Geofabrics is Australasia’s geosynthetic specialist. We help our clients deliver safe, efficient, and sustainable infrastructure through the innovative use of geosynthetic products.

On these projects and every project we undertake, we have a singular focus: to provide smarter infrastructure solutions for our clients. For us, smarter infrastructure is about using smart products, smart solutions, and smart people to help our clients deliver their projects on time and on budget.

Our value engineering delivers countless benefits for our customers including cost reduction, faster construction, risk mitigation, longer maintenance cycles, and whole of life opportunities.

For more than 40 years in Australia and New Zealand, we have supported the infrastructure sector on significant tunnel projects including the Westgate Tunnel, Metro Tunnel, Cross River Rail, WestConnex, and NorthConnex.
WHY CHOOSE GEOFABRICS?

SUSTAINABILITY
We’re committed to building a strong, sustainable future for Australia.
Where possible we manufacture and supply products that reduce reliance on non-renewable resources and reduce waste to landfill.

SMARTER PEOPLE
Our team of industry specialists provide on-site support, and understand best-practice and regulatory frameworks.
We pride ourselves on more than 40 years experience with geotextiles and geosynthetics.

SMARTER SOLUTIONS
Our product solutions are suited for drainage, lining, cushioning, and reinforcing tunnel structures.
Our portfolio includes tunnel solutions that are exclusive to Geofabrics.

SERVICE RELIABILITY
We’ve built a strong reputation for delivering projects on time and within budget, and continue to set the industry benchmark for supply and reliability.
AUSTRALIAN MADE
The only local manufacturer of geosynthetic and geotextile products.
Shorter lead times, first-class quality, and none of the risks associated with inferior or non-complying products.

INDUSTRY PARTNERSHIPS
We work closely with designers, engineers, universities, government and regulatory bodies to deliver world-class infrastructure projects.

GRID: R&D LAB
Our team work closely with clients to develop site specific solutions.

PRODUCT PERFORMANCE
We manufacture our products in compliance with Australian and international quality standards. We are also the exclusive supplier for world-leading geosynthetics manufacturers.
Each project is unique and can often require custom solutions.

At Geofabrics, we work closely with our clients – whether you’re the asset owner, design engineer, contractor or installer, you’ll receive the best possible solution for the project at hand.

**CREATING AUSSIE JOBS**

By employing over 200 people across 12 locations, we support over 1,000 Australian suppliers with many located in regional Australia.

**DEDICATED R&D LAB**

The Geofabrics centre for Geosynthetic Research, Innovation and Development (GRID) has a state of the art R&D laboratory to solve complex customer problems.
WE DEVELOP SUSTAINABLE TUNNEL SOLUTIONS WITH CONSIDERATION FOR COST, RISK, AND OVERALL PERFORMANCE.

NATIONAL BACKING
With our national footprint and branch network we are able to support your project no matter how remote.

SPECIALIST SUPPORT
We have specialists across many disciplines including Logistics, Information Technology, Research & Development, Marketing and Finance.

LOCALLY MANUFACTURED
With factories in Albury (NSW) and Ormeau (QLD), we continue to support and invest in Australian manufacturing.
BESPOKE SOLUTIONS THROUGH OUR IN-HOUSE R&D CENTRE

Geofabrics’ Centre for Geosynthetic Research, Innovation & Development (GRID) is a specialist research and development (R&D) laboratory that works with clients to develop the right geosynthetic solution for complex problems.

Based in southern Queensland, the GRID houses a selection of key geosynthetic-specific test equipment. Testing is aimed at solving the real-world problems that designers, contractors, and asset owners find on their construction site – a major step forward to ensure the right solution is adopted.

The GRID is committed to precision analysis and comprehensive reporting. Analysis is performed according to Australian, American, and international test methods. Comprehensive test reports are generated, including results, photos, graphs, test conditions, and details of the test equipment used.

Our own research is supported by the research undertaken by our industry leading suppliers in both lab and field trials across the Americas, Europe, and Asia.

At our GRID facility we develop prototypes and carry out testing in situ to provide the bespoke products and system solutions that you require.

- We actively promote new technical developments and research projects
- We provide our clients with specification reviews, and application evaluations for geosynthetic applications in both construction and maintenance.
INNOVATION

As the Australasian leader in geotextiles and geosynthetics, we pride ourselves on being leaders in innovation and excelling at technically challenging tunnel projects.

We have a reputation for supplying world-class technical leadership and engineering support through our innovation, research, industry education, design, and independent testing services.

In October 2020, we were recognised as one of the ‘Top 10 Most innovative Companies 2020’ in Australia and New Zealand by the Australian Financial Review.
APPLICATIONS

Each project has its own characteristics, requirements, and conditions, which pose designers and contractors the challenge to implement the most suitable systems for draining, waterproofing, cushioning, and reinforcing.

At Geofabrics we pride ourselves on being tunnelling experts. We have the complete range of solutions for your next tunnel project. Be it drainage, waterproofing, sealing, portals, erosion control or load support - we have you covered with design, engineering, testing and product solutions.

KEY TUNNEL APPLICATIONS

A DRAINAGE & FILTRATION
Suitable for walls, under lining and flooring. Water infiltration can lead to deterioration and substantial damage of structural and functional components of the tunnel.

Tunnels require a drainage system to intercept and evacuate water quickly. In this way hydrostatic pressures are reduced, and water is prevented from entering the tunnel if there are weak points in the structure.

B WATERPROOFING
A special waterproofing layer is used to protect the tunnel structures from the influence of groundwater and penetration of excessive moisture into the interior space of the tunnel. Reliable, solid and durable waterproofing material can significantly extend the period of the facility’s successful operation.

The waterproofing system in tunnels caters for three important functions:
- It separates the subsequent bearing structure from the excavation support to avoid constraining forces
- It protects the inner shell from possible aggressive underground water
- It protects the traffic area from underground water

C PROTECTION & REINFORCEMENT
Coatings and membranes applied to concrete structures are often in need of protection. Angular materials in contact with the proofing can penetrate the barrier, particularly if the structure is to be subjected to high confining pressures.
At Geofabrics we have a range of geosynthetic and geocomposite drainage products designed specifically for tunnel walls (internal and external) and flooring.

**AUSTRALIAN MADE UNDER DRAINAGE PRODUCT SOLUTIONS**

**AUSTRALIAN MADE**

**MEGAFLÒ® GREEN**

Megaflo® Green is an effective subsurface drainage for the removal of excess water. Megaflo® Green has twice the inflow capacity and drains water 60% faster than 100mm slotted round pipe.

**AUSTRALIAN MADE**

**TUNNEL DRAIN**

Tunnel Drain is a new under-drainage product, exclusively designed by Geofabrics. Suitable for large road tunnels, Tunnel Drain reduces install time, is more flexible than typical under drainage and reduces labour and costs on site.

Contact us today to find out more about this innovative new product for your next project.
<table>
<thead>
<tr>
<th>WALL DRAINAGE PRODUCT SOLUTIONS</th>
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<tr>
<td><strong>STRIP DRAIN™ &amp; MODIFIED STRIP DRAIN</strong></td>
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<tr>
<td>Stripdrain™ is a prefabricated and flexible subsoil drainage system that removes the underground seepage water and also saves costs, reduces installation time and increases your subsoil drainage efficiency.</td>
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<tr>
<td>It consists of a HDPE inner drain core completely wrapped with a non woven geotextile filter and requires only sand as the backfilling material. It is an alternative to the complicated traditional perforated pipe-gravel-geotextile systems.</td>
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<th><strong>CORDRAIN®</strong></th>
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<tr>
<td>Cordrain® is a geocomposite drainage sheet designed for vertical drainage behind retaining walls, bridge abutments, and basement walls.</td>
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<tr>
<td>Being lightweight it is also well suited for installations on steep building sites to replace the need for traditional expensive drainage gravels that are heavy and provide logistic problems for the installer.</td>
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<th><strong>GEONET</strong></th>
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<td>The Geonet composite drainage systems are used during the construction of underground concrete lined structures (tunnels) to intercept and divert water from ingress into the concrete structure.</td>
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<th><strong>WALL CUSPATED SHEET (20-40MM)</strong></th>
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<td>Provides a free draining layer to collect infiltration water from behind tunnel linings as well as providing protection from physical damage.</td>
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Tunnel waterproofing is one of the most demanding sectors of the tunnelling industry. For waterproofing in tunnels or underground structures, it is important to consider the entire system rather than the individual waterproofing layers.

Just like there are many different methods of constructing a tunnel, the waterproofing solution should be designed to fit specific project requirements and expected jobsite conditions.

One of the most cost-effective ways to increase the useful life of a tunnel is through sealing and waterproofing. Tunnel sealing or waterproofing protects against corrosion and safeguards the structure, as well as reducing maintenance costs and repairs.

At Geofabrics we have a range of geosynthetic and geocomposite waterproofing product solutions.

### AUSTRALIAN MADE WATERPROOFING PRODUCT SOLUTIONS

#### AUSTRALIAN MADE
**GEOSYNTHETIC CLAY LINERS (GCLS)**

Elcloseal® GCL’s are Australian made composite materials consisting of bentonite bonded between woven and nonwoven geotextiles that can be used as an infiltration/hydraulic barrier. For transport tunnels the sealing system will also prevent environmental damage from oils or chemicals which may occur due to traffic accidents.

#### AUSTRALIAN MADE
**GEOSYNTHETIC MEMBRANES**

EnduraSeal® is a new Australian made geocomposite which combines our bidim® nonwoven geotextiles with the geomembrane. This combination provides cushioning to protect the geomembrane during installation, helping to minimise construction damage to the lining system.
GEOSYNTHETIC MEMBRANES

Cooley PVC Lining is used for lining basements, bored and driven tunnels, cut and cover tunnels, cross passages, shafts and underground structures. Available in a range of thicknesses for various applications. The membrane is applied to structures to prevent water inflow and provide asset protection.

GEOCOMPOSITES

Multi-layered combination geosynthetics

Geocomposites provide benefits over individual layered geosynthetics. With careful design they can provide drainage, protection, reinforcement, filtration and barrier functions whilst reducing instal time.

CONDUCTIVE NON-WOVEN GEOTEXTILES

bidim® C utilises the properties of graphene to provide an effective, lower cost means for designers and installers of lining systems to undertake liner integrity surveys, providing reliable leak detection of liner pin holes down to 1 mm in diameter.

BITUMINOUS GEOSYNTHETIC LINER (BGM)

The Teranap 431 TP geomembrane can be used to waterproof underground works in upper surface of cut and cover trenches and vaulted works without hydrostatic pressure, and underface of structural rafts and walls with or without hydrostatic pressure.

Bitac consists of a self-adhesive geotextile that is impregnated with bitumen. This combination gives the product a rugged durability and high conformity to road surfaces. It has high strength and high elongation properties to ensure the waterproofing function and stress relief performance is maintained under the expected traffic loads.
Floor support in tunnels includes ground stabilisation, base stabilisation, reinforcement and waterproofing of the wearing course and sub-surface drainage.

Geomembranes must be protected against potential mechanical damage. Without a protection layer the geomembranes can be damaged by the rough shotcrete surface of the sealing carrier layer or by careless installation of the concrete steel reinforcement layer.

Nonwoven geotextiles are used as a protection layer between the support and the geomembranes. The nonwoven geotextile performs not only a protective function but also a drainage function and is of great importance for the effectiveness of the total sealing system.

**PROTECTION SOLUTIONS**

**MARKER LAYER**

The ideal solution for tunnel protection, this bright orange “Marker” or indicator layer is easily visible during the milling process. This helps to eliminate the risk of damaging the extremely sensitive waterproofing membrane.

**FIRE RETARDANT GEOTEXTILE**

Tunnel building codes and regulations continue to stress lower flame spread and low smoke generation for many materials. Our Texcel P50 (500g/m2) and P70 (700g/m2) geotextiles have achieved a Fire Rating classification of Class E according to BS EN 13501:2007, on a scale from “A1” (concrete, ceramics glass and other non-combustible materials) to “F” (No performance determined).

**NON-WOVEN GEOTEXTILES**

Choose Texcel - Australia’s leading geotextile. Tunnel membranes often need of protection. Angular materials in contact with the proofing, whether by design or by accident, can penetrate the barrier, particularly if the structure is to be subjected to pressure. Thick, Australian made non-woven Texcel geotextiles are the simplest and most proven solution.
REINFORCEMENT SOLUTIONS

TENSAR GEOGRID
Tensar’s TriAx with its improved rib geometry and junction efficiency, greatly improves aggregate interlock and confinement – leading to improved structural performance of the mechanically stabilised layer. These Geogrids are easy-to handle and safe to work with since they are lightweight with no sharp edges. The result is increased production efficiency and decreased injury downtime.

PRESTO GEOSYSTEMS GEOWEB® GEOCELLS
This geocell cellular confinement system is the most advanced soil stabilisation technology available. Through an interconnected honeycomb-like network, 3D geocells confine and stabilise soils that would otherwise be unstable under loading. Geocells are widely used for load support, erosion control, slope stability, retaining structures and high velocity channels.

GLASGRID
Pavement reinforcement geogrids are a high strength self-adhesive reinforcement grid designed to control reflective cracking in asphalt concrete overlays on roads. They maintain high-tensile and stiffness fiberglass grid due to consistent impregnation of each glass filament. Multiple grades available.

ROAD CROSS SECTION
- A Wearing Course: Reinforcement and Waterproofing
- B Base Stabilisation
- C Subgrade/Ground Stabilisation and Separation/Filtration
- D Sub Surface Drainage
PRODUCT & TECHNICAL SERVICE

Our team members are well-trained in design and installation processes for geosynthetic products. Our technical and laboratory teams are industry experts, providing excellent support to designers and contractors.

We offer both product management and technical support through our engineers and experienced technicians:

- Testing and evaluation of tunnel drainage and reinforcing products
- Laboratory testing at our geosynthetic testing laboratories
- Design and construction advice and optimisation
- On-site services for professional installation and testing
- Support across the entire project phase

OUR FOCUS ON QUALITY ENSURES OUR PRODUCTS COMPLY WITH OUR PUBLISHED SPECIFICATIONS AND ARE TRACEABLE FROM RAW MATERIAL THROUGH TO FINISHED PRODUCT.

We also provide a wide range of support tools for all our products that are accredited and compliant with Australian safety regulations.
SMARTER INFRASTRUCTURE, STRONGER AUSTRALIA

Australian manufacturers have a responsibility to source and adopt local recycled raw materials into their manufacturing process. Geofabrics will continue innovating around existing products and seeking opportunities to replace virgin material for recycled material.

We are committed to being environmentally conscious. We are challenging traditional manufacturing from non-renewable sources and achieving the same high quality with recycled materials. Going green means we can support our customers with sustainable products that include Australian sourced recycled materials.

We are committed to contributing to a positive impact on the environment and to manufacture and supply products that reduce reliance on non-renewable resources and reduce waste to landfill.

Geofabrics is a proud member of the Infrastructure Sustainability Council of Australia (ISCA) and is the only geosynthetic manufacturer and supplier with ISCA accredited products (bidim® Green, Sealmac® Green and Megaflo® Green) listed on the iSupply directory.

Our Green products are made in Australia – from Australian sourced recycled materials. These products can contribute to IS credits in infrastructure and civil engineering projects.

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