:** Haul roads, compounds, piling & working platforms, embankments, slopes, bunds, walls

## PRODUCTS

- ▶ FasTrack
- ▶ E'GRID
- ▶ SX Grid
- ▶ SX Composite
- ▶ ProtectaWeb
- ▶ CellTrack
- ▶ TurfMesh



## DRAINAGE

The use of a geosynthetic to collect and transport fluids.

A reduction in the thickness of drainage layers can save money on aggregate stones whilst giving a more consistent and more protected solution.

**Applications:** French drains, open ditches

## PRODUCTS

- ▶ FasTrack
- ▶ MultiTrack
- ▶ HDPE



## PROTECTION

Reduces damage to an adjacent surface, acting as stress reduction.

A practical solution for areas which may be particularly prone to wear. Our geosynthetic products can ensure the protection of soils, grasses and gravel areas.

**Applications:** Embankments, car parks, bunds, walls, landfill, attenuation tanks

## PRODUCTS

- ▶ MultiTrack SNW
- ▶ ProtectaWeb
- ▶ Trinter
- ▶ CellTrack
- ▶ TurfMesh



## CONTAINMENT

Prevents the migration of liquids through the soil.

Offers solutions for either aggressive containment or contaminated land. These products provide a barrier that offers pollution control in varied applications.

**Applications:** SUDs, ponds, lakes, lagoons, landfill

## PRODUCTS

- ▶ Geosynthetic Clay Liner
- ▶ Geomembranes

# MARKETS

Our solutions have been successfully used on thousands of projects. From major road and rail infrastructure projects to car parks, housing estates, garden landscaping and coastal defences.

Whatever market you operate in, take a look at how we can help you to minimise costs, save time and improve efficiencies. Simply put, we are the experts, and however big or small your project may be, we are always available and ready to help.



## CIVIL ENGINEERING

With construction materials becoming scarce or costly, and their environmental impacts being contentious, geosynthetics have a crucial role to play in civil engineering applications. They can provide a cost effective and carbon reducing solution to numerous applications.

## INFRASTRUCTURE

Geosynthetics help to conserve energy and promote more durable and sustainable structures. Our solutions can assist in minimising the carbon footprint of infrastructure developments while saving natural resources and reducing transported materials.

## HOUSING

Housing developments require reliable, rapid, and durable solutions. With the ever-growing demand for more homes and quicker build times, geosynthetics can play a crucial role in the early stages of a development.





## **RAIL**

Rail construction projects require geosynthetic solutions for wide ranging rail applications. Typically, geotextiles and geogrids are specified, however many of our other products can also play a key role.

## **LANDFILL**

Reliable and durable geosynthetics are critical in landfill applications. We provide liners to suppress the vertical migration of liquids and gases, and drainage solutions that allow liquids to collect and limit the potential for leaks.

## **AND MANY MORE...**

We are always on hand and available to assist with specifications, site visits, technical support and design work on a wide range of projects. We are always available and ready to help.



# WHERE CAN WE HELP WITH YOUR PROJECT?

1

## **ROADS AND PAVEMENTS**

Innovative solutions to speed up road surfacing and improve access on residential schemes, our value engineered solutions have been proven to offer cost savings in excess of 40%.

2

## **SUSTAINABLE URBAN DRAINAGE**

Choosing a complete system from a single supplier helps to ensure an effective, sustainable and compatible drainage system across a whole development.

3

## **COMPOUNDS AND HAUL ROADS**

We provide value engineered solutions to reduce costs and construction time on the creation of initial site compounds and haul roads.

4

## **WORKING PLATFORMS**

Innovative value engineered solutions can be applied here to reduce installation time and costs, with typical thickness reductions in excess of 50%.



5

### **EMBANKMENTS AND SLOPES**

Our reinforced soil solutions can reduce costs and installation time by up to 50% and can incorporate site won materials, providing significant carbon reductions.

6

### **DRAINAGE AND SEWERS**

Sewers and connecting services must comply to adoptable standards. By working with a supplier that understands the details means a faster process for the client.

7

### **TREE ROOT PROTECTION AND TREE PLANTING**

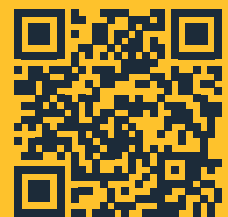
Landscaping systems and tree planting creates aspirational environments for residents to enjoy and safe havens where wildlife can thrive. Our innovations protect existing trees from construction damage and help new trees to establish and grow.



# TRAINING AND CPDS

**We are happy to provide free training and support, including CPDs, giving you real, valuable insight into what can be achieved using geosynthetics. Whether that's reduced construction times, reduced labour, reduced overall project cost or reduced environmental and carbon impact.**

We understand that each project is unique, and our team is equipped to provide tailored guidance and advice to ensure that our clients are making the most out of our products. Whether you need assistance with product selection, installation, or troubleshooting, our team is here to help.



Register your interest today

[wrek.in/cpd](https://wrek.in/cpd)

REGISTER FOR AN INTRODUCTORY CPD

# VALUE ENGINEERING THROUGH BIAXIAL GEOGRIDS



The reasons to specify and install geogrids are plain to see. This CPD will help you to understand the background to our range of products on offer, where they're used, what makes them different, and what to look out for when specifying:



Learn about the different geogrid forms and what makes them different.



Understand the different manufacturing processes and their impacts.



Understand how geogrids work to provide reinforcement properties.



Learn how geogrids can add value to a project through value engineering.

## TIME

1 hour total, 45 minute presentation including 15 minutes for questions and answers

## SUGGESTION

Ideally provided as a lunchtime seminar, we can supply lunch on request.



## IN-PERSON SUPPORT

We understand that our customers have various needs when it comes to implementing our products in their projects. That's why we offer in-person support, designed to provide guidance and help to our clients. This includes;

- ▶ Toolbox talks with our geos experts
- ▶ On-site installation support
- ▶ Educational lunch & learn sessions



## ADDITIONAL SUPPORT

We know our customers have busy schedules and may not always have the time to meet in-person. That's why we offer support remotely with our team, or on our website with hundreds of useful articles, guides and datasheets.

- ▶ Product specific guidance
- ▶ Product application guidance
- ▶ Dedicated online Knowledge Base
- ▶ Design software and savings calculators



## DATASHEETS

Full datasheets for our entire product range are available online. Easily accessible on computers and mobile devices.

[wrekinproducts.com](http://wrekinproducts.com)

# SUPPORTING YOUR PROJECTS



**We're an advocate of early engagement. If a Wrekin engineering manager is engaged at the tender stage, the impact on the savings to reduce time and money can also assist contractors in winning tenders.**

Another benefit of early engagement is that geogrids can be manufactured to the exact width that the contractor needs, suiting the site-specific requirements and creating an even more cost-effective grid. Simply removing an overlap in the geogrid layout can save a further 10 per cent in product costs alone.

However, all isn't lost if engagement comes afterwards as savings can still be introduced.



## Initial consultation

Listening and working with our customers to fully understand project requirements.



## Technical & value engineering

Technical professionals are in place to provide expert advice and support.



## Tendering support

Decades of experience in providing tender support, gives you an edge.



## Site meetings & advice

Ensuring projects are completed successfully through regular site meetings.



## Project reviews

Conducting project reviews to learn lessons that are taken forward to future projects.



“ Wrekin provided Jessup's with a technical solution which **saved time and cost**, enabling us to continue with our works unhindered, ensuring we met key milestones of the construction phase.

**Their on-site technical support was invaluable** during the installation of the geomembrane. ”

**Jessup Brothers Ltd.**



# THE NEW AND IMPROVED KNOWLEDGE BASE

We've designed our new Knowledge Base to provide comprehensive support and resources to help you succeed with our products.

Our learning area includes frequently asked questions (FAQs), installation guides, product guidance, and regulatory information, all in one convenient location.



### FAQs

Our Frequently Asked Questions section is designed to provide quick and easy answers to common questions related to our products and services.



### Installation Guides

Our installation guides provide step-by-step instructions for installing and using our products. These guides are easy to follow and are designed to help you get the most out of our products.



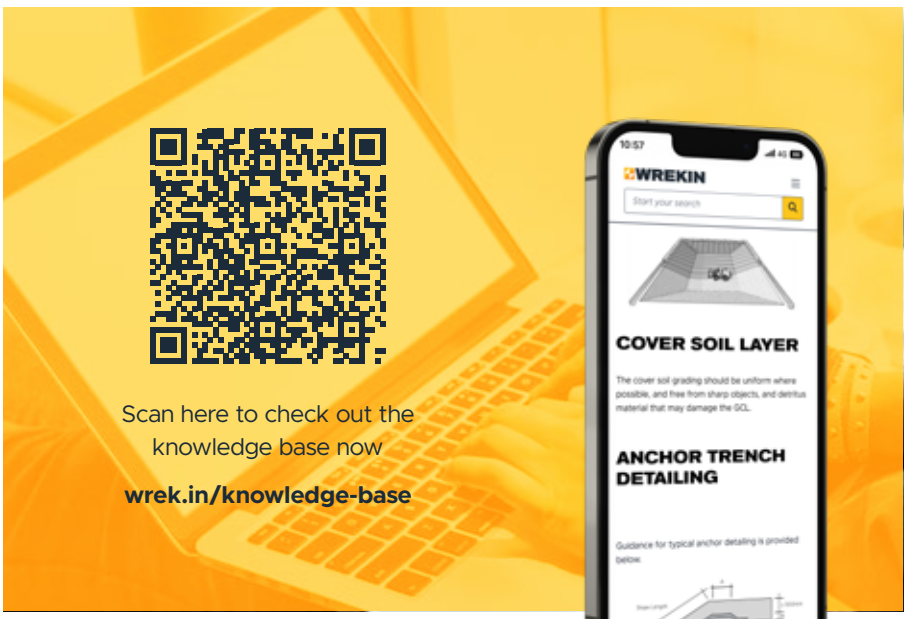
### Product Guidance

Our product guidance section includes helpful tips and advice for using our products in various applications. This section is ideal for those who are looking for ways to optimise the use of our products and achieve the best possible results.

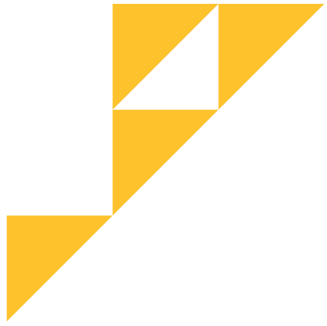


### Standards and Conformity

Our standards and conformity section provides you with important information related to regulatory compliance and safety guidelines. This section is ideal for anyone who needs to stay up-to-date with the latest regulations and guidelines in the industry.



Scan here to check out the knowledge base now  
[wrek.in/knowledge-base](http://wrek.in/knowledge-base)





## GEOSYNTHETICS

# THE PLASTIC NARRATIVE

**In recent years, the dangers of plastic to our environment, combined with the climate crisis, have had a dramatic effect on the way we live and work.**

With changes in lifestyle and ongoing education on environmental best practice, specifiers, contractors and asset owners have become more aware of choosing products and processes which promote sustainability and reduce emissions. However, despite this global push to eradicate plastics, there is still a place for them – and it can be sustainable.

Anyone who views the news will be familiar with headlines about plastic waste, pollution and irresponsible firms that are damaging our efforts to become greener and cleaner.

Plastic Free July – a global movement aiming to encourage people to become part of the solution to plastic pollution and refuse single-use plastic – is a sign of the times. On a business level, the UK government is also encouraging less plastic by imposing a plastic packaging tax.





Though these efforts should be applauded and we welcome such initiatives, it is becoming more and more difficult to separate the long-term negatives from the long-term benefits where manufacturing is concerned.

Even the smallest plastic items can take hundreds of years to decompose, so mindless creation and discarding is undoubtedly harmful, but when used correctly there are many hidden benefits.



## KEY FUNCTIONS OF GEOSYNTHETIC PRODUCTS



Filtration



Separation



Reinforcement



Drainage



Protection



Containment

### So, why are geosynthetics so different?

The six key functions – filtration, separation, reinforcement, drainage, protection and containment - mean geosynthetics are part of the foundation for many developments and aren't obvious at surface level.

The solutions offered by geosynthetics can allow the use of marginal or recycled soils and aggregates, which can be a by-product of brownfield regeneration. In short, sustainability is both proven and enabled through use of plastic – contrary to popular belief.

Ironically, given that part of the plastic problem is how long it takes to degrade, many geosynthetics are being manufactured to last even longer due to their importance and this longevity is a crucial benefit. Some products have a lifespan of up to 100 years and can then be recycled time and time again.

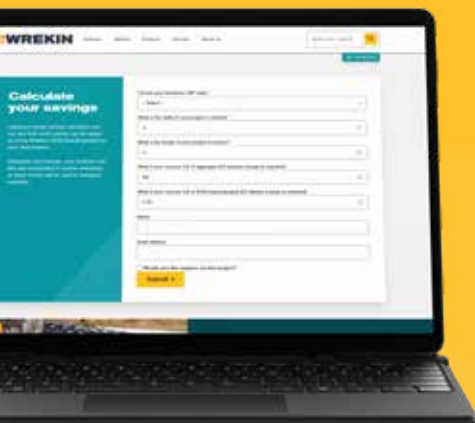
Our work with geosynthetics has shown that there is still a place for these plastics, and as a manufacturer we can help drive sustainable solutions that continue to serve a purpose.

## SAVINGS CALCULATOR

Instead of merely claiming a greener approach, we're making it possible for environmental efforts to be evidenced. The geogrid aggregate savings calculator is our tool to help see how much carbon and money can be saved by using the 3030 biaxial geogrid on a project.

See how much you could save today, by simply entering a few key details.

[wrek.in/calculate](http://wrek.in/calculate)



# GEOTEXTILES

**Geotextiles play a vital and long-lasting role in improving ground conditions in a wide variety of construction projects, from road building and car parks to coastal defences and railways.**

A woven geotextile is manufactured from synthetic material, woven together to form a uniform sheet and provides more tensile strength than a nonwoven textile, per weight of product.

Nonwoven geotextiles are manufactured by entangling fibres together, either by thermally bonding or by needle punching. This creates a random structure with a relatively larger pore size, making them ideal in filtration and drainage applications, with long term separation.

Robust, flexible, reliable and durable, our woven and nonwoven geotextile ranges are available in a variety of sizes, and provides huge benefits across a wide range of both large and small-scale construction works.





**PAGE 20**

## **FASTRACK**

### **WOVEN GEOTEXTILES**

Our market-leading woven geotextiles give outstanding performance. Their high load capacity and tensile strength, coupled with a relatively low elongation, provides a high material resistance to breaking under tension.



**PAGE 22**

## **MULTITRACK**

### **NONWOVEN GEOTEXTILES**

MultiTrack is a needle-punched or thermally bonded nonwoven geotextile that offers many benefits where separation, filtration and drainage functions are required. It delivers excellent durability and drainage functions in addition to its very high water flow capability.



**PAGE 34**

**NEW**

## **SX COMPOSITE GEOCOMPOSITE**

SX Composite is a geogrid and geotextile combined into one thermally bonded solution for separation and reinforcement, providing significant time and cost savings.





## WOVEN GEOTEXTILES **FASTRACK**

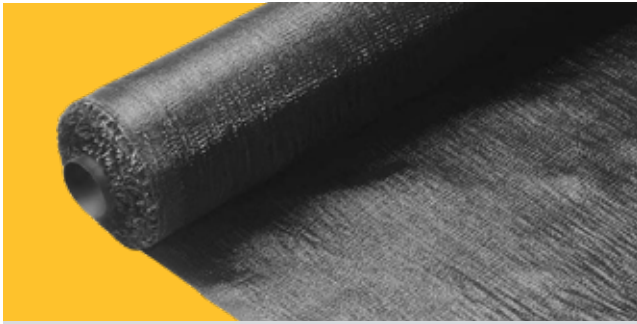


**Our market-leading woven geotextiles give outstanding performance. Their high load capacity and tensile strength, coupled with a relatively low elongation, provides a high material resistance to breaking under tension.**

This provides for an ideal separation and reinforcement product, making them a great, cost-effective choice for roads, car parks and other heavy traffic areas.

Woven geotextiles provide a great solution for the separation of granular fill materials and for the provision of sub structure support. The most common application is use as a separating layer beneath roads, helping to prevent rutting through separation and providing tensile support.





Separation



Reinforcement

## FASTRACK SG

FasTrack Standard Grade (SG) woven geotextile fabrics are produced with long term performance in mind. Available in CBR puncture resistance ranging from 1,500N to 9,000N. SG includes our ever popular FasTrack 609.

### QUICK GLANCE DATA

FasTrack SG	
Roll size(s)	4.5 x 100m, 5.25 x 100m
CBR puncture resistance	1,500N to 9,000N
Weight	75g/m <sup>2</sup> to 356g/m <sup>2</sup>



Separation



Reinforcement

## FASTRACK ORANGE

Based on our popular FasTrack 609 geotextiles, FasTrack Orange prevents the intermixing of contaminated and uncontaminated soils and its bright colour also alerts users and future users to the potential danger of further excavation.

### QUICK GLANCE DATA

FasTrack Orange	
Roll size(s)	4.5 x 100m
CBR puncture resistance	1,500N
Weight	75g/m <sup>2</sup>

Product Name	Description
FasTrack 609	1,500N, 75g/m <sup>2</sup> - 4.5m x 100m roll (mini packs also available)
FasTrack 609 Orange	Orange, 1500N, 75g/m <sup>2</sup> - 4.5m x 100m roll
FasTrack 1800	1,900N, 85g/m <sup>2</sup> - 4.5m x 100m roll
FasTrack 18/18 B	2,000N, 91g/m <sup>2</sup> - 5.25m x 100m roll
FasTrack 29/29	4,100N, 173g/m <sup>2</sup> - 5.25m x 100m roll
FasTrack 35/35	3,600N, 140g/m <sup>2</sup> - 5.25m x 100m roll
FasTrack 40/40	5,000N, 185g/m <sup>2</sup> - 5.25m x 100m roll
FasTrack 60/60	5,600N, 258g/m <sup>2</sup> - 5.25m x 100m roll
FasTrack 80/80	9,000N, 356g/m <sup>2</sup> - 5.25m x 100m roll

Other specifications are available on request.



# NONWOVEN GEOTEXTILES **MULTITRACK**



**MultiTrack is a thermally bonded or needle-punched nonwoven geotextile that offers many benefits where separation, filtration and drainage functions are required.**

It delivers excellent durability and drainage function in addition to its very high water flow capability, but reduced strength in comparison to a woven geotextile.

It can also be used for erosion control and protect membranes from being punctured. Ideal for roads, car parks, coastal defences and drainage systems.

Other highlights include:

- ▶ A comprehensive selection with a range of weights
- ▶ Available in nonwoven (NW) and superior nonwoven (SNW), both thermally bonded and needle-punched
- ▶ An efficient option to tackle critical separation functions
- ▶ Superior permeability and pore size provides highly effective drainage
- ▶ High puncture resistance and permeability make our SNW range ideal for membrane protection and coastal defences, where sharp rocks and damp conditions can cause significant issues for many geotextiles





Separation



Filtration



Drainage

## MULTITRACK NW

MultiTrack Nonwoven (NW) was developed for separation and filtration in a wide range of groundworks applications. MultiTrack NW has been manufactured using a unique thermal bonding process, the NW range has excellent filtration properties, making it ideal for use in a variety of construction applications including roads, car parks, coastal defences, and drainage systems.

### QUICK GLANCE DATA

MultiTrack NW	
Roll size(s)	4.5 x 100m, 5.25 x 100m
CBR puncture resistance	1,000N to 3,600N
Weight	80g/m <sup>2</sup> to 300g/m <sup>2</sup>



Separation



Filtration



Protection



Drainage

## MULTITRACK SNW

MultiTrack Superior Nonwoven (SNW) geotextiles are manufactured by needle punching a web of high tenacity fibres to produce a consistent and uniform product of highest performance.

### QUICK GLANCE DATA

MultiTrack SNW	
Roll size(s)	4 x 100m, 5.25 x 100m
CBR puncture resistance	1,400N to 11,500N
Weight	120g/m <sup>2</sup> to 1,000g/m <sup>2</sup>

PRODUCT NAME	DESCRIPTION
MultiTrack 700	1,000N, 80g/m <sup>2</sup> - 4.5m x 100m roll
MultiTrack 1000	1,500N, 100g/m <sup>2</sup> - 4.5m x 100m roll
MultiTrack NW 13	2,200N, 160g/m <sup>2</sup> - 5.25m x 100m roll
MultiTrack NW 15	2,500N, 180g/m <sup>2</sup> - 5.25m x 100m roll
MultiTrack NW 16	2,400N, 200g/m <sup>2</sup> - 5.25m x 100m roll
MultiTrack NW 18	3,000N, 215g/m <sup>2</sup> - 5.25m x 100m roll
MultiTrack NW 20	3,100N, 235g/m <sup>2</sup> - 5.25m x 100m roll
MultiTrack NW 25	3,600N, 300g/m <sup>2</sup> - 5.25m x 100m roll

PRODUCT NAME	DESCRIPTION
MultiTrack SNW 14	1,400N, 120g/m <sup>2</sup> - 4m x 100m roll
MultiTrack SNW 17	1,700N, 150g/m <sup>2</sup> - 4m x 100m roll
MultiTrack SNW 50	5,000N, 400g/m <sup>2</sup> - 5.25m x 50m roll
MultiTrack SNW 40 UV	4,000N, 300g/m <sup>2</sup> - 5.25m x 100m roll (other roll sizes available)
MultiTrack SNW 80	8,000N, 650g/m <sup>2</sup> - 5.25m x 50m roll
MultiTrack SNW 120	11,500N, 1000g/m <sup>2</sup> - 5.25m x 35m roll

Other specifications are available on request.

# MOSTYN SEA WALL REPAIRS

**When gale force winds combined with high tides on Thursday 5th December 2013, the result was the worst storm surge to hit North Wales in years.**

At Mostyn in Flintshire, where the Chester to Rhyl railway line runs along the sea front, the result was approximately 200m of the sea wall being breached in 6 separate locations, forcing the closure of the railway.

Network Rail engineers along with Alun Griffiths (Contractors) Ltd immediately started working around the clock using three heavy excavators to undertake the huge task of removing around 1,000 tonnes of the fallen sea wall from the railway. They replaced 150 tonnes of ballast, then repaired the track, signalling and other electrical equipment to allow the railway line to re-open.



This was achieved in the early hours of Tuesday 10th December when the focus moved to undertaking emergency repair work to the breaches in the sea wall before the next high tide on 2nd January 2014.

To ensure the sea wall repairs were completed as soon as possible, work continued around the clock and in between the high tides.

“The storm surge has caused significant damage to the railway in North Wales. We are doing everything we can to get passengers on the move again, but the scale of the work needed means it is likely to be several days before train services resume through the affected areas.”

Route Managing Director,  
**Network Rail Wales**



**Network Rail  
Wales**



**Mostyn,  
Flintshire**



**10,000m<sup>2</sup>  
MultiTrack**





# VALUE ENGINEERED ROAD FOR OAK GRANGE HOUSING DEVELOPMENT



William Davis  
Homes



Derby



40m Adoptable Road  
E\*GRID Biaxial

**Our geogrids team value-engineered a fit-for-purpose adoptable road for a new Derby housing development, working with the city council, William Davis Homes and S&L Groundworks.**

We created an adoptable road solution for new housing development Oak Grange. Derby City Council's overseeing engineer had previously highlighted various issues surrounding the creation of a permanent adoptable road that needed to be resolved before the adoption could progress.

Our team visited the site and identified that, before using a geogrid solution to significantly reduce the road foundation thickness, a performance trial was needed to prove efficacy for implementation. This was due to the very weak subgrade and the potential for differential movement.

First, We cleared a 20 metre long on-line area down to the sub-formation, with an additional ten metres at either end to allow for access and egress. An initial layer of MultiTrack MT1000 geotextile membrane provided separation of fines and filtration of water flow, which could have otherwise weakened the foundation over time.

While the geotextile membrane provides effective separation and filtration, the subsequent geogrid layers provide efficient stabilisation through robust reinforcement of the 6F5 aggregate (capping materials).

The first layer of our E\*GRID rigid biaxial geogrid was rolled out over the top of the MultiTrack 1000. 250mm of 6F5 aggregate was placed and then compacted by a roller, followed by another layer of geogrid and a further 250mm of 6F5.

The substantial half metre reduction in foundation thickness over a conventional founding section reduced the total excavation and export of earthworks, therefore reducing the overall import and compaction of aggregates required.

After construction of the founding layers, plate bearing tests confirmed the in-situ performance at the formation level, on top of geogrid stabilised capping layers. Five plate bearing tests were taken on the inner 20 metres of the performance trial area, with the highest result being 47% and the lowest result being 18.7%. The performance trial area therefore exceeded the preliminary requirement of 15% at formation level.

A further granular sub-base layer was installed and tested, producing results between 70% and 100%, far exceeding the requirement of the pavement foundation. This confirmed that the geogrid solution and application was suitable for adoption to overcome the identified problems.

Altogether, this project demonstrates how value engineering solutions such as geogrids can be used to solve general and site-specific issues for the housing sector, while simultaneously saving contractors time and money.

“A further granular sub-base layer was installed and tested, producing results between 70% and 100%, far exceeding the requirement of the pavement foundation. This confirmed that the geogrid solution and application was suitable for adoption to overcome the identified problems.”

Engineering Manager,  
**Wrekin Products Ltd.**



# GEOGRIDS

**Creating a safe working environment in construction projects is of vital importance - but those initial site compounds and haul roads can have a big impact on resources for contractors, both at the project planning stage and when on site.**

That's where geogrids can prove their value as a cost-effective, durable and easy-to-install method of reinforcement in groundworks, allowing force to be distributed over a larger area, reducing settlement and movement. They can reduce the thickness of haul roads and piling platforms, resulting in cost and time savings while supporting and protecting the local environment.

Our geogrids are used to reinforce soft, unstable soils and similar materials in subsoils below road structures, sub-bases and earth-retaining walls.

When granular fill is compacted over the grids, they partially penetrate and project through the apertures to create a strong and positive interlock. The load dispersal effect from the interlocking mechanism increases shearing resistance within the fill material, improving compaction and allowing the sub-base thickness to be decreased, ultimately reducing construction time and costs and increasing longevity.



## 20 YEARS

of proven real world project experience



## **E'GRID** BIAXIAL GEOGRIDS

E'GRID is our premium range of biaxial geogrids. Designed to reliably solve pavement problems by providing reinforcement to granular sub-bases. E'GRID provides reliable long-lasting performance with significant carbon and cost savings.



## **SX GRID** BIAXIAL GEOGRIDS

SX Grid is a biaxial geogrid that provides a cost-effective solution to solve pavement problems by providing reinforcement to granular sub-bases including compounds, haul road and working platforms in areas of weak or variable soils.



## **E'GRID** UNIAXIAL GEOGRIDS

Used in the reinforcement of walls and slopes, E'GRID uniaxial's principal characteristic is good creep performance with low strain and high strength under constant load.



## **SX COMPOSITE** GEOCOMPOSITE

SX Composite is a geogrid and geotextile combined into one thermally bonded solution for separation and reinforcement, providing significant time and cost savings.



- ▶ Online savings calculator available
- ▶ CPD available



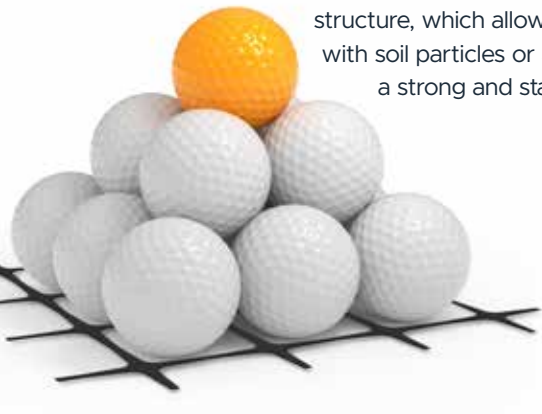


# WHAT IS A BIAXIAL GEOGRID?

**Biaxial grids have equal strength in two axis so that when they interact with the soil they provide omni-directional reinforcement and stabilisation.**

Geogrids are a type of geosynthetic, that are commonly used in civil engineering and construction projects. They are typically made of high-strength polymer materials, such as polyester or polypropylene, and are designed to provide reinforcement to soils, aggregate, and other materials in a variety of applications.

Geogrids work by distributing applied loads across a wider area of soil or aggregate, reducing the stress on any one point and increasing the overall stability of the material. This is achieved through the geogrid's open structure, which allows for interlocking with soil particles or aggregate, providing a strong and stable foundation.



When geogrids are placed within soil or aggregate, they act as a tensile reinforcement by transferring tensile stresses, reducing the likelihood of cracking and failure. This also helps to reduce the amount of material needed for construction, as the geogrids provide additional support and reinforcement.

Geogrids are commonly used in a range of applications, including retaining walls, embankments, roadways, and reinforced soil slopes. They are a cost-effective and durable solution for improving the stability and load-bearing capacity of soil and aggregate materials, and can be easily installed and maintained.





# THE BENEFITS TO YOU



## IMPROVED SOIL STABILITY

A geogrid can increase the bearing capacity and shear strength of soil, providing a stable base for construction projects such as roads, embankments, and retaining walls.



## INCREASED DESIGN FLEXIBILITY

Geogrids offer a range of design options, including varying thicknesses, strengths, and aperture sizes, allowing engineers to tailor the material to the specific needs of a project.



## REDUCED CONSTRUCTION COSTS

By improving the stability of soil, a geogrid can reduce the amount of excavation and soil replacement required, resulting in lower construction costs.



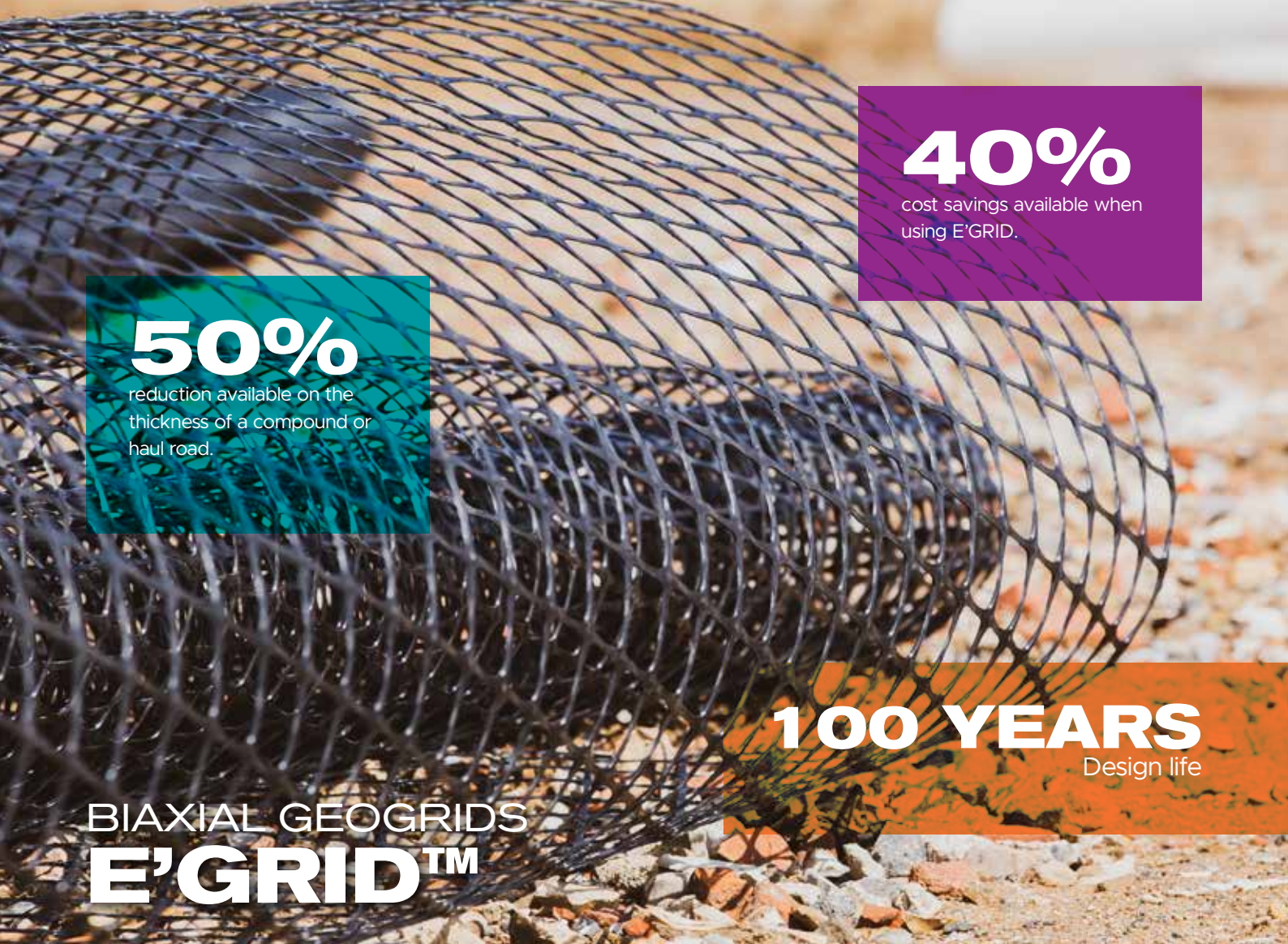
## ENVIRONMENTALLY FRIENDLY

By reducing the need for excavation and soil replacement, geogrids can minimise the environmental impact of construction projects and reduce the amount of waste generated.



## LONGER SERVICE LIFE

Geogrids are typically made of durable materials such as polypropylene or polyester, which have a long service life and can withstand exposure to UV light, chemicals, and weathering.



**40%**  
cost savings available when using E'GRID.

**50%**  
reduction available on the thickness of a compound or haul road.

**100 YEARS**  
Design life

# BIAXIAL GEOGRIDS E'GRID™

**E'GRID is our premium range of biaxial geogrids, offering a 100 year design life. Available in a choice of roll sizes, including large aperture variants, E'GRID uses a proven square shape which has been installed in real world applications for over 40 years.**

Proven through independent, peer reviewed testing, unlike its alternatives, E'GRID gives specifiers and contractors confidence in a long-lasting solution that's quick and simple to install while providing significant cost and CO<sub>2</sub>e savings.

E'GRID biaxial geogrids can solve pavement problems by providing reinforcement to granular sub-bases, capping layers & railway ballasts in areas of weak or variable soils. When granular particles are compacted over a geogrid, they partially penetrate and project through the apertures, creating a strong and positive interlock.

The load dispersal effect provided by E'GRID combined with the interlocking mechanism provides increased shearing resistance within soils. This improves compaction and allows the sub-base thickness to be decreased by up to 50%, providing significant reductions to construction time and costs. Carbon emissions are also massively reduced across projects, as less aggregate is required. Removing emissions from the extraction, processing, transport, and installation processes.





Reinforcement

## QUICK GLANCE DATA

E'GRID Biaxial	
Roll size(s)	4 x 30m <sup>i</sup> , 4 x 50m <sup>ii</sup>
Tensile strength (MD/CMD)	<sup>ii</sup> 20/20kN/m <sup>2</sup> <sup>ii</sup> 30/30kN/m <sup>2</sup> <sup>i</sup> 40/40kN/m <sup>2</sup>
Radial stiffness (measured at 0.5% elongation under 360 degrees radial loading)	420kN/m 620kN/m 800kN/m



- ▶ Bespoke specifications available including on-site visits
- ▶ Calculate your savings online

## CARBON SAVINGS WITH E'GRID

Our geogrids can play a significant role in reducing carbon emissions across a project. There's numerous ways this is achieved, including:

- ▶ By reducing the amount of earthworks required on-site before the grids go into the ground. This reduces the amount of plant required, and their associated emissions.
- ▶ Reducing the thickness of a haul road, compound or similar. This thickness is created with aggregate which requires extraction, processing, and transport. By minimising the aggregate you will significantly reduce embodied carbon. Wrekin geogrids can provide equivalent load bearing capabilities to sub-bases twice as thick, providing aggregate savings of up to 50%.
- ▶ Minimising the likelihood of repairs. Geogrids provide reinforcement, leading to higher quality, stronger sub-bases, which can result in longer lasting and harder wearing installations, requiring less repairs and maintenance.

## BENEFITS OF E'GRID BIAXIAL GEOGRIDS

- ▶ 100 year design life
- ▶ Triple the load capacity on road and highway projects
- ▶ Cost-effective
- ▶ Faster construction
- ▶ More environmentally friendly - 20 to 40% reduction in the carbon emissions associated with road construction
- ▶ Available in standard and large aperture size
- ▶ Suit any fill material, and can be installed in single or multiple layers



## SAVINGS CALCULATOR



Instead of merely claiming a greener approach, we're making it possible for environmental efforts to be evidenced. The geogrid aggregate savings calculator is our

tool to help see how much carbon and money can be saved by using the 3030 biaxial geogrid on a project.

See how much you could save today, by simply entering a few key details.

[wrek.in/calculate](https://wrek.in/calculate)



# BIAXIAL GEOGRIDS SX GRID

**SX Grid biaxial geogrids can solve pavement problems by providing reinforcement to granular sub-bases, capping layers & railway ballasts in areas of weak or variable soils.**

SX Grid allows granular particles to be compacted over them, partially penetrating and projecting through the apertures. This creates a strong and positive interlock, this interlocking mechanism increases shearing resistance within the soil, improving compaction and allowing the sub-base thickness to be decreased while allowing loads to be dispersed. With SX Grid you can reduce construction time, costs and even CO<sub>2</sub> emissions.

## BENEFITS OF SX GRID BIAXIAL GEOGRIDS

- ▶ 30 year design life
- ▶ Available as a composite grid - **Page 34**
- ▶ Cost effective
- ▶ Wider rolls available compared to E'GRID range



Reinforcement

## QUICK GLANCE DATA

### SX Grid Biaxial

Roll size(s)	<sup>i</sup> 4 x 30m, <sup>ii</sup> 4 x 50m, <sup>iii</sup> 4.5 x 50m, <sup>iv</sup> 5.2 x 50m
Tensile strength (MD/CMD)	<sup>ii</sup> 20/20kN/m <sup>2</sup> <sup>ii, iii, iv</sup> 30/30kN/m <sup>2</sup> <sup>i</sup> 40/40kN/m <sup>2</sup>





# UNIAXIAL GEOGRIDS E'GRID™

**Used in the reinforcement of walls and slopes, E'GRID uniaxial reinforcement can improve the bearing capacity and safety of a structure whilst helping to reduce construction cost. Its principal characteristics provide good creep performance with low strain and high strength under a constant load.**

Soil banks are constructed by wrapping E'GRID uniaxial geogrid around the soil face to the required slope angle, this process is repeated in layers to create a stable/steep embankment. Reinforced soil retaining walls can be constructed with a variety of faces, these structures can accommodate base deformation and have particularly good resistance to vibration and even earthquakes.

E'GRID uniaxial allows naturally vegetated slopes to be easily constructed, providing mental health benefits for residents and users, along with environmental benefits.



Reinforcement

## QUICK GLANCE DATA

E'GRID Uniaxial	
Roll size(s)	1.3 x 50m
Tensile strength (MD/CMD)	50kN/m <sup>2</sup> , 60kN/m <sup>2</sup> , 70kN/m <sup>2</sup> , 95kN/m <sup>2</sup>

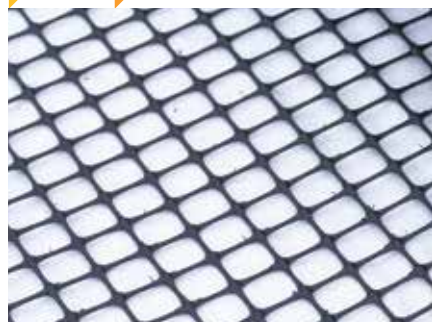


## COMPOSITE GEOGRIDS **SX COMPOSITE**

**Achieve time savings when acquiring materials and overall quicker installations, thanks to SX Composite, a geogrid that performs as both a geogrid and a geotextile solution in one.**

SX Composite consists of a high-grade nonwoven geotextile thermally bonded to our SX geogrid. It combines the functions of reinforcement, separation and filtration into one single product, rather than having to use two separate solutions.

Geogrids and geotextiles are often used together to provide reinforcement, separation, and filtration properties. This can be on projects such as haul roads, permanent roads, working platforms and compounds where there is low formation CBR.



SX Composite, combines all three functions into one, thermally bonded solution, providing significant time, labour and cost savings. Available in a choice of the two most popular tensile strengths, 30/30kN/m and 40/40kN/m, ensuring specifiers and installer always has a solution on hand.

Developed with customer feedback and increased demand on construction materials in mind. Thanks to its multi-purpose function, you can save time when acquiring materials, and achieve an overall quicker installation.



Separation



Filtration



Reinforcement

## SX COMPOSITE

With SX Geocomposite Geogrids you'll only need to ship, handle and install single roll, offering a significant reduction in carbon during transport and handling versus using separate materials.

### QUICK GLANCE DATA

#### SX Composite 3030

Roll size(s)	5.2 x 50m
Tensile strength (MD/CMD)	30/30 kN/m
Radial stiffness (measured at 0.5% elongation under 360 degrees radial loading)	580 kN/m

#### SX Composite 4040 (coming soon)

Roll size(s)	5.2 x 50m
Tensile strength (MD/CMD)	40/40 kN/m
Radial stiffness (measured at 0.5% elongation under 360 degrees radial loading)	760 kN/m



### IMPROVED STABILITY

Achieve improved stability on haul roads and access roads with SX Composite Geogrid.



### INCREASED USAGE

SX Composite Geogrid offers increased usage ability for hard-to-reach or remote-access roads.



### CARBON SAVINGS

Reduced aggregate usage and shipping fewer products provides carbon savings on every project.



### REDUCED COSTS

Achieve reduced labour and plant costs during every installation.

## EXPERT SUPPORT EXPERT HELP, WHEN YOU NEED IT

We pride ourselves on providing expert advice, helpful solutions and reliable products, and this new range is an extension of that commitment.

It's important to us that all our ranges and solutions are simple to understand and don't slow down projects with unnecessary jargon or blockers. Our team of knowledgeable experts are always on hand to support, at any stage of a project.

**Call our geosynthetics team on 01543 440440 to discuss your project.**



## TIME TO LAY CALCULATOR

Installing your geotextile and geogrid separately can be a time-consuming task. Switching to a geocomposite can cut your installation costs by up to 50%.

See how much you could save today, by simply entering a few key details. [wrek.in/calculate](http://wrek.in/calculate)

# NORWICH NORTH RECYCLING CENTRE

**We played an important role in the construction of a new £2.75 million recycling centre in Norwich – built to encourage the local population to be more sustainable and provide modern facilities to meet ongoing growth.**

The recycling centre is part of a multi-million-pound programme of investment to improve recycling centres across the county and is now the largest in Norfolk. However, before this vision was made a reality, there were challenges to overcome.

After starting the project, further inspection of the ground conditions proved that they were worse than the initial reports had suggested. This was due to the project starting at the end of a wet winter, resulting in a delayed earthworks programme, and the planned in-situ stabilisation becoming impractical.

We recommended a combination of the E'GRID 3030 and the E'GRID 4040L biaxial geogrids, as well as the MultiTrack 1000 Nonwoven Geotextile. This gave enough ground strength for multiple heavy goods vehicle shipments to come and go without damage or degradation.

Quentin Brogdale, resident engineer for highways, transport and waste at Norfolk County Council, said: "Wrekin's approach was positive, promptly assessing the prevailing ground conditions and developing a performance specification for a new foundation beneath the reinforced concrete slab for operational areas.

"The design was met quickly with approvals from our laboratory engineers and even amid supply shortages the required materials were delivered to the site without issue. Especially appreciated was the on-site guidance and support that proved useful on numerous occasions."

**Resident Engineer for Highways, Transport and Waste**  
Norfolk County Council

"Overall, the service Wrekin provided was efficient and successful. You can't really ask for more."

Commercial & Technical Manager at Wrekin Geosynthetics said: "We were very pleased to be asked to come and work on this important East Anglian project and are glad we provided a solution that helped the council get back on track to meet the project's tight schedule deadlines.

The project team call us in to help, and with our aid these challenges were overcome.

Given that it was a recycling centre being built, we knew sustainability was a priority and proceeded to look for a solution that would minimise wastage, deliveries to site, and the overall carbon footprint of the project.

"Our products have a range of benefits and capabilities that allow all but the most difficult problems during construction to have an easy solution. Often it is just a case of looking at the issue and matching the right specification to fix it."



Norwich City Council



Norwich



E'GRID Biaxial





A E Yates



West Lothian



SX Grid

**A new multi-million-pound wind farm in West Lothian. Work at Longhill Burn wind farm in West Calder started in April 2021, with operations and management delivered by leading wind farm business, Energiekontor UK.**

During the early phases of the project, due to the remote location of the wind farm, a track road was created to carry vehicles, machinery and goods needed for construction. Bolton-based contractor, A E Yates that was assigned to the project, called on our technical team to supply the necessary Geogrids – also used at sister site Dalquhandy wind farm near Coalburn.

With projects of this size and scale, track roads are built to transport vehicles and parts. Geogrids are used to layer across the tracks and help to reinforce soil and similar materials, creating a strong surface to withstand heavy machinery.

In this case, the road was 4.5m wide, and the standard size for geogrid rolls is 4m. This would mean using double the quantity of rolls and having them overlap in the middle, which would then be too wide, meaning excess would have to be removed. This uses up vital time in the progress of a project, not to mention the wastage it creates, which unnecessarily adds to our carbon footprint.



Our 4.5m wide Geogrid, SX 3030, was perfectly suited this project, cutting out unnecessary delays and costs.

Another major time saving was being able to utilise our Linlithgow depot, which is just 13 miles down the road from the West Calder wind farm site. This enabled the contractor to meet extra requirements when needed, even within a tight schedule. If more rolls were needed, they could easily collect and the yard team would ensure everything was ready to go.

Usually this would require a five-to-six-day lead time but, in this instance, the team could have things ready by the next morning. With time being so precious in construction, this option ensured vital cash savings were made by avoiding contractors and their vehicles being left waiting.

This has been a prestigious project that we were excited to be involved with and came at a high value to the business, with a high supply of product used within the job. Being part of the renewable energy sector is also something we are proud to have contributed to, as many civil engineering firms and construction businesses are striving towards a carbon net zero goal.

While the supply for the track roads has been completed, the project is ongoing and will require further input from us at another stage – namely the pylon mats which incorporate the same SX grid products. This will be in the new year, to enable cranes to put the pylons in place.

# GEOMEMBRANES

**Geomembranes are one of the most versatile products used in SUDS systems, waterproofing, landfill sites and below ground drainage containment.**

A highly reliable choice as a liner in Sustainable Urban Drainage (SUDs) applications, to help prevent leakage of liquids, geomembranes are an ideal solution wherever fluid movement needs to be controlled.

Available in a variety of roll sizes, our impermeable geomembranes are manufactured to current European standards and can be tailored for a huge range of civil engineering projects.

We also supply pre-formed welded liners, reducing installation time frames and costs of specialist machinery and labour associated with full installation packages.





## **GEOSYNTHETIC CLAY LINER**

### **GEOMEMBRANES**

Our GCL range are mechanically bonded geosynthetic clay liner composites of sodium bentonite embedded between two layers of geotextile. Additional bentonite can be added to the overlap edges for ease of sealing.



## **GT MEMBRANE 500**

### **GEOMEMBRANES**

GT Membrane 500 is a standard impermeable geomembrane made from polyethylene and is used for a variety of applications where containment functions are required.



## **HDPE**

### **GEOMEMBRANES**

HDPE geomembranes are the most commonly specified liners in the construction industry. Tried and tested, our HDPE membranes are resistant to most chemicals, are extremely robust and have a high stress fracture resistance.



## **BESPOKE**

### **GEOMEMBRANES**

Bespoke-sized geomembranes which come fully welded and pre-formed to custom sizes for attenuation “shoe-box” applications. Available in different materials to suit a large range of projects.





# GEOMEMBRANES GEOSYNTHETIC CLAY LINER

**This geosynthetic clay liner (GCL) is used across a range of civil engineering and building applications.**

It contains the clay mineral sodium bentonite - a natural sealant that swells on contact with water - and is sandwiched between two layers of geotextiles, a woven and a nonwoven, that are mechanically needle-punched together to provide shear strength.

Our top-performing, self-sealing and self-healing clay liners, comply with the latest industry codes of practice. The perfect solution for where containment is required to act as a hydraulic barrier to leachate from landfill sites or as a SUDs pond liner.



Containment

## QUICK GLANCE DATA

### GCL 4500

Roll size(s)	5.1 x 40m
Weight	4,800g/m <sup>2</sup>





# GEOMEMBRANES **GT MEMBRANE 500**

**Our standard impermeable geomembranes are a popular choice for creating a watertight barrier to prevent storm water from filtering out and saturating the surrounding ground.**

Our GT Membrane 500 provides a cost-effective, reliable, and sustainable solution for a wide range of environmental and engineering applications.

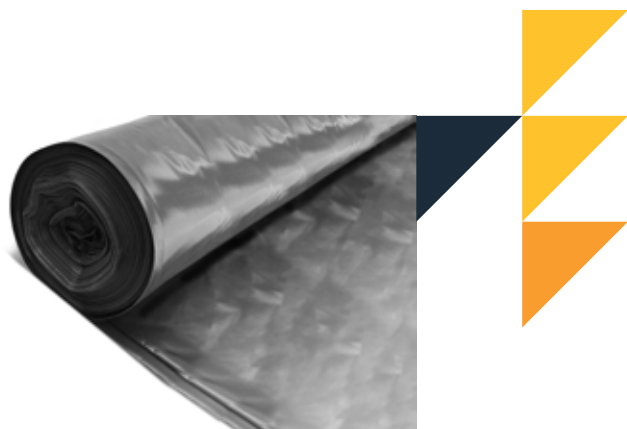


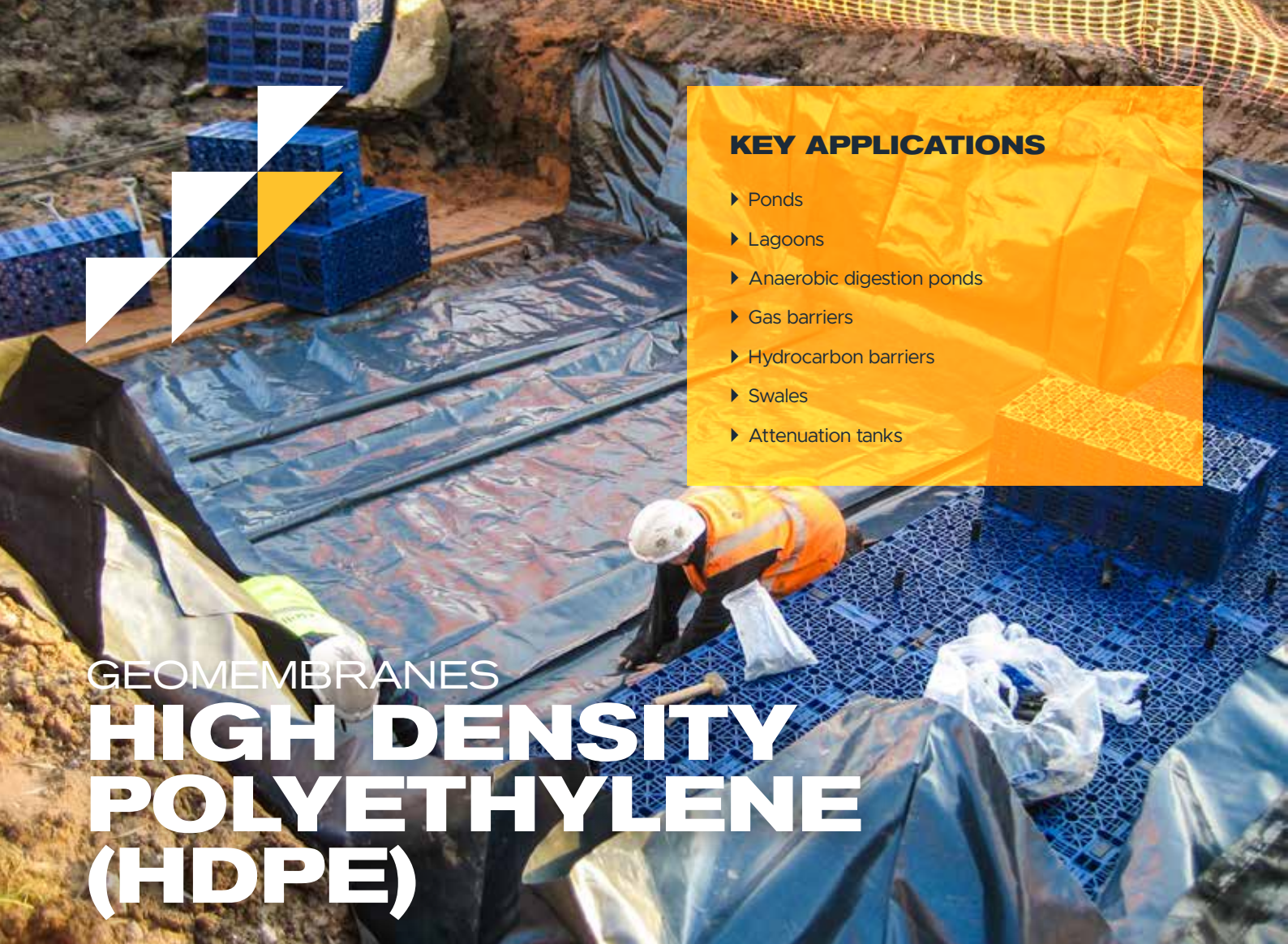
Containment

## **QUICK GLANCE DATA**

### **GT Membrane 500**

Roll size(s)	4 x 12.5m
Thickness	0.5mm





# GEOMEMBRANES HIGH DENSITY POLYETHYLENE (HDPE)

## KEY APPLICATIONS

- ▶ Ponds
- ▶ Lagoons
- ▶ Anaerobic digestion ponds
- ▶ Gas barriers
- ▶ Hydrocarbon barriers
- ▶ Swales
- ▶ Attenuation tanks

The most specified liners in the construction industry, our robust, high-density polyethylene impermeable geomembranes (HDPE) are resistant to most chemicals and have a high stress factor resistance.

Available in a range of sizes, these tried and tested products are suitable for anaerobic digestion applications, as barriers against hydrocarbons.

They are also perfect for lining SUDs ponds, lagoons and attenuation tanks.



Containment

## QUICK GLANCE DATA

HDPE Membrane	
Roll size(s)	2.5 x 35m, 2.5 x 50m, 5.1 x 100m
Thickness	0.6mm, 0.75mm, 1mm, 1.5mm, 2mm



# GEOMEMBRANES **BESPOKE** **GEOMEMBRANES**

**Backed by years of experience and technical know-how, we can provide a bespoke geomembrane that is ideal for your liquid containment needs, for example in urban drainage systems.**

Our barrier solutions provide excellent flexibility, improved elasticity and resistance to puncture and are engineered to be used in a wide range of civil engineering projects.

Choosing the right geomembrane for your project is vital to each system's long-term performance.



Containment

## **QUICK GLANCE DATA**

### **Bespoke Geomembranes**

Available materials | Polypropylene, LLDPE



# WARNER BROTHERS STUDIO



Warner Bros. Studio



Leavesden,  
Hertfordshire



20,000m<sup>2</sup> E'Grid &  
Multitrack



1,000m<sup>2</sup> HDPE  
membrane

**Originally the site at Leavesden was a second world war airfield and aircraft production base for the Mosquito fighter and Halifax bomber. After the war, Rolls-Royce acquired the site for producing aeroplane and helicopter engines. When they left in the early 1990s the site became a film studio, and in 1994 the James Bond film GoldenEye was filmed there.**

Since then, films including the eight Harry Potter films, Knights of the Roundtable: King Arthur, and Mission Impossible: Rogue Nation have been filmed at the site.

Over the years around £150 million has been spent developing the 200 acre site. The latest phase of expansion at the site will cost tens of millions of pounds. As part of this work, earthworks contractor Spadeoak was contracted to build new car parking areas as the land where they had built car parking previously was being reclaimed for new buildings.

Our MultiTrack 1000 non woven geotextile was laid on the formation to provide separation and filtration.

A layer of E'GRID 20/20 geogrid was installed above this, beneath the granular fill to provide reinforcement and stabilisation. When the fill is compacted, the stone particles partially penetrate the apertures within the E'GRID but are then prevented from moving sideways by its rigid and integral structure. It is these processes of 'lateral restraint' and 'mechanical interlock' provided by the geogrid that reinforces and stabilises the ground and enables reductions of up to 50% in the depth of fill to be achieved. In addition, our 1mm HDPE geomembrane was used to form a drainage 'baffle' across the car park.

Our MultiTrack 1000 non woven geotextile is manufactured from virgin polypropylene in state-of-the-art facilities. It has been designed to offer optimum performance per unit weight giving the required mechanical robustness and excellent hydraulic properties required for separation and filtration applications. It's high elongation at break also offers greater resistance to installation damage than woven geotextiles.

Our E'GRID is a premium quality 'punched and drawn' polypropylene biaxial grid that has been specifically developed to provide engineers with a cost effective solution. It is proven to give comparable reinforced soil performance to other market leading products where the superior optimised performance and associated longevity is required.





# CANNOCK ORNAMENTAL POND

**Fallow Park is an exclusive housing development on the outskirts of Cannock. The rural setting of the development and close proximity to Hawks Green Nature Reserve influenced the design and installation of shared recreation areas on the site.**

A 1,400m<sup>2</sup> ornamental pond with green space was designed to enhance the development and provide a habitat for a variety of wildlife. The ground conditions and nature of the finished pond meant that an impermeable membrane would be required to line the pond.

The groundwork contractors contacted Wrekin Products via their preferred distributor to provide a solution. Typically in this situation a specialist team of geomembrane installers would visit the site, place the geomembrane and weld the joints to provide a water tight seal.

However, our Geosynthetics team offered a one piece Greenseal EDPM Geomembrane as the solution, meeting the requirements of the specification whilst providing huge cost savings in installation timescales, plus the material did not require specialist installation machinery.

The liner was protected by our 300g/m<sup>2</sup> MultiTrack SNW geotextile protection fleece. The liner was pre-fabricated by our geomembrane partner and delivered to site on a manageable roll for the groundworkers to install. Both the geotextile and liner were installed within 2 hours of commencement as the liner was simply unfurled from its roll and placed in-situ.

The end results speaks for itself and an established ornamental pond is now in place, supporting a wide range of biodiversity and increasing the aesthetic appeal of the development.



**Jessup Brothers**



**Fallow Park**



**1,400m<sup>2</sup> Geomembrane**

# GEOCELLS & GEOCELLULAR PAVING



**Geocells provide cellular confinement for a range of projects, including car parks, slope reinforcement and the essential need to protect tree roots.**

Geocells are an ideal solution for erosion control on embankments and slopes, even steep ones. Once infilled, the concertina-like system of our Protectaweb provides a semi-rigid foundation that reduces the amount of materials needed to create stability and protection, saving time and money.

The Geocellular confinement of CellTrack ensures that, once installed and infilled, the product is virtually invisible from the surface. It then can be infilled with soil to promote grass growth or gravel to create car parks, decorative driveways and paths.





**PAGE 48**

## **PROTECTAWEB**

### **GEOCELLS**

ProtectaWeb performs two main functions, slope stabilisation and erosion control when used on slopes and the protection of tree roots when used for car parks or access roads near to existing trees.

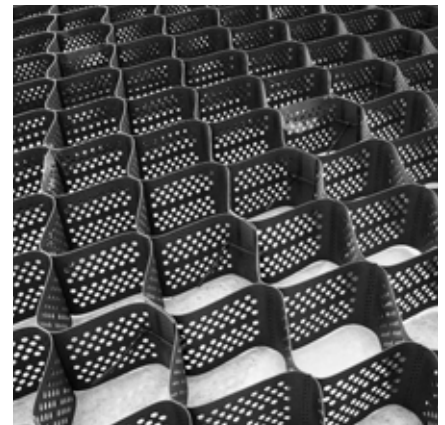
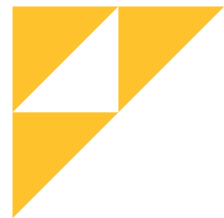


**PAGE 50**

## **CELLTRACK**

### **GEOCELLULAR PAVING**

CellTrack is a permanent panelled system that is virtually invisible from the surface once in-filled. Designed for quick and easy installation, panels simply interlock together and incorporate small ground spikes which provide anchorage during installation.





# GEOCELLS PROTECTAWEB

**Our ProtectaWeb is an established and proven method of constructing access tracks or parking areas close to tree roots without causing them undue stress and possible damage.**

We've developed the range to be the most cost-effective and environmentally sensitive answer to striking the right balance between creating vehicular access and tree root protection.

ProtectaWeb, when used for slope reinforcement, provides contractors with a straightforward installation, even on steep banks and slopes. ProtectaWeb is an incredibly cost-effective solution for reinforcement and can significantly reduce the fill requirement.







Reinforcement



Protection

## PROTECTAWEB TREE ROOT PROTECTION

ProtectaWeb is a proven no-dig method of enabling the creation of access ways or parking areas close to nearby trees. The unique composition and strength of ProtectaWeb ensures this can be done without compacting the soil, which can cause irreparable harm to the tree's life support system.

Legislation is in place to ensure the construction industry preserves trees where appropriate.

### QUICK GLANCE DATA

ProtectaWeb	
Expanded section area	20m <sup>2</sup>
Expanded section size	2.71 x 7.38m
Tensile strength	20kN/m
Depths	75, 100, 150, 200mm



Reinforcement



Protection



Erosion control

## PROTECTAWEB EROSION CONTROL

ProtectaWeb slope reinforcement provides contractors with straightforward installation, even on steep banks and slopes. A perforated panelled system, ProtectaWeb is an incredibly cost-effective solution for reinforcement and can significantly reduce the fill requirement.

Common fill materials can be used, even in locations of high load intensity. When infilled, ProtectaWeb provides a semi-rigid foundation.

### QUICK GLANCE DATA

ProtectaWeb	
Expanded section area	20m <sup>2</sup>
Expanded section size	2.71 x 7.38m
Tensile strength	20kN/m
Depths	75, 100, 150, 200mm

## KEY APPLICATIONS

- ▶ Car park areas
- ▶ Access roads
- ▶ Driveways
- ▶ Footpaths
- ▶ New housing developments
- ▶ Slopes





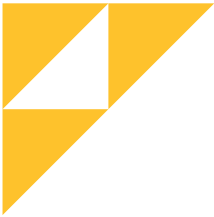
### KEY APPLICATIONS

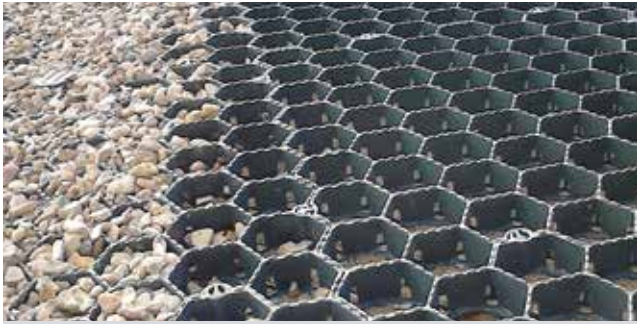
- ▶ Public parks
- ▶ Overspill car parks
- ▶ Public and private driveways
- ▶ Footpaths
- ▶ Caravan and camp sites
- ▶ Emergency vehicle access tracks

# GEOCELLULAR PAVING CELLTRACK

**CellTrack is a permanent panelled system that is virtually invisible from the surface once in-filled. Designed for quick and easy installation, panels simply interlock together and incorporate small ground spikes which provide anchorage during installation.**

CellTrack can be used with a variety of fill materials, allowing developers to rapidly build new access areas such as access roads and car parks, which are both pleasing to the eye and consistent with the existing environment.





Reinforcement



Protection

## CELLTRACK

Designed for quick and easy installation, panels simply interlock together and incorporate small ground spikes which provide anchorage during installation.

CellTrack is a permanent panelled system that is manufactured from recycled plastics. Virtually invisible from the surface once infilled, the product can be infilled with soil to promote grass growth or gravel to create decorative driveways and paths.

CellTrack is available in range of sizes and depths including 500mm x 500mm panels (CellTrack) and 1,200mm x 800mm panels (CellTrack LP).

In all applications CellTrack provides excellent support for vehicular traffic.

### QUICK GLANCE DATA

CellTrack	
Tile size	500 x 500mm, 1,200 x 800mm
Tile depth	38, 50mm



Reinforcement



Protection

## CELLTRACK HD

CellTrack HD offers all of the design and installation benefits of CellTrack but in a heavy duty panel, that is design to withstand high loading capacities.

CellTrack HD is a permanent panelled system manufactured from recycled plastics.

Designed for HGV loading, it is also suitable for high intensity traffic situations, fire tender access and dust cart traffic.

CellTrack HD can be used with a variety of fill materials including grass and gravel. Allowing developers to build new access areas such as coach and truck parking areas, which are both pleasing to the eye, porous and consistent with the existing environment.

### QUICK GLANCE DATA

CellTrack HD	
Tile size	600 x 400mm
Tile depth	100mm



# THETFORD WOODLAND LODGES



Wooden Lodge  
Foundations



Thetford



ProtectaWeb 400m<sup>2</sup>

**Thetford Forest is the UK's largest man made lowland forest. It's patchwork of pines, heathland and broadleaves provide the ideal setting for a great day out, and a welcome refuge for a rich variety of animal and plant life.**

To accommodate some of the thousands of visitors who flock to the woodland every year, the operators decided to construct a collection of luxury woodland cabins. The site identified for the cabins contained many mature trees which the local authority was keen to preserve.

During the selection of products, our technical team considered the mass of the lodges themselves as well as delivery vehicles. Due to the weight involved, it was clear that the correct selection of ProtectaWeb™ depth was imperative to the success of the project.

The contractors employed to carry out the works praised ProtectaWeb™ for its ease of installation, and appreciated onsite assistance provided by our support team.





# KINEMA IN THE WOODS

**The Kinema in the Woods is a cinema in the village of Woodhall Spa, Lincolnshire, England. Dating back to 1922, this beautiful woodland setting is a protected conservation area.**

We were invited to assist with creating a new access road and car park in the sensitive area in which the cinema is located and which is surrounded by hundreds of trees protected by Tree Preservation Orders (TPOs).

The new car park needed to provide root protection for the protected trees in accordance with BS5837 (2012) and a final surfacing capable of retaining aesthetically pleasing decorative gravels. There was also an entrance area and access road which required the same tree root protection system but with a heavy duty gravel paving system to permit construction vehicle access during the build phase.

We attended a number of project meetings with the client, who was also the contractor. We successfully agreed cost-effective and durable Protectaweb TRP as the most appropriate solution and gained approval from all relevant parties, including the conservation officer for Lincolnshire County Council and the landscape architect. Our design solutions delivered an attractive, hard wearing access road and car park which combined tree protection and permeable paving – an engineered SUD's design which will serve The Kinema for many years to come.



Woodhall Spa



Woodhall Spa  
Lincolnshire



3,500m<sup>2</sup>  
ProtectaWeb



1,200m<sup>2</sup>  
CellTrack



# GEOMATS

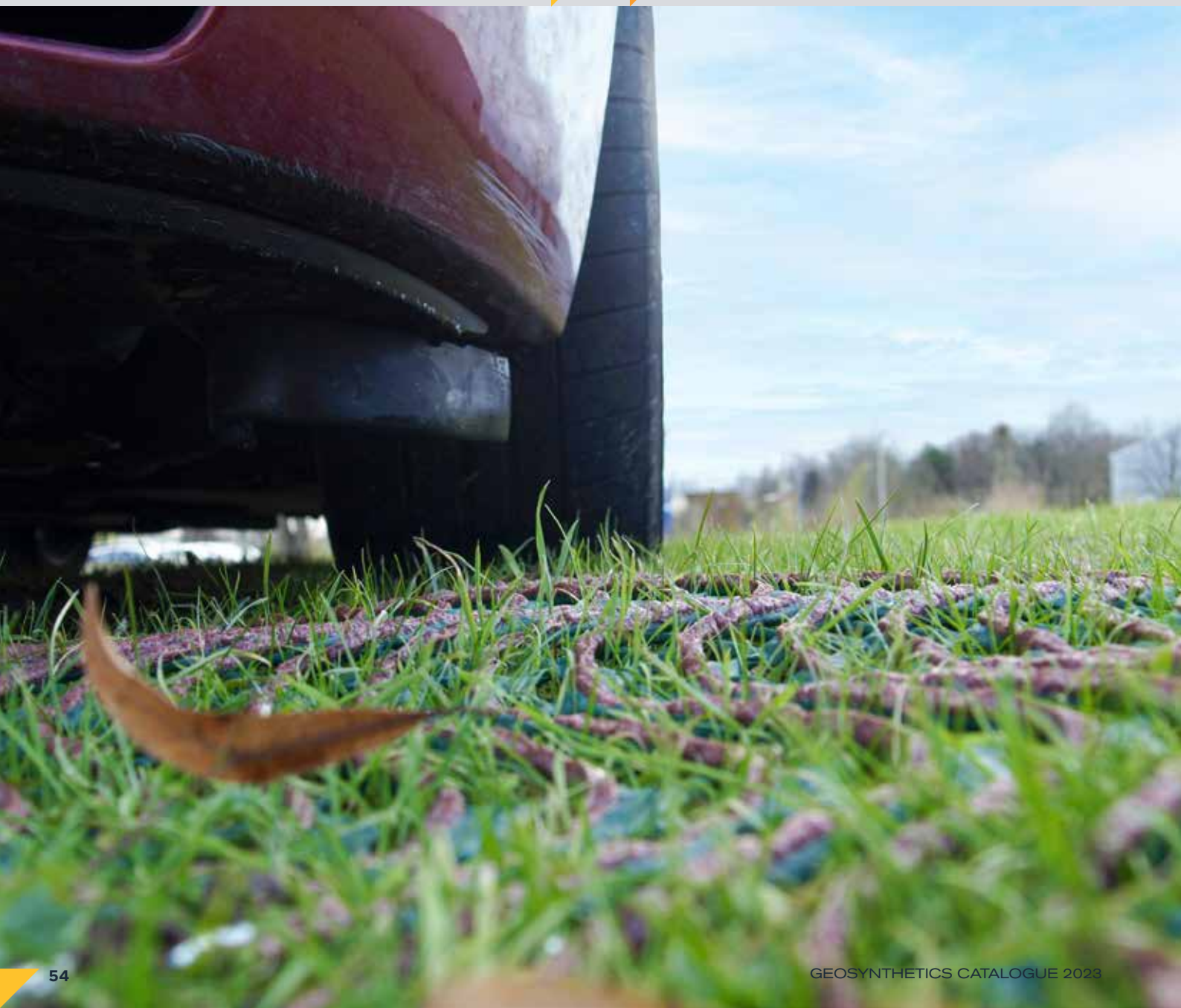
**Geomats are designed to extend or support existing grass or vegetation areas. These are used for extensions of vehicular access areas in aesthetically sensitive locations.**

Our geomats aid seed germination and vegetation growth as roots networks interlace with the mesh, stabilising the upper layer and allowing a deeper network to develop.

Easy to install and highly durable, geomats excel around developments such as roads and motorways, railways, riverbanks and reservoir embankments.

Trinter, our erosion control matting is used as a lightweight solution to help establish healthy vegetation, which also protects against erosion on banks and slopes - or as vital protection for grassy areas being used by vehicles.

TurfMesh has been specifically designed to facilitate vehicular traffic on ground with established grass/turf without effecting normal gardening practices e.g. mowing, fertilising, rolling.





## TURFMESH

### GEOMATS

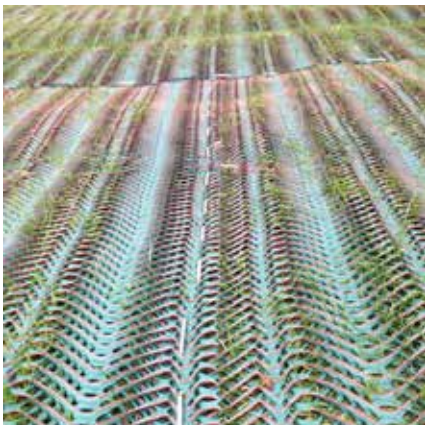
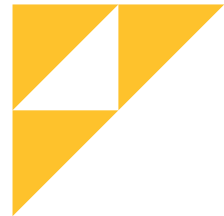
TurfMesh is a versatile grass support system, which can be installed on already established lawns and park areas. TurfMesh provides great versatility as a temporary system or left in position to become a permanent and integral reinforcement mesh.



## TRINTER

### GEOMATS

Trinter erosion control mesh is a volumetric geomat made from Polypropylene and High Density Polyethylene and is designed to control erosion. Protection is guaranteed from the moment of installation.





### KEY APPLICATIONS

- ▶ Overflow car parks
- ▶ Pedestrian grassed areas
- ▶ Emergency vehicle access routes
- ▶ Golf course buggy access
- ▶ Caravan parks
- ▶ Footpaths and cycle tracks

# GEOMATS TURFMESH

**TurfMesh is a versatile grass support system, which can be installed on already established lawns and park areas. TurfMesh provides great versatility as a temporary system or left in position to become a permanent and integral reinforcement mesh.**

It is manufactured from a heavy duty thermoplastic which incorporates a blowing agent to help texture and creates a less slippery surface. TurfMesh is UV stabilised, rot resistant and chemically inert, giving a long term reinforcement solution.

TurfMesh is laid directly onto the grass surface and secured in place by steel U-pins. Grass roots quickly grow through and establish within the mesh apertures, allowing areas to return to a natural appearance as the TurfMesh becomes part of the grass root matrix.

TurfMesh has been specifically designed to facilitate vehicular traffic on ground with established grass/turf without affecting normal gardening practices such as mowing, fertilising and rolling.

TurfMesh is available in three grades, Standard up to Heavy, to suit different loading capacities from pedestrian to emergency vehicle access.



Protection



Reinforcement

### QUICK GLANCE DATA

TurfMesh	
Roll size(s)	2 x 20m
Weight	1,000, 1,400, 1,800g/m <sup>2</sup>
Tensile strength	6.5, 9.5, 11.5kN/m





## KEY APPLICATIONS

- ▶ Roads and motorways embankments
- ▶ Railway embankments
- ▶ River banks and channels
- ▶ Irrigation canals
- ▶ Reservoir embankments
- ▶ Grassed spillways
- ▶ Culvert inlets and outfalls

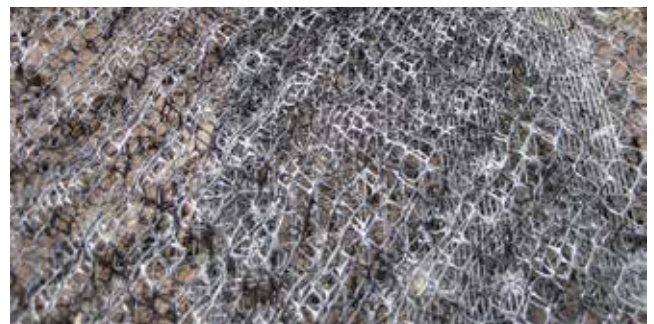
GEOMATS

# TRINTER EROSION CONTROL MESH

**Erosion control on banks and slopes is a common problem faced by many contractors and engineers. Erosion control matting is used as a lightweight solution to help establish healthy vegetation for permanent erosion protection on banks and slopes.**

Our Trinter erosion control mesh is a volumetric geomat made from Polypropylene and High Density Polyethylene and is designed to control erosion. Protection is guaranteed from the moment of installation.

Trinter aids seed germination and facilitates the growth of vegetation by encouraging root networks to interlace with the mesh, thereby stabilising the upper layer and allowing a deeper network to develop over time. Easy to install, and highly resistant to degradation, Trinter can be used on all types of sloping ground. Predicted to be durable for a minimum of 25 years in natural soils with pH 4-9 and soil temperatures < 25°C.



Protection



Erosion control

## QUICK GLANCE DATA

Trinter	
Dimensions	2 x 25m
Thickness	25mm
Weight	320g/m <sup>2</sup>



# HELPING TO 'LOVE YOUR GARDEN'

**We were selected to supply our TurfMesh and weed suppression geotextiles to the ITV series 'Love Your Garden with Alan Titchmarsh' following an approach by the series' producers to see if we could help Alan and his team.**

The objective was to completely redesign the garden of Bolton resident Caroline. Animal lover Caroline was an RSCPA Inspector until a spinal stroke left her with severe nerve damage. Today, Caroline helps others who have spinal injuries, but her disability has made it hard for Caroline to look after her 131 foot-long garden. Alan stepped in to create a beautiful zoned garden where a path zig-zags past vegetable beds, a potting shed and a play area for Caroline's rescue dogs.

We supplied two rolls of TurfMesh 1000 with steel Upins and two 2 x 50m lengths of weed suppression fabric. These are used to protect the carefully arranged areas of Caroline's gardens to encourage healthy plant and lawn growth, while keeping it easy to maintain.

TurfMesh was used for all grassy areas of the garden. It provides ground reinforcement and protection so that Caroline's visitors – many of whom use wheelchairs – can travel over the grass without damage to the turf.



**ITV**



**Bolton**



**2x Rolls Turfmesh**

"We're happy to help Caroline, so we jumped at the chance to support the show. Because most of our products can't be seen when installed, it's a brilliant opportunity to show how they work."

**Simon Turner,**  
Commercial Director, Wrekin Products Ltd.

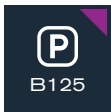




# **WREKIN** ACCESS SOLUTIONS **SOLUTIONS FOR EVERY SCENARIO**



A15



B125



C250



D400



E600

In addition to geosynthetics, we are a leading UK designer, manufacturer and supplier of specialist products for the civil engineering industry, including; ductile iron manhole covers and gully grates, steel access covers and bespoke steel systems.





All information in this catalogue is subject to change without notice. While efforts have been made to make this catalogue helpful and accurate, Wrekin Products Ltd. does not warrant the accuracy of information obtained from this catalogue. Where errors or omission are brought to the attention of Wrekin, amendments will be made as quickly as possible.



**Tel.** 01543 440 440  
**Fax.** 01543 440 444  
**Email.** [sales@wrekinproducts.com](mailto:sales@wrekinproducts.com)

[wrekinproducts.com](http://wrekinproducts.com)

Wrekin Products Limited.  
Unit 1a, Europa Way  
Britannia Enterprise Park  
Lichfield, Staffordshire  
WS14 9TZ

