



Geotechnical Solutions



When your business needs a supplier for construction products who can offer you impartial advice and support, you need a distributor who you can trust. At SIG we are dedicated to supporting you on your projects.

As one of the UK's market-leading specialist suppliers to the construction industry, we take the time to understand the demands of our customer's project. We work with our customers throughout their project, from early design stage through to completion enabling us to provide on hand support, offering the right solution backed by our technical expertise.

You can trust the extensive product range, and excellent service of SIG to deliver what you need when you need it.

How SIG can support you

- We can offer you an extensive product range from leading manufacturers in Construction Accessories, Insulation, Fire Protection, Dry Lining, Interiors, Ceilings, Fixings & First Fix M&E and Roofing
- We provide technical support when you need it, including estimating and technical calculations
- ✓ With a diverse fleet, we have the right vehicle to deliver the product to you on site
- ✓ Our **nationwide** branch network means we're never far away
- Our dedicated Construction Accessories sales team are always on hand to support you



TRUST SIG TO DELIVER

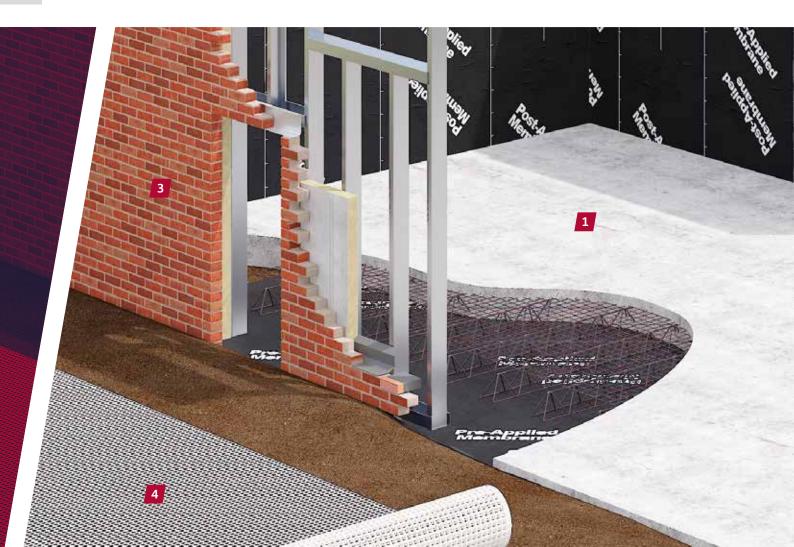




SIG Construction Accessories, are a specialist distributor of products for Masonry, Groundworks, Geotechnical, Waterproofing, Concrete Repair and Technical fixings. Our team is made up of skilled professionals who are passionate about what they do and are dedicated to delivering the best possible solutions for our customers. We pride ourselves on our ability to tailor our services and the products available to meet the unique needs of each, and every project we work on.

With years of experience, we have developed a deep understanding of our industry, and we are always striving to stay ahead of the curve when it comes to new developments and innovations. We work with Architects and design teams in the early stages of projects, to provide value engineered solutions which consider application, sustainability and commercial viability. Once the project is on site we are on the ground supporting our customers for the duration.

When you need a supplier who has the products you need, when you need them through a national branch network, then trust SIG Construction Accessories to deliver.



Our Range of Products



Concrete Repair & Protection

Available products:

- ✓ Grouts & Anchors
- ✓ Cementitious Repair Mortars
- ✓ Resin Repair Mortars
- ✓ Levelling Compounds
- ✓ Protective Coatings
- ✓ Specialist Sealants



Waterproofing

Available products:

- ✓ Membranes (Pre & Post-Applied)
- ✓ Bentonite
- ✓ Cavity Systems
- ✓ Liquid Applied
- ✓ Cementitious
- √ Waterstops
- ✓ Waterproofing Accessories



Masonry

Available products:

- Masonry Support Systems
- ✓ Windposts & Parapet Posts
- ✓ Surface Fixed Wall Channel
- ✓ Brick Reinforcement
- ✓ Wall Ties & Restraint Fixings
- ✓ Head Restraints
- ✓ Remedial Wall Ties
- ✓ Wall Starter Systems
- ✓ Builder's Metalwork
- ✓ Damp Proof Course Systems & Accessories (DPC)
- ✓ Cloak Units, Cavity Trays & Abutment Trays
- ✓ Crack Stitching Injection
- ✓ Brickwork Joint Filler
- ✓ Brickwork Protection
- ✓ Through Wall Ventilation ✓ Wall Ventilation/Weep Vents

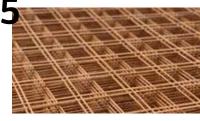




Groundwork **Engineering**

Available products:

- ✓ Geotextiles
- ✓ Geogrids
- √ Walls/Gabion Baskets
- ✓ Erosion Control & Matting
- ✓ Cellular Confinement System
- ✓ Root & Weed Barriers
- ✓ Grass Protection Mesh
- ✓ Geocomposite Drainage
- ✓ Clay Liners & Plastic Membranes
- ✓ Gas/Hydrocarbon Barriers
- ✓ Clayheave/Void Former Insulation
- ✓ Permeable Paving
- ✓ Slope Stability



Reinforcement & Formwork

Available products:

- ✓ Reinforcement Mesh
- ✓ Reinforcing Bars
- ✓ Cut & Bent
- ✓ Reinforcement Spacers
- ✓ Dowel Bars & Accessories
- ✓ Tying Wire
- ✓ Concrete Slab Accessories
- ✓ Beamform/Ground Prop
- ✓ Tie Bar Systems
- ✓ Column Formers
- ✓ Expanded Metal Formwork
- ✓ Screed Rails & Accessories
- ✓ Crack Inducers & Void Formers
- ✓ Structural Concrete Reinforcement
- ✓ Cast-in Channels
- ✓ Floor Decking
- ✓ Brick & Concrete Cleaning Materials
- ✓ Continuity Systems
- ✓ Formwork Chemicals



Geotechnical Specialists

Our SIG Construction Accessories
Geotechnical Team support Clients,
Contractors, Local/National Authorities
at early stages of projects – specifically
looking at ways to optimize designs and
offer safe, efficient, low carbon and cost
saving solutions.

We Offer

Early involvement to offer advice on costs, product specifications, design solutions, value engineered services, and more.

We Provide

Technical support through our dedicated supply chain partnerships, including preliminary design, technical CPD's, full design including indemnity via third party, technical support on products and applications.





We Assist

Temporary and permanent work designs at ECI stage to optimize the site and reduce on material import.

We Partner

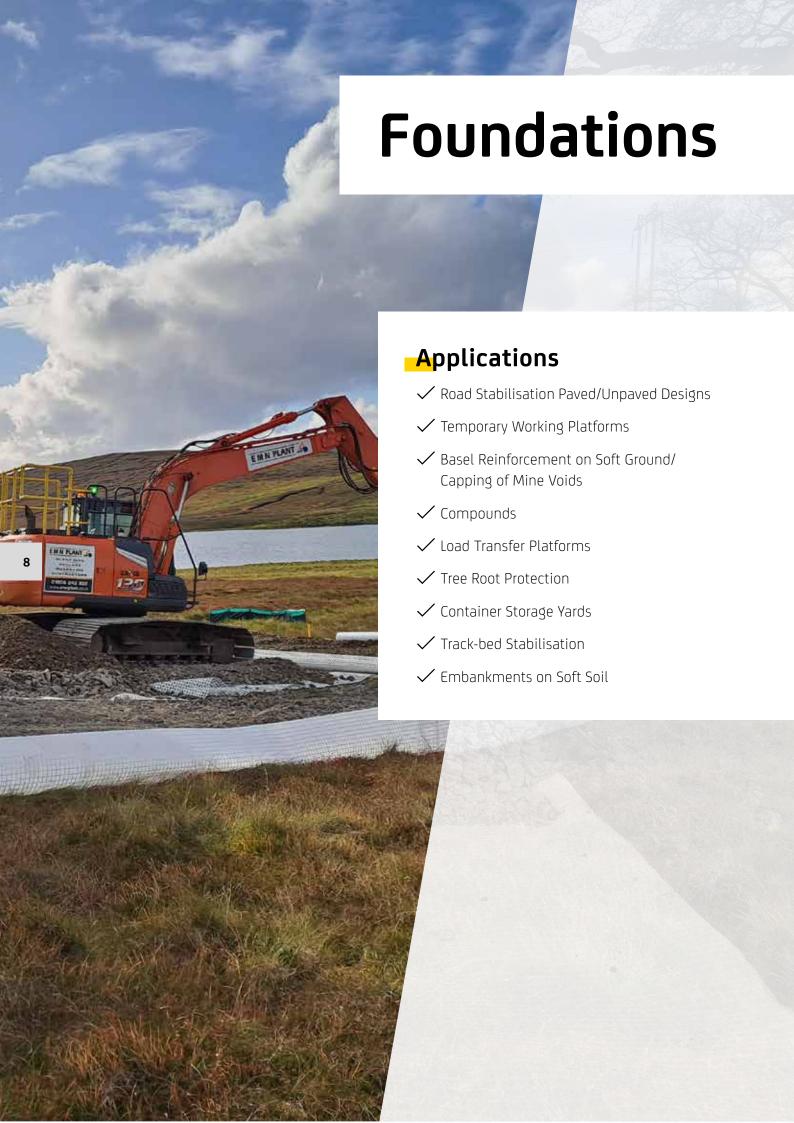
With specialist suppliers & design engineers to offer a robust solution to your problem.

Benefits Include:

- Reduction in import/export of materials
- Use of a wider variety of fill material
- Reduced foundation thickness
- Lesser vehicle movements = safer sites
- Cost reductions due to savings on materials

& much more







Secugrid™ HS are high strength geogrids. They are laid geogrids made of high tenacity polyester filaments with an extruded polyethylene protective coating and welded junctions.

Secugrid[™] HS combines high tensile strength and low creep tendency with extreme robustness and resistance.

Secugrid[™] HS was developed specifically for geotechnical applications in earthworks where tensile strengths of more than 400 kN/m are required.



Secugrid™ HS product advantages

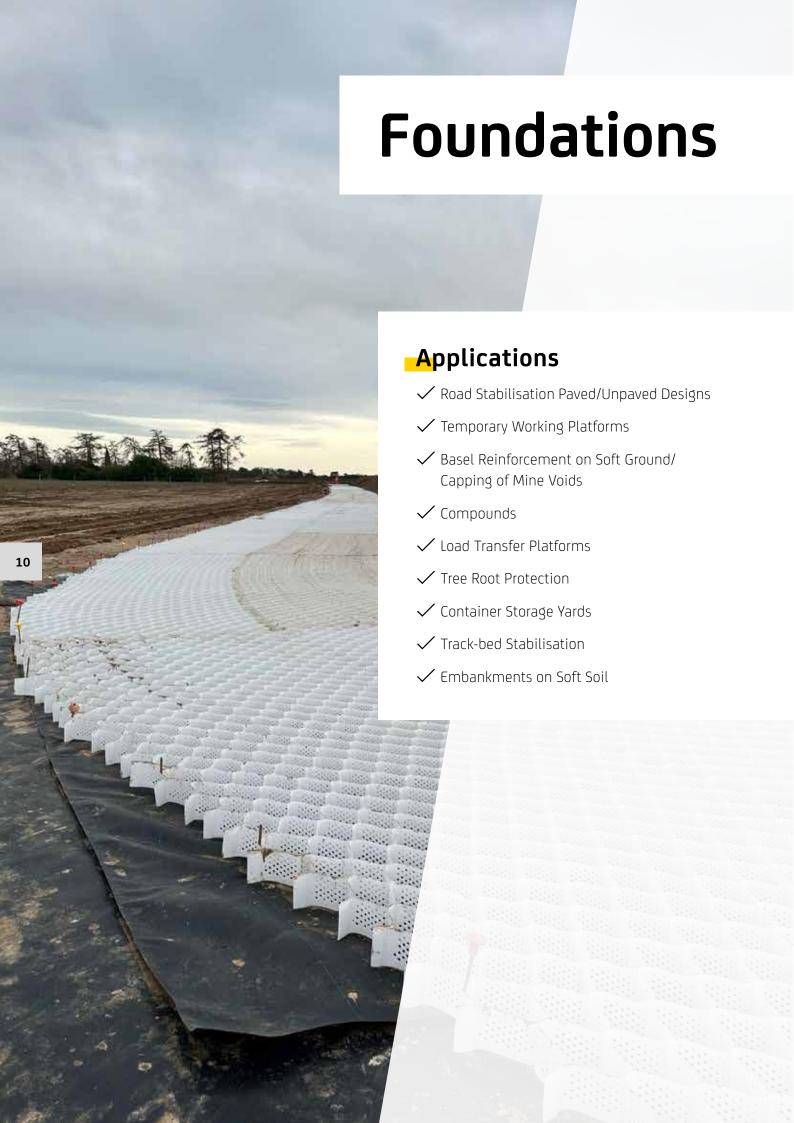
Secugrid™ HS is the choice for all applications where high tensile strengths over a long service life is required. The selection of the polymers used in combination with the applied product technology guarantees a robust and durable reinforcement product.

Low creep tendency

All geosynthetics that are exposed to permanent loads experience loss of tensile strength over time as a result of creep effects. The degree of tensile strength reduction depends on the stress level, time, temperature and molecular composition of the polymer used.

Robust against damage during installation

Installation of soil and the subsequent compaction mean high stresses for geogrids during the installation phase. Robust reinforcement products largely retain their strength during installation. The very high robustness of Secugrid™ HS was documented in field trials. For Secugrid™ HS 1200/100 R6, for example, a reduction factor of only 1.03 can be expected when installed below crushed stone (d85 < 35 mm).





Neoloy® Tough-Cells are a 3D honeycomb geosynthetic made from a nano-polymeric alloy (NPA) for unparalleled performance in terms of stiffness, creep resistance and service life. NPA-based Neoloy® Tough-Cells stabilize soft soil with more engineering, environmental and economic advantages than Soft-Cells (HDPE geocells), chemical additives or any other reinforcement solutions.

3D Tough-Cells made of a strong and stiff polymer (NPA) mechanically confine weak soil to increase the strength of infill and reinforce pavements. The result is higher engineering performance, sustained for long-term, achieved with lower construction and maintenance costs.

Engineering Benefits

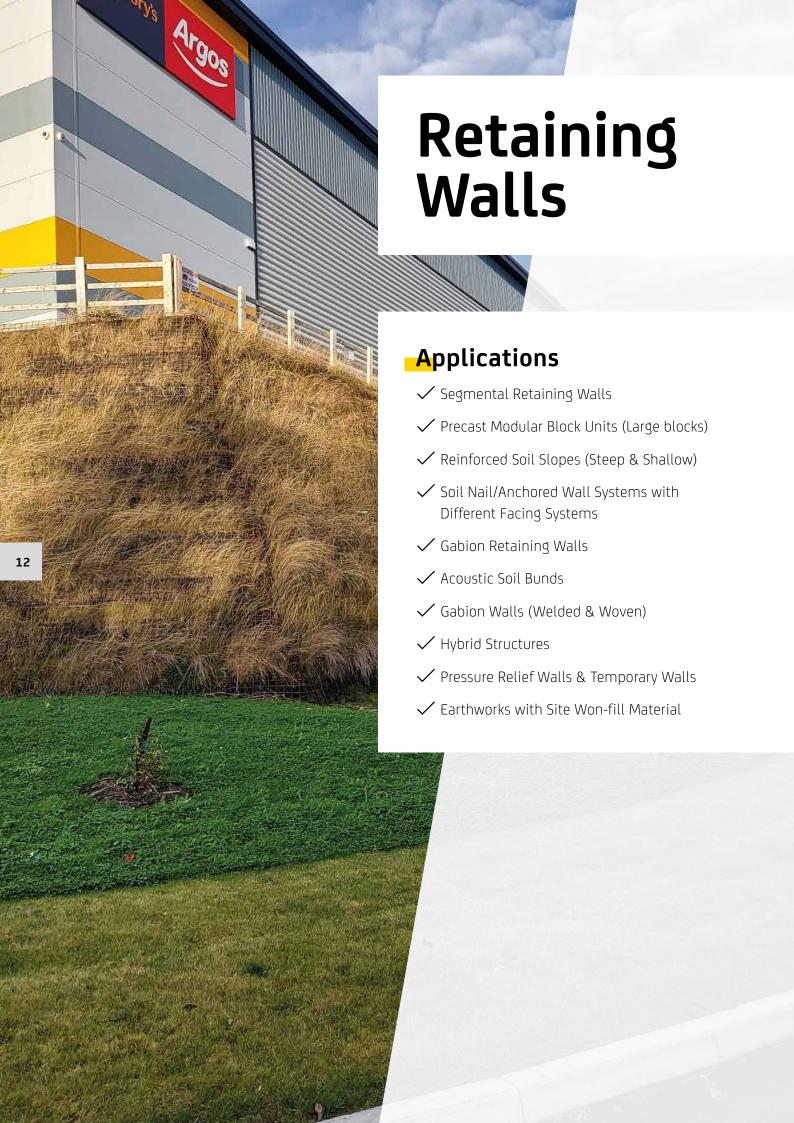
- Stabilises pavements over problematic soils such as sand, peat, and clays typically found on many construction projects worldwide
- Can extend pavement lifespan by 2 to 5 times
- Reinforced pavement foundations enables up to 40% reduction in asphalt and support layer thickness
- Durable design with dynamic modulus, creep resistance and tensile strength properties, guarantee the same pavement performance for the entire project design life

Economic Benefit

- Optimizes design with costs
- Simple logistics and all-weather installation
- Lowers capital construction costs –reduces costs of asphalt and/or aggregates
- Decreases repairs, downtime, and maintenance by up to 85%

Environmental Benefit

- Enables use of marginal but locally available soils and/or recycled materials for structural infill (i.e: sand and recycled asphalt)
- Reduces quarrying, haulage, fuel, pollution, carbon footprint

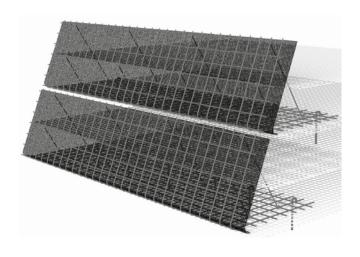




Naue M³ Retaining Wall System

The Naue Steel P system combines
Secugrid™ geogrid reinforcement
with longterm (permanent) steelskin facings to create reinforced soil
structures amenable to numerous
slope shapes.

Vegetation is allowed on slopes up to 70°. For steeper slopes on which vegetation is desired, special plantings and irrigation are necessary.





Selected advantages of Secugrid™ m³ Steel P

- Permanent stability even up to 90°
- High load capacity from 20 deg to 90° slopes
- Variable spacers allow site-specific slope face adjustment
- Quick and easy construction
- Site soils (including cohesive soils) can be used
- Extremely economical, due to the ability to utilise more-affordable cohesive soils rather than dispose of or replace them with non-cohesive soils
- Secugrid™ geogrids can be used with cement stabilised and lime stabilised soils
- Ecological benefits associated with the use of local soils include decreased transportation pollution (and cost) and conservation of natural resources

System components

- Secugrid[™] geogrid reinforcement
- Secumat® erosion control mat and/or nonwoven Secutex® geotextile
- Fasteners
- Hydroseeding
- Galvanised steel facings





Bentofix®, also known as geosynthetic clay barriers (GBR-C) are needle-punched, reinforced composites that combine two durable geotextile outer layers and a uniform core of high-swelling powder sodium bentonite clay.

This forms a uniform, multi-directional, shear-resistant hydraulic barrier with self-sealing and re-healing characteristics.

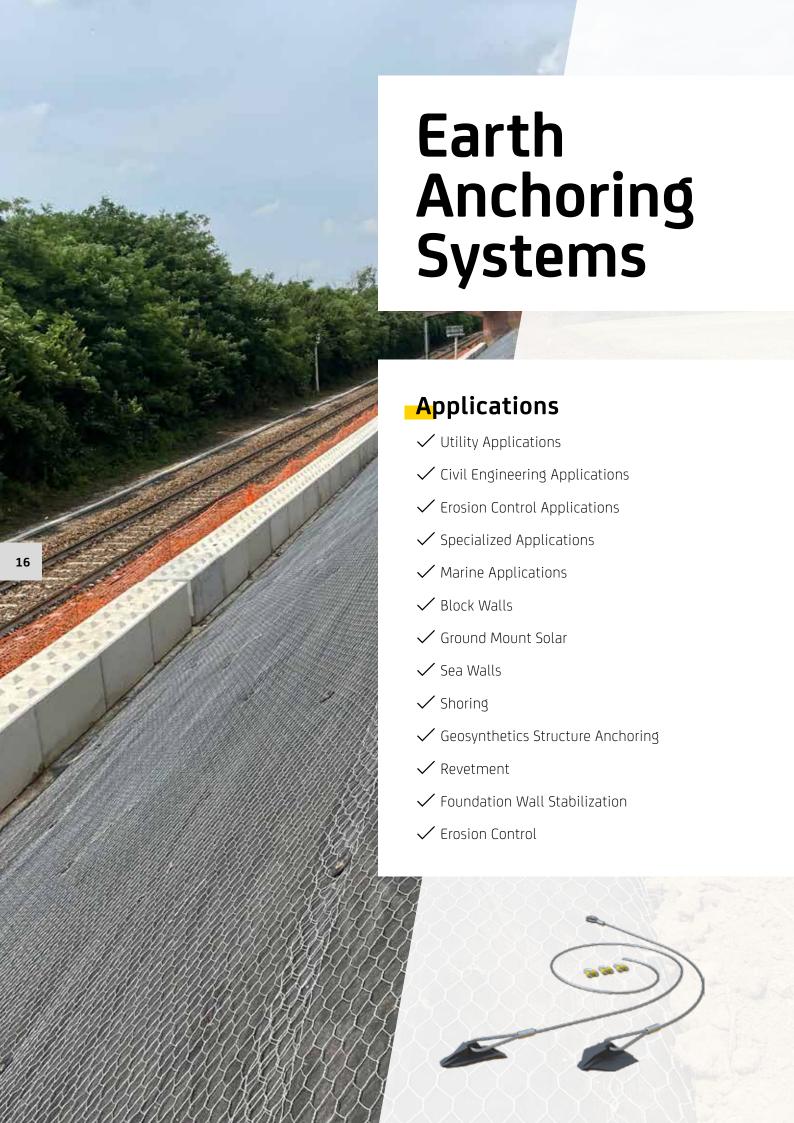


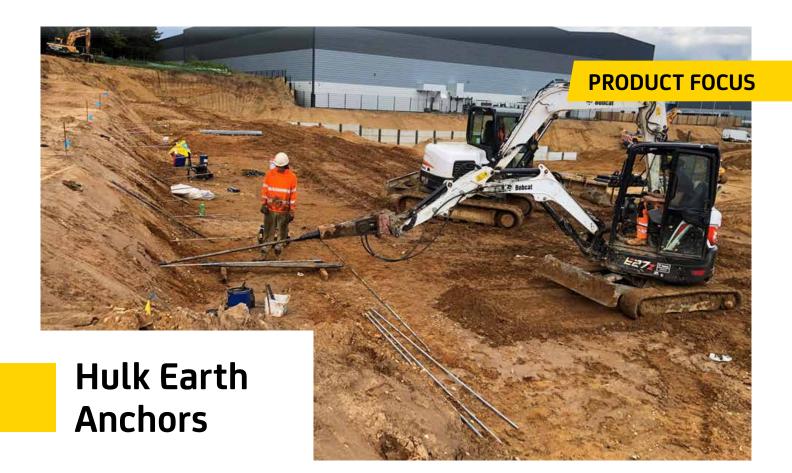
Typical solutions with Bentofix®

- Landfill caps, closures and base seal
- Environmental protection under roads, railways, airports
- Dams and dykes
- Water containment and pond applications
- Structural waterproofing
- Secondary containment
- Mining applications
- Tunnels

Project advantages

- Versatile sealing applications possible
- Immediate sealing and long-term performance with high swellable sodium bentonite powder
- Outperforms compacted clay liners
- Robust geotextiles encapsulate and contain the bentonite
- Uniform needle-punching provides multi-directional shear strength
- Thermal Lock process increases internal shear strength and interface friction angles
- Self-sealing length overlaps; with BFG types all overlaps self-seal
- Quick, easy and cost effective to install





Hulk Earth Anchors are driven tipping plate soil anchors for reaction of tensile loads.

Hulk earth anchors have minimum breaking load up to 280 kN. The elegant, simple, effective and low-cost Hulk earth anchor system represents a major breakthrough in anchoring technology with a multitude of uses in the utility, civil engineering and marine markets. Hulk earth anchors offers cost reductions for the installation and repair of walls, sheet piles and seawalls. Many of our customers utilize Hulk earth anchors to shore up, stabilize and repair failing walls providing a cost-effective alternative to a potential full or partial rebuild/replacement structure.

HEX DRIVE TECHNOLOGY

The unique shape of the Hulk earth anchor body allows it to have a slimmer, stronger profile, we call this Hex Drive Technology. This reduces the amount of effort required to drive the anchor into the ground while simultaneously increasing the overall strength. It also provides a wider scoop on the trailing end of the anchor, encouraging it to rotate and lock into position sooner and more reliably during proof testing. Hex drive also allows for clean angles, allowing the product to galvanise well thereby enhancing corrosion resistance.

HULK DEFLECTOR

The Hulk Deflector protects the anchor tendon from damage while the anchor is being driven into the ground.

TENDON ATTACHMENT

The Hulk Earth Anchor tendon attachment point is built touch for cable, rod or chain. A wide range of tendons are available to cater for any of your anchoring requirements.

BALL NOSE SMASHER

The ball nose "Smasher "anchor driving rods offer superior performance and increased resistance to wear and tear. This also reduces the risk of the rod getting stuck in the back of the anchor.

WIDENED SCOOP

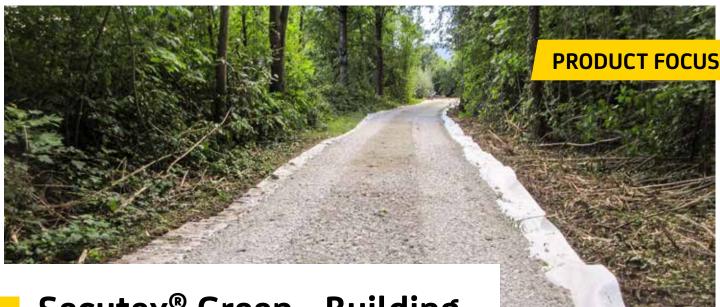
A further benefit of Hex Drive Technology is the wider scoop on the trailing end of the earth anchor which encourages it to rotate and lock into position sooner and more reliability during proof testing. A major benefit of this is that Hulk Earth Anchors pull back less when proof testing compared to competing brands, thereby requiring a shallower installation depth to achieve similar results- a major benefit for production installers.

CHISEL TECH

The "cutting edge" technology of the HULK earth anchor. The chisel like leading edge of the HULK provides superior penetration while driving the anchor into the ground, especially in harder ground conditions.

LOAD MAX TECHNOLOGY

The reaction surface of Hulk earth anchors is optimised using clever load max technology. Years of experimentation have shown us that surface bearing angles of an anchor have an influence on bearing capacity. Therefore when we coupled the Hex shape of Hulk with the perfect angled wing, frustum cone angles were increased allowing it our Hulks to carry higher loads. We call this LOAD MAX technology. This wing varies in size across the different Hulk models to cater for varying ground conditions.



Secutex® Green - Building on sustainable ground.

Secutex® Green is a 100% biodegradable, mechanically bonded nonwoven. Due to its certified biodegradability, residues of the product do not harm the environment. Secutex® Green is also UV-resistant, the nonwoven can therefore be used in uncovered applications.

Secutex[®] Green is suitable for all applications where a temporary solution is required.



Typical Applications

- Gardening and landscaping
- Temporary road and path construction
- Bank protection/natural watercourse development, coastal protection and scour protection

Application Advantages

- Remaining onsite or composting after renaturation
- No entry of plastic into the environment during installation, operation or renaturation
- UV-resistant

Expected Service Life

The range of applications and the maintenance of the function depend on the site factors such as soil, water and climate conditions of the respective project. As a rule, a service life of three years can be assumed.

Guarantee (biodegradability)

- Guarantees complete biodegradability in garden compost
- Guarantees biodegradation in a natural freshwater environment
- Guarantees biodegradability in an industrial composting plant
- Guarantees complete degradation in natural soil
- Guarantees biodegradability in a natural seawater environment

Secutex[®] Green Visitor Centre Access Road & Car Park Area Northam Burrows Visitor Centre, North Devon

For the first time in the UK, a new and innovative biodegradable geotextile from Naue Geosynthetics has been used in the construction of an elevated access road and car parking area for the Visitor Centre at Northam Burrows Country Park on the North Devon coast.

Northam Burrows is Common Land and, as well as being home to the Royal North Devon Golf Club, it is still actively grazed by the, Potwallopers' of the ancient manor of Northam.

Because it's common land, the Burrows has not been subjected to the normal development and intensive use of other similar seaside dune systems, which has given rise to a great diversity in the flora and fauna, and the area is designated as a Site of Special Scientific Interest (SSSI) and an Area of Outstanding Natural Beauty (AONB). The site is

particularly noted for its bird life; especially wading birds visiting from the saltmarsh and estuary.

Northam Burrows Country Park is owned and managed by Torridge District Council and the access road to the site is also used by Visitor Centre staff, Country Park Rangers, and members of the public accessing the parking area around Sandymere Lake.

Originally constructed in 1985, the Visitor Centre has been extensively refurbished, and the 400-metre-long vehicular

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access road, which was regularly inundated by tidal waters, has been reconstructed and elevated to sit above the 1 in 200-year, plus climate change, tidal level.

Wholly sympathetic to the site's SSSI and AONB status, all works on the site were carried out in an environmentally-friendly manner. Despite enduring the frequently harsh coastal weather for almost 40 years, timber cladding removed from the building has been reused or recycled, and even the surrounding turf was moved to a temporary location, then reinstated when construction works were completed.

Other materials recovered during the refurbishment, such as roofing slates, are being re-purposed elsewhere by Torridge District Council (TDC). Consistent with the other green policies being adopted at the Northam Burrows site, Natural England had required that any geotextiles used in the construction should be plastic-free.

Design consultancy, Craddys, taking advice on board from Naue's technical team, specified a new and innovative biodegradable geotextile - Secutex® Green - for use in construction of the elevated access road and hardstanding car parking area which will enable year-round access to the Visitor Centre. Northam Burrows is the first project in the UK to benefit from the use of this new geotextile - the first to be launched from Naue's planned 'GreenLine' range.

For the hardstanding area, Craddys' design specification utilised three separate layers of Secutex® Green 30G1 GRK 2.

The first layer was installed directly to the prepared base of general fill, then a 450mm layer of Type 3 aggregate was overlaid with a second layer, followed by a 150mm topping of Type 1 material.

The final layer of Secutex® Green was then laid prior to installation of a 20mm blinding layer of sharp sand, in readiness for installation of the permeable Grasscrete™ paving system which was backfilled with material excavated onsite and left to self-seed from adjacent grassland.

A layer of Secutex® Green 30G1 GRK 2 was also used on the embankment prior to installation of further Grasscrete™ paving.

Craddys' Senior Engineer on the project commented: "Having recently achieved ISO14001: Environmental Management System certification, we endeavour to improve environmental performance, and encourage sustainability, ecology and biodiversity, wherever possible. Naue's Secutex® Green is the only product on the market that's readily biodegradable but, for this project, it was the perfect solution."

"In a couple of years', the natural ,living' embankment and car parking area will be flourishing as rapidly as the geotextile layers are biodegrading — the roadway will virtually 'disappear' from view and, within three years, the geotextile material will have completed its task, reached the end of its service life, and nature will have taken over once again."

At just 300g/m² and 3mm in thickness, Secutex® Green 30G1 GRK 2 is a lightweight material that can be simply unrolled ahead of operations yet, with a resistance to stresses in excess of 1,000N, it's robust enough to withstand the impact of aggregate fill.

The Grasscrete™ system employed on the embankment and hardstanding areas is reinforced with steel, rather than plastic, and vegetation will be allowed to recolonise the sides of the new roadway without the introduction of seed from external sources. The permeable hardstanding area has also minimised the use of tarmac and will improve surface water run-off.

Naue's Secutex® Green is manufactured exclusively from organic, natural, renewable raw materials, and is certified as 100% biodegradable by TÜV Austria. It is an eco-friendly, nonwoven, mechanically-bonded geotextile which delivers similar properties of separation, filtration and protection as Naue's original Secutex® product which has been acclaimed by the industry for decades... except that its effective service life, depending on prevailing site conditions, is typically in the region of just 3 years.

Soil organisms, micro-organisms and fungi, as well as exposure to oxygen, contribute to the biological degradation of the product and, since animals' stomach acid attacks the material, there is no danger to living creatures if fibres are absorbed.

Naue's production process guarantees consistent quality and optimum mechanical properties of the industrially produced staple fibres and, as well as road construction in ecologically sensitive environments, other uses include temporary construction roads, bank protection in waterway construction, and for scour protection in marine and coastal applications.

For the Northam Burrows project, Naue supplied 3,600 square metres of Secutex® Green 30G1 GRK 2; a total of 8 rolls, at 6m wide and 75m in length.

Also available on 2m and 4m wide rolls, and in grades from GRK 2 to GRK 5, Secutex® Green is capable of resisting mechanical stresses in excess of 5,000N during installation and construction.

In short, for applications where a long lifespan is unnecessary, or even undesirable, Secutex[®] Green now provides the industry with an environmentally neutral alternative.

SUSTAINABILITY

SIG are committed to building modern, sustainable, and safe living and working environments in the communities in which we operate, while also doing what we can to influence the industry to take meaningful environmental action.

As we respond to climate change and rising energy costs, addressing our own carbon footprint is crucial. We also want to play an influential leadership role in the transition to sustainable construction through our central position in the building materials supply chain.

We say that SIG was born green because since we were founded, we have supported the drive for better energy efficiency standards and greater protection for the environment. Our five group-wide sustainability commitments, launched in 2022, support our renewed focus.



NET ZERO CARBON BY 2035

We have committed to net zero carbon in SIG's operations by 2035 at the latest and as stated in 2021, we aim to achieve this target by meeting the following secondary goals:

- 80% reduction against total Scope 1, 2 and business travel emissions by 2035 (using 2021 emissions as a base year) and offsetting any residual emissions
- Cars and forklifts ("FLTs") to be 100% electric by 2030
- Commercial vehicles to be 100% electric, hydrogen, or lower-carbon alternative by 2035 (although this continues to be dependent on the pace of progress in the development of external technology, especially for HGVs).



PARTNER WITH MANUFACTURERS AND CUSTOMERS TO REDUCE CARBON AND WASTE ACROSS THE SUPPLY CHAIN

Our commitment is to partner with manufacturers and customers to reduce carbon and waste across the supply chain.

As a specialist distributor of products central to building energy efficiency, SIG is at the heart of the supply chain, uniquely placed to help suppliers and customers meet their own sustainable construction ambitions

SIG's role is to provide choice, data transparency and expertise on regulatory compliance. We are working to identify and promote more sustainable products from new and existing suppliers.



ZERO SIG WASTE TO LANDFILL BY 2025

Our commitment is for zero SIG waste to landfill by 2025. Our primary responsibility is the SIG waste that we directly control, including monitoring and validating third-party waste contracts for our sites. This will be achieved by waste segregation, reuse of packaging and paperless processes.

However, the nature of our role as a distributor in the middle of the supply chain, handling logistics between customers and suppliers, means we are already coordinating complex logistics and breaking bulk, which helps reduce on-site waste (both materials and labour) in construction. We are also well placed to support a circular economy by recycling and repurposing materials to reduce waste and raw materials extraction.



HEALTH AND SAFETY

We are committed to being a health and safety leader in building materials distribution and to providing workplaces that assure the safety, health and wellbeing of our employees, contractors, and stakeholders.



OUR PEOPLE

Our commitment to our people is to make sure they feel safe, proud, and valued. Their health and wellbeing are integral to this. Now more than ever, we will do what we can to support, educate and provide opportunities for our people to stay happy and healthy at work.

Contact SIG construction accessories today for...

- Structural Waterproofing
- Groundwork Engineering
- Geotechnical
- Concrete Repair & Protection
- Masonry
- Reinforcement & Formwork

Scotland

Aberdeen

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North

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Speak to your local SIG **Construction Accessories Branch**





www.sigca.co.uk



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