



**INFRASTRUCTURE
SOLUTIONS**

GEOFABRICS®
Sustainable solutions





Why use geosynthetic engineering in infrastructure?

Geosynthetic engineering is the use of synthetic materials in civil engineering projects to achieve more cost effective, environmentally sound and safer construction outcomes. The design techniques bring particular benefits to infrastructure projects, because geosynthetics maximise the use of site-won fill and avoid the need to import additional construction materials.

BENEFITS

ECONOMIC

The fundamental benefit of using geosynthetics in civil engineering infrastructure projects is to save costs by reducing high volumes of fill material required.

TECHNICAL

Geosynthetic design can remove the risk of variability in traditional engineering applications. The consistency of product across the full roll, eliminates the variability of construction methods and improves the long-term performance.

ENVIRONMENTAL

By reducing volumes of fill material required, there is less need to quarry and fewer machines needed to build infrastructure, reducing the carbon footprint. Geosynthetic lining systems are equivalent or superior to traditional soil containment of waste and contaminants, and surface erosion systems protect waterways from dust and sediment. Rising sea levels and an increase in significant weather events present serious challenges to coastal communities, which Geofabrics can help them manage.

SAFETY

Geosynthetics are utilised to reduce on-site workers' exposure to dangerous working conditions including roof control in tunnels, and rockfall protection beneath unstable rock slopes.

ROADS

- Optimise subgrade performance by providing stabilisation, separation, drainage and filtration functions
- Support heavy load platforms and reduce ongoing maintenance costs
- Maximise the performance of on-site material or fill

RAIL

- Improve formation performance when constructed on poor ground conditions
- Reduce maintenance interruptions
- Stabilisation and drainage ensures minimal disruption to rail transport corridors

TUNNELS

- Ensure safer operations and prevent rockfalls impacting people and operations
- Efficient drainage systems to control the water pore pressure on tunnel roofs

RENEWABLES

- Ensure both short-term and long-term haul road performance.
- Provide solutions for pavement stabilisation, hardstand areas, slope reinforcement, erosion control and drainage

PORTS & AIRPORTS

- Stabilisation and reinforcement for wharves, pavement, runways and taxiways
- Solutions for land reclamation, dredging, seawalls or breakwaters, and consolidation of soft soils
- Reduce aggregate requirements and extend service life

SPORTS & RECREATION

- Drainage, filtration and stabilisation to provide and maintain optimum field conditions
- Cost-effective solutions, reducing construction and maintenance costs

SLOPES & WALLS

- Protect areas prone to rockfall to provide safe traffic operations and protect life
- Adding functional space and maximising land area with retaining structures

WASTE & WATER

- Protect from PFAS & other emerging contaminants
- Protect underlying soil from erosion and restore the environment

COASTAL

- Reduce the effects of coastal and estuarine erosion
- Maintain safety and amenity, while maintaining sustainable coastlines for residents and the community

Up to
30%
reduction in
construction
costs

6x
improved
design-life



**TO ACHIEVE MORE COST EFFECTIVE
AND ENVIRONMENTALLY SOUND
CONSTRUCTION IN INFRASTRUCTURE**





WORKING WITH STAKEHOLDERS TO DEVELOP THE RIGHT GEOSYNTHETIC SOLUTION FOR EACH PROJECT



Who are Geofabrics?

Geofabrics are the only Australian manufacturer of geosynthetic products, with plants in Albury, New South Wales and Ormeau, Queensland.

Our success is based on strong partnerships with clients to solve their engineering problems. Our vision is to be a solution provider, to supply products that demonstrate cost savings, superior technical performance, safer operations and better environmental outcomes.

Technical leadership

GEOFABRICS GRID LABORATORY

We supply world-class technical leadership and engineering support through our innovation, research, industry education, design and independent testing services.

Our GRID (Geosynthetic Research, Innovation & Development) laboratory is a specialist facility that works with clients to develop the right geosynthetic solution for each project.

Based in south east Queensland, the laboratory 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 site – to ensure the right solution is adopted.

- Analysis is performed according to Australian and International test methods
- Comprehensive test reports are generated, including results, photos, graphs, test conditions and details of the apparatus used
- Research is supported by industry leading suppliers in both laboratory and field trials across America, Europe and Asia

INNOVATION & EDUCATION

We provide technical and practical education to engineers about the use of geosynthetics in a range of infrastructure projects.

Our team conducts real-world, technical seminars for engineers and contractors to earn CPD hours through our Geofabrics Academy; we also run in-house workshops for our clients and undertake lectures at universities around Australia and in New Zealand.

We are proud to support the next generation of engineers through sponsorship of PhD candidates.

QUALITY & TRACEABILITY

Geofabrics manufactures in compliance with the Australian and International Quality Standards and are ISO 9001 assured. We operate two QA laboratories in Australia – Albury is NATA accredited, Ormeau GRID is GAI LAP accredited and products are tested frequently and transparently.

SUSTAINABILITY

We work to protect, contain and secure the physical environment using smart geotextile and geosynthetic products. We help our clients mitigate environmental risk through world leading research and innovative product development.

Geofabrics is a proud member of the Infrastructure Sustainability Council (ISC).

SITE INSTALLATION

Geofabrics has the largest regional footprint of any geosynthetic supplier in Australasia. We have branches in key mining regions, so we can deliver product where and when you need it and provide local expertise to support your project.

Product installation is critical to project success, local representation can ensure correct procedures and minimal delays.



GEOFABRICS
ACADEMY™



35+
years of
reliable supply

GEOFABRICS



Aggregate
depths
lowered by
up to

30%

in road
construction

Roads & rail

Geosynthetic engineering allows for the construction of roads and rail in areas previously deemed unsuitable, enabling access to soft subgrade environments.

ROAD INFRASTRUCTURE

Geofabrics geosynthetics are used in roads to ensure the best construction performance to both minimise construction costs and prevent costly maintenance disruptions.

Geofabrics provide solutions that encompass all road types, from temporary access tracks to high volume roads.

- New road construction on soft ground and general unpaved roads
- Utilisation of site-won fill or reduction in quarried material required
- Improved structural performance of roads
- Improved road surface performance of high traffic areas
- Embankments in coastal areas

RAIL INFRASTRUCTURE

The Geofabrics Rail Division has critical design expertise and a long project history in the utilisation of geosynthetics for the construction and maintenance of rail formations.

- Improved bearing capacity of in situ sub-grades to enable formation construction
- Improved structural performance of ballast and reduced soil importation
- Extended maintenance intervals and reduced costs by maintaining track alignment

Tunnels

Tunnel construction, maintenance and longevity depends on optimal drainage, waterproofing, sealing, portals, erosion control and load support. Geofabrics can provide engineering solutions and testing to reduce costs, while maintaining design life.

50%

reduction of
structural
infill depth
with geocell

TUNNELS

- Optimised solutions for drainage and filtration to help prevent water infiltration which can cause deterioration and damage

- Sealing and waterproofing to protect and safeguard against corrosion
- Cushioning protection and pavement stabilisation solutions

RECOMMENDED ROAD & RAIL PRODUCTS

Bidim Green non-woven geotextile
Megaflo Green socked slotted drain pipe
Sealmac Green paving fabric geotextile
Tracktex Green anti-mud pumping geocomposite
Grassroots synthetic erosion control mat
Triaxial geogrid
Bitex geocomposite
Geoweb cellular confinement geocell
MIRAFI RSi multifunctional woven geotextile
MIRAFI PET high strength woven geotextile
MIRAFI H2Rx multifunctional woven geotextile
GlasGrid asphalt geogrid
Geosynthetic cementitious composite mat

RECOMMENDED TUNNELS PRODUCTS

Megaflo Green socked slotted drain pipe
Panelflo Green panel drainage system
Elcoseal geosynthetic clay liner
Cordrain geocomposite sheet
Texcel P non-woven staple fibre geotextile
Coolguard geomembrane
Pavement and asphalt reinforcement products



ALLOWING FOR SAFE CONSTRUCTION IN SOFT AND UNSTABLE ENVIRONMENTS



GEOFABRICS®



**AIRPORT
INFRASTRUCTURE**

**COASTAL
PROTECTION**

**CHANNEL
LINING**

**RETAINING
WALLS**

SORBSEAL

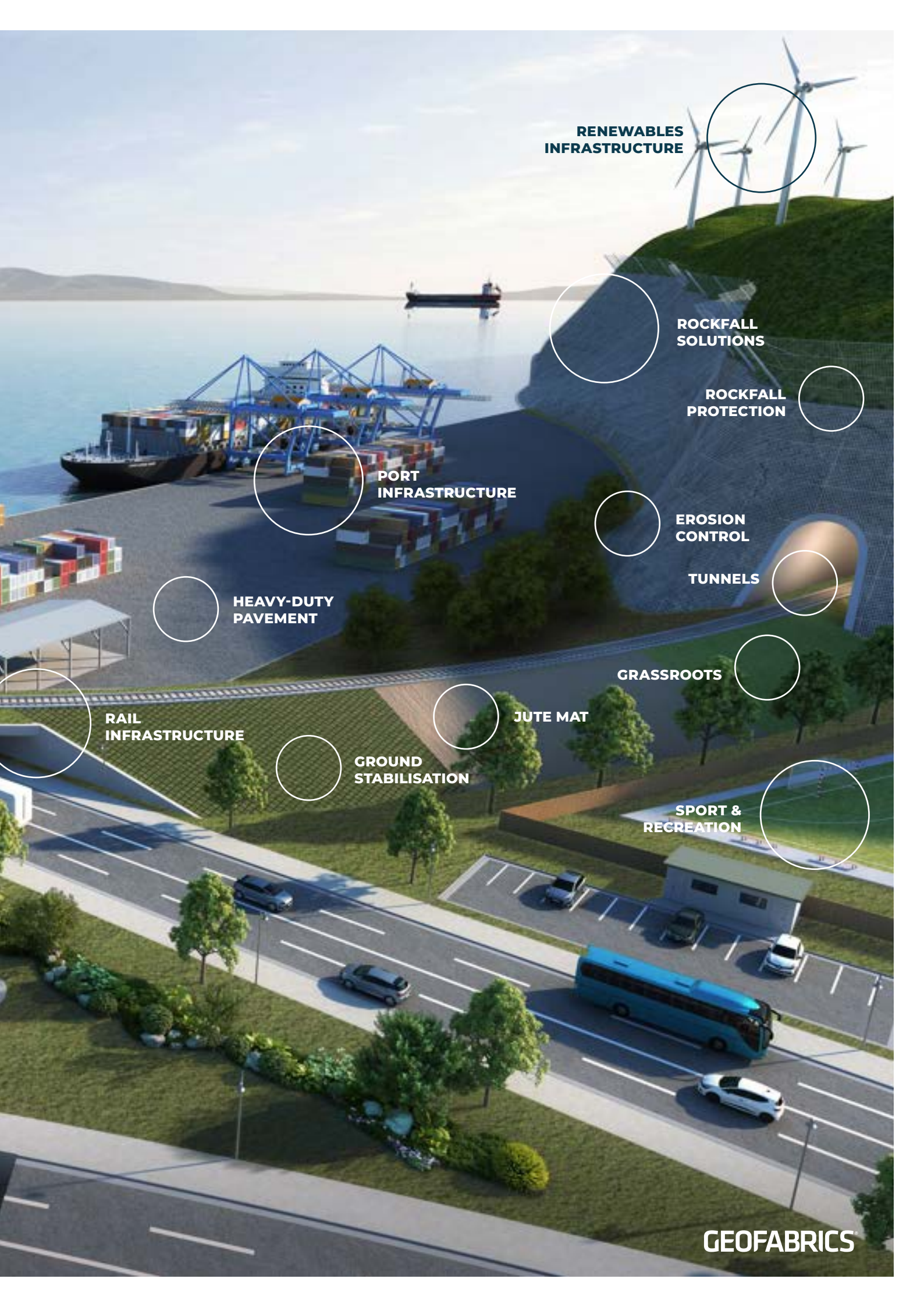
**WASTE &
CONTAINMENT**

**ROAD
INFRASTRUCTURE**

**BIDIM
GREEN**

**BASAL
REINFORCEMENT**

**MEGAFLO
GREEN**



**RENEWABLES
INFRASTRUCTURE**

**ROCKFALL
SOLUTIONS**

**ROCKFALL
PROTECTION**

**EROSION
CONTROL**

TUNNELS

GRASSROOTS

JUTE MAT

**GROUND
STABILISATION**

**SPORT &
RECREATION**

**RAIL
INFRASTRUCTURE**

**HEAVY-DUTY
PAVEMENT**

**PORT
INFRASTRUCTURE**

GEOFABRICS



Enabling safer renewable energy construction

Renewable energy

We develop geosynthetic solutions for renewable energy infrastructure to reduce cost, environmental impact and risk, and add value to each project. Geosynthetic materials play a critical role in both short-term and long-term haul road performance and working platforms.

ACCESS ROADS & WORKING PLATFORMS

- Stabilising temporary access roads and haul roads
- Geosynthetics provide significant cost and time savings in construction
- Allow for tandem axle and heavy vehicles to access remote locations over soft soil
- Working platforms provide a safe and durable surface for heavy plant such as piling rigs and cranes to operate
- Using geosynthetics can reduce the overall thickness of the pavement layer, reducing the quantity of imported fill material required

The Geofabrics technical team offers a wide range of solutions for the Renewables industry including separation and filtration, sub-grade stabilisation, hardstand areas supporting extra heavy cranes, channel stabilisation, reinforced soil structure and erosion control applications.

Ports & airports

Geofabrics has a range of geosynthetic solutions for both landside and seaside components of port infrastructure, including reinforcing hardstand areas, consolidation of soft soils and marine breakwaters. Geofabrics aviation solutions are focused on pavement reinforcement.

PORTS

- Stabilisation and reinforcement for wharves and pavement
- Geosynthetic solutions for land reclamation, dredging, seawalls and breakwaters
- Reduce the effects of coastal and estuarine erosion
- Maintain safety and amenity, while maintaining sustainable coastlines for residents and the community

AIRPORTS

- Focus on developing mechanically stabilised layers and pavement solutions for runways and taxiways
- Extend service life whilst maintaining the load bearing capacity required for safe aircraft movements.

Extend service life and maintain load bearing capacity

RECOMMENDED RENEWABLES PRODUCTS

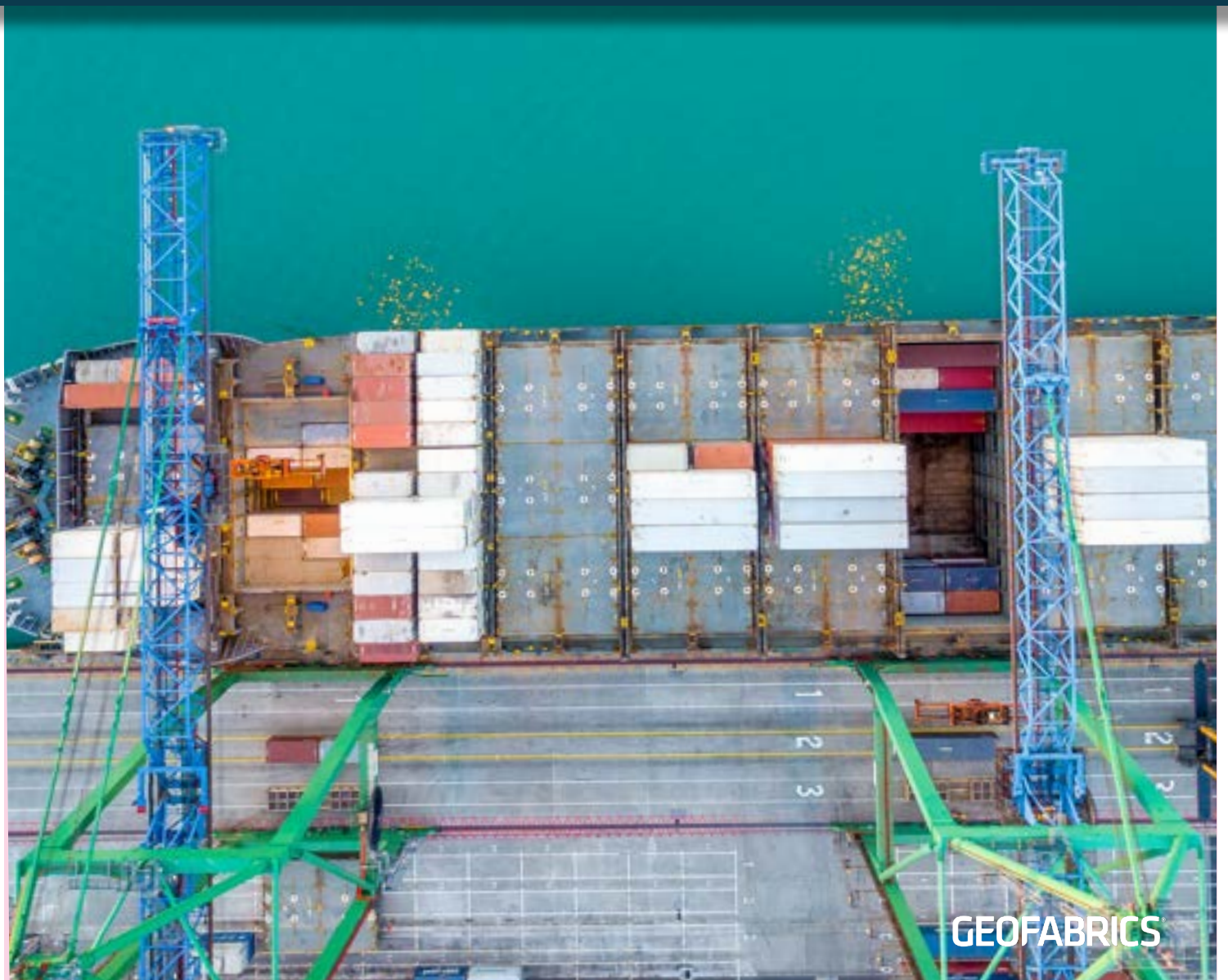
Bidim Green non-woven geotextile
Megaflo Green socked slotted drain pipe
Triaxial geogrid
Geoweb cellular confinement geocell
MIRAFI PET high strength woven geotextile
MIRAFI RSi multifunctional woven geotextile
MIRAGRID GX geogrid

RECOMMENDED PORTS & AIRPORTS PRODUCTS

Bidim Green non-woven geotextile
Megaflo Green socked slotted drain pipe
Sealmac Green paving fabric geotextile
Elcorock geosynthetic sand container
Grassroots synthetic erosion control mat
Triaxial geogrid
Bitex geocomposite
Geoweb cellular confinement geocell
MIRAFI RSi multifunctional woven geotextile
MIRAFI PET high strength woven geotextile
GlasGrid asphalt geogrid
Geosynthetic cementitious composite mat



GEOSYNTHETIC SOLUTIONS THAT ENSURE PROTECTION OF THE ENVIRONMENT





Maximise playing hours on sport fields

Sport & Recreation

Our aim is to provide product solutions that maximise playing hours on natural and synthetic sport fields, racetracks and golf courses by creating excellent drainage, filtration and stabilisation solutions to help maintain optimum field conditions while reducing construction and maintenance costs for our customers.

- Drainage of natural turf sports fields
- Formation and drainage of synthetic sports fields
- Water hazards and ornamental lakes in parks, golf courses and other recreational areas
- Stormwater retention and storage for irrigation of gardens, courses and sports fields
- Protecting synthetic grass from subgrade moisture variations
- New road construction on soft ground and general unpaved roads

Access to technical experts to support slope and retaining wall design

Slopes & walls

Geofabrics offers a range of engineered slope, embankment and retaining wall solutions used to construct infrastructure projects.

- Improved surface stability of mild slopes, water courses and spillways
- Large height Mechanically Stabilised Earth (MSE) retaining walls
- Protection of workers and assets from instability of rock faces
- Independently verified rockfall mitigation systems

To support the design of retaining walls, slopes, and embankments, we provide access to expert technical specialists who use advanced design software to ensure fast, accurate, and customised solutions for every project.

Protection is a critical part of all infrastructure projects

Waste

Our highly experienced geosynthetic waste and containment team work with clients to develop lining systems which are backed by years of research and designed to exceed regulatory guidelines, protecting the environment through the control of hazardous leachates and liquors from waste and containment facilities.

- Solutions include base lining, geomembrane protection, leachate drainage, cap lining and drainage plus gas collection

RECOMMENDED SPORT & RECREATION PRODUCTS

Megaflo Green socked slotted drain pipe
Enduraseal geocomposite liner
Bunkermat sand retention & drainage matting
Bidim Green non-woven geotextile
Triaxial geogrid
InterAx geogrid
Elcoseal geosynthetic clay liner

RECOMMENDED SLOPE & ROCKFALL PRODUCTS

Geobox gabion basket
Geomesh Natural wire mesh system
Rockfall protection system
Miragrid GX geogrid
Uniaxial geogrid
Keystone TW3 concrete block retaining wall system
Verti-Block interlocking concrete block
Geomattress rock mattress

Water

Geofabrics provides clients with cost effective options for potable and wastewater capture, storage, distribution and treatment through an innovative range of geosynthetic solutions.

- Water capture and retention options include trafficable underground stormwater harvesting systems which are easy to install and require minimal maintenance
- Water distribution pipe systems and channel lining solutions
- Water storage systems include dam lining and floating covers which minimise leakage and evaporation

- Water treatment solutions enable low-cost non-mechanical dewatering of all types of waste water

We can also assist in the design and supply of solutions for hydraulic structures including weirs, bridges and culverts.

**Cost
effective
waste & water
solutions**

Coastal

Coastal erosion is a significant problem in Australia, New Zealand and the Pacific with rising sea levels, extreme storms and climate change having a significant impact on shorelines. Geofabrics coastal solutions are designed to reduce the effects of coastal and estuarine erosion whilst maintaining safety and amenity for the community.

Geofabrics offers flexible armour solutions that also provide robustness and adaptability and can be used in coastal, river and other dynamic applications where environmental impact must be minimised.

- Seawalls and revetments
- River and estuary works
- Groynes and breakwaters
- Temporary and emergency coastal erosion works
- Shoreline embankments

**Mitigating
the effects of
estuarine
erosion**

RECOMMENDED WASTE PRODUCTS

Sorbseal hybrid geosynthetic clay liner
Elcoseal geosynthetic clay liner
Bidim non-woven geotextile
Bidim C conductive non-woven geotextile
Flownet drainage geocomposite
Trinet drainage geocomposite

RECOMMENDED WATER PRODUCTS

Bidim C conductive non-woven geotextile
Atlantis Flo-Vault stormwater storage system
Elcoseal geosynthetic clay liner
Oasis floating cover geomembrane
Geosynthetic cementitious composite mat
Geoweb cellular confinement geocell

RECOMMENDED COASTAL PRODUCTS

Elcorock geosynthetic sand container
Texcel R non-woven staple fibre geotextile
Silt curtain

GEOFABRICS®



Unmatched expertise & support

We draw from our years of experience in the Australasia resource sector to tailor design and provide geosynthetic solutions to best meet our client's performance and economic requirements.

Our superior technical support includes early stage testing to validate product selection, design and construction suggestions, certified designs if required; as well as installation systems to increase safety and productivity during installation.

Our comprehensive design advice for projects can include R&D testing, stability analysis, typical sections and standard details. We can also assist with product and installation specifications for tenders.

By employing a national team of engineers, and forming strategic alliances with multi-national consulting engineering practices, our technical support for geosynthetics is unmatched throughout Australasia.

We support our design advice with a suite of design software which assists engineers in developing cost effective solutions to exacting international design standards. We offer our software suite free of charge to our clients and it offers the ability to run a range of design scenarios to cover differing ground and loading conditions to minimise the design risk for a project. Our team of engineering specialists are available to give technical advice in the use of the software as well as provide in-house or seminar training.

We can also provide on-site installation training as well as guidelines and diagrams to assist contractors or maintenance crews.

QUALITY & TRACEABILITY

Geofabrics manufactures geosynthetics under management systems that comply with the Australian and International Quality Standards and are ISO 9001 assured.

We operate two quality assured testing facilities in Australia – Albury is NATA Accredited, Ormeau GRID is GAI LAP accredited and products are tested frequently and transparently.

Our products have traceability from the test results to the roll number and production

batch, providing confidence in the quality and consistency of our products in accordance with our latest published specifications.

The information on the labels can be traced via a clear audit trail to the date, name and place of manufacture and the relevant quality assurance test results. In addition, our geotextiles are clearly printed for identification once they are unwrapped and rolled out.

Our commitment to world class quality provides our clients with the confidence that the product delivered is as per their project specifications, ensuring performance and life-cycle costs are optimised.

AUSTRALIAN MANUFACTURING

Many of the products we supply are manufactured in our two production plants in Albury (NSW) and Ormeau (QLD). We employ more than 100 manufacturing staff and we return more than \$10 million per annum into the regional communities in which we operate.

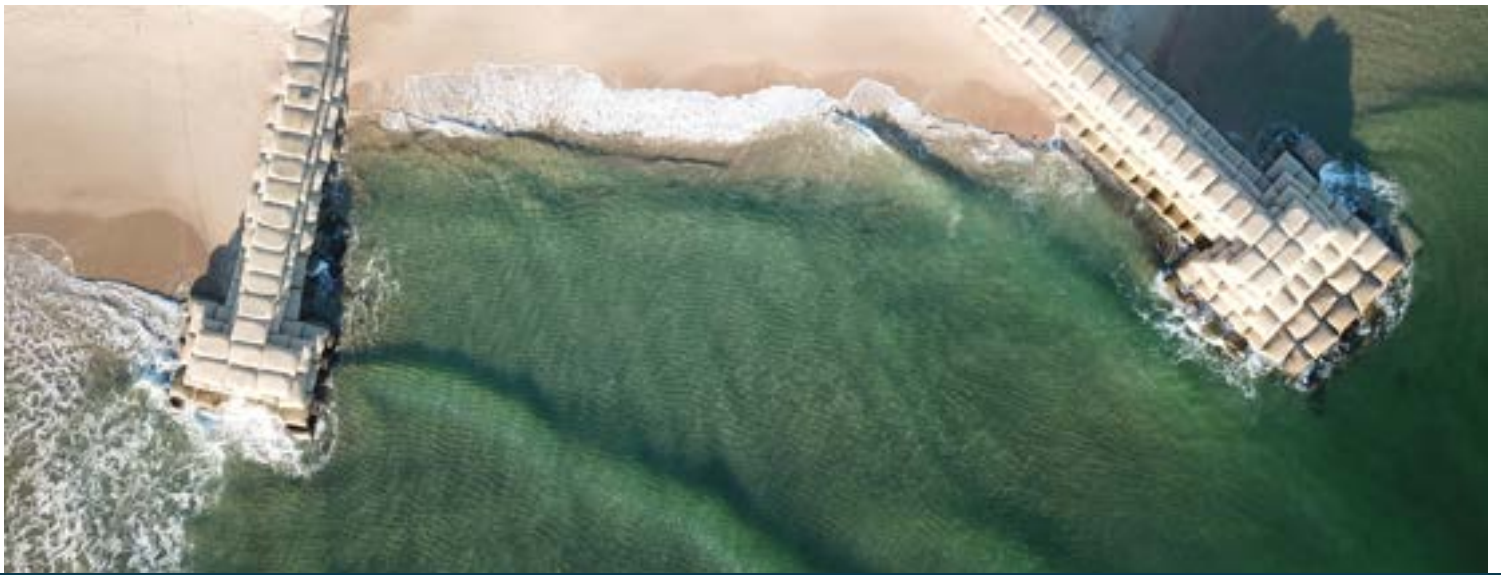
Our Megaflo Green, Elcorock and Filterwrap products carry the mark of Australian-made logo.

WHERE YOU NEED US

Geofabrics has the largest regional footprint of any geosynthetic supplier in Australasia. We have branches throughout Australia, New Zealand and the Pacific. Within Australia, we have branches in every state as well as offices in strategic regional centres along the east coast staffed by our own employees.

This means that we can deliver product where you need it, when you need it while providing local expertise to support your project.





**OUR COMMITMENT TO WORLD CLASS
QUALITY PROVIDES OUR CLIENTS
WITH CONFIDENCE**



GEOFABRICS



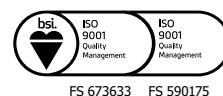
AUSTRALIAN-MADE GEOFABRICS

Geofabrics is the only geotextile manufacturer in Australia, with plants in Albury and Ormeau. We pride ourselves on providing unrivalled service to our customers. We can recommend the best geosynthetic product to achieve the objectives of your project and ensure it's available when you need it.

Over 40 years of experience allows our technical staff to provide practical support, based on local conditions. We are proud to have been recognised in the Australian Financial Review (AFR) Most Innovative Company list in 2020 with Bidim Green.

In 2021, Geofabrics ranked #1 in AFR's Most Innovative Company for Manufacturing and Consumer Goods for Sorbseal.

With a view to the future, we are committed to improving the sustainability of our business by reducing waste to landfill, lowering our carbon emissions and investing in our people.



Visit geofabrics.co or call 1300 60 60 20 (AU)
or geofabrics.co.nz or call 0800 60 60 20 (NZ)

GEOFABRICS®
Sustainable solutions