



GEOFABRICS°

Sustainable solutions





Why use geosynthetics in erosion & sediment control?

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

Over Over years supporting New Zealand Infrastucture

6X Improved design-life

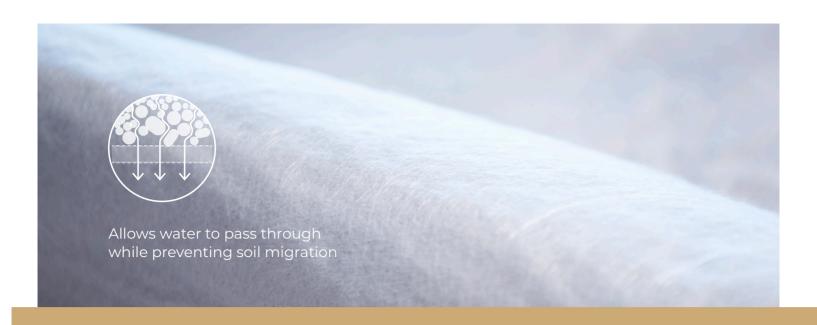
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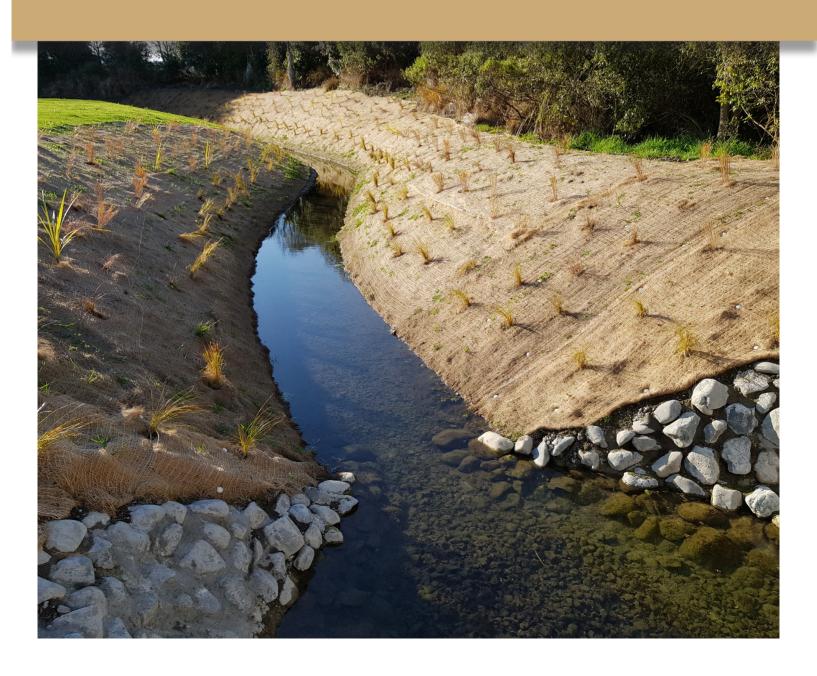
BENEFITS OF CHOOSING GEOFABRICS

- · Sustainable Bidim Eco 100% recycled geotextile available
- Recycling plan includes recycling IBC's or 200L drums, plus geotextile wrappers.
 As a delivery backload, this will be a carbon neutral process.
- Geofabrics is a proud member of the Infrastructure Sustainability Council (ISC)
- Bidim Eco is registered on the ISC
 ISupply directory, you may be eligible for sustainability credits
- Local storage and strategic timing for ordering project specific materials ensures that your project timeline can be met.
- Batch testing certificates from the manufacturer or an independent accredited laboratory to ensure the quality of products.
- · Proven track record in New Zealand conditions.
- Team of internationally recognised experts who can optimise your designs or work with your team to ensure best practice
- Product installation is critical to project success, local representation can ensure correct procedures and minimal delays
- Member of International Erosion Control Association (IECA)





TO CONTROL EROSION AND SEDIMENT RUN-OFF IN THE MOST COST EFFECTIVE AND ENVIRONMENTALLY SOUND WAY





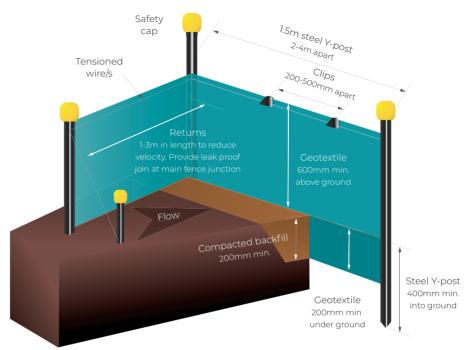




Silt & Super Silt Fences

Silt Fences and Super Silt Fences temporarily impound sediment-laden runoff, reduce velocities and allow sediment to settle out of the water.





SILT FENCES

Silt Fences are geotextile fabrics used above ground to retain sediment and avoid silt pollution in rivers, drains, and sensitive environments.

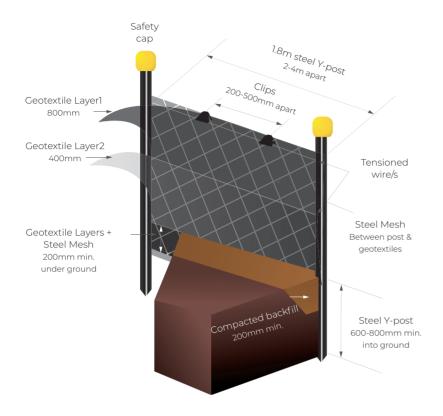
Silt Fences are often a requirement to be used around construction and earthworks sites to prevent the silt running off the construction zone in an uncontrolled manner, polluting waterways.





Silt Fence calculator

Code	ode Product	
SFENCESF4010050	Silt Fence	1.0m x 50m
SFENCESF40100100	Silt Fence	1.0m x 100m
STEELYPOST15C	Y-posts	1.5m (5 per bundle)
SAFETYCAPC100	Y-post Caps	Bag of 100
SFCLIPS100	Butterfly Clips	100/bag
SFPIN	Ch 5	Bag of 100
SFPIN500	Silt Fence Pins	Bag of 500
SFWIRE2.5S25KG C	Wire: Low Tensile (Soft), 2.5mm	25kg (~645m)
FENCEWIREHT25KG C	ICEWIREHT25KG C Wire: High Tensil 2.5mm (Required for 4m Spacing)	
SFSTRAINER	Wire Strainer	Every 50m
SFENCE HIVO130050	Siltfence Hi Vis Orange 1.3M	50m
SFENCE HIVO130100 Siltfence Hi Vis Orange 1.3M		100m



Super strength for larger catchment areas



Easy to use accessories & components - see page 6 - 7



SUPER SILT FENCE

The Super Silt Fence has a double layer of geotextile and additional wire mesh with increased strength for treating larger catchment areas.

The Super Silt Fence is used in applications where there will be excessive pressure on the fence due to high water concentration from large catchments.



Code	Product	Dimensions
SFSUPER0120050	G G'ILE	1.2m x 50m
SFSUPER0120100	Super Silt Fence	1.2m x 100m
SFMESH001050C	Ciliforna Cupar Mach	1.0m X 50m
SFMESH0010100C	Siltfence Super Mesh	1.0m X 100m
	Hi Vis Super Silt Fence	1.3m X 50m
STEELYPOST18C	Y-posts	1.8m (5 per bundle)
SAFETYCAPC100	Y-post Caps	Bag of 100
SFCLIPS100	Butterfly Clips	
SFPIN	Cilt Fance Dina	Bag of 100
SFPIN500	Silt Fence Pins	Bag of 500
SFWIRE2.5S25KG C	Wire: Low Tensile (Soft), 2.5mm	25kg (~645m)
FENCEWIREHT25KG C	Wire: High Tensile 2.5mm (Required for 4m Spacing)	25kg (~645m)
SFSTRAINER Wire Strainer		Every 50m



Download Super Silt Fence calculator





Y-post caps ensure safety

Silt Fence Components & Accessories

An effective Silt Fence and Super Silt Fence is as only as good as the quality components and installation tools used to ensure that the structure remains safe and in position for the desired period of time.





Code	Product		
POST DRIVER & POST PULLER			

Accessories to make installation **easier**



4 ARM WIRE JENNY

POSTDRIVERC

POSTPULLER

WIREJEN4AEM 4-Arm Wire Jenny

Post Driver

Post Puller



POSTPULLERCHAIN1M Post Puller Chain

STEEL POST LIFTER

RING FASTENER PLIERS

SPRING F

Steel Post Lifter



Safety Fence Components & Accessories



Ring Fastener Pliers

Each





Erosion & Sediment Control Containers

Silt Socks, Sediment Control Tubes, and other filled containers are lightweight barriers for diverting or filtering water so sediment drops out. They have a variety of applications for controlling sediment, including:

- Intermediate or perimeter sediment control through retention or filtration of runoff
- · Control and direct overland flow
- · Stockpile containment
- Channel flow control using check dams to reduce water velocity (see local council guidance for design spacing)
- Drain protection (see also Stormwater Inlet Protection page 11)

Lightweight barriers for filtering water









Code	Product	Dimensions / Quantity		
SILT SOCKS				
ECT015020FWC	Pre-filled with wood chip	150mm x 2m		
SILTSOCK-SAWDUST225003	Mesh reinforced, sawdust filled	225mm x 3m		
SEDIMENT TUBES				
SC03	Un-filled	230mm x 2m		
SC04	Un-filled	230mm x 50m		
WATER LOGS				
CWLOG-300024 Compressed coir fibre in coir mesh		300mm x 2.4m		
HESSIAN BAGS/ROLLS				
HESSIANSACK2918	Un-filled	0.4m x 0.7m		
HESSIAN 183/50	Matting	1.83m x 50m Sandbag UV stabilised		

Stormwater Inlet Protection

Catch drain inserts and sump protection are a final barrier against sediment in the waterways.

The Drain Warden filters dirty water entering the catch drains. The geotextile skirt holds it in place under the steel grate cover and four ties secure to the grate.

protection use sediment tubes, sandbags, or Silt Socks to divert or filter water around the catch drain.

For additional



Code Product		Dimensions / Quantity	
DRAIN WARDEN: CATCH DRAIN INSERT			
CATCHWARDEN	Ties at 500mm square	Skirt ~1.3m square Depth 65mm	

Stabilised Entryways

Entry or exit points of a construction site should be stabilised to prevent these access points from becoming sources of sediment, as well as to minimise dust generation and areas of disturbance.

STABILISED ENTRYWAY COMPONENTS

Access points incorporate a geotextile separator over the subgrade followed by a suitable depth of aggregate to support vehicle traffic.

The grade of geotextile is dependent on the strength of the subgrade and the maximum stone size the aggregate fill as detailed in the table below.

Additional measures may be required to remove sediment from vehicles before moving off site.



Stablised entryways from becoming the source of sediment

Code	Code	Draduct	roduct Dimensions		
Code	Code	Product	Difficisions		
STRENGTH CLASS A					
A14K200050	Bidim Eco A14	2m X 50m			
A14K400050	Bidim Eco A14	4m X 50m		37.5mm	-
A14K600250	Bidim Eco A14	6m X 250m			
STRENGTH O	LASS B				
A19K200050	Bidim Eco A19	2m X 50m			
A29K200050	Bidim Eco A19	4m X 50m		75mm	-
A19K600200	Bidim Eco A19				
STRENGTH CLASS C					
A29K200050	D: 1: E 420	2m X 50m	2m X 100m		75mm
A29K200100	Bidim Eco A29			200	
A29K400050	Bidim Eco A29	4m X 50m	4m X 100m	200mm	
A29K600150	Bidim Eco A29	6m X 150m			
STRENGTH CLASS D					
A39K600125	Bidim Eco A39	6m X 125m		400mm	200mm



Stockpiles & Exposed Soil

Potential eroded sediment from stockpiles and cut faces can be contained at the source, or controlled as runoff.

At the source, lightweight geotextile is used as a temporary measure to mitigate rain and sheet flows from eroding the exposed surface.

Bidim® Soil Cover is a lightweight geotextile ideal for temporary cover of soil bunds, stockpiles and cut batters providing temporary sediment control, erosion protection and dust control on site.

It can also be used for lining of low velocity temporary (≤12 months) clean water diversion channels and sediment pond spillways as per Regional Council Guidelines.

Polythene should only be used on very small areas or very short durations.

Polythene should only be used on very small areas or very short durations.

A temporary measure to mitigate rain and sheet flows from eroding the exposed surface.



Code Product		Dimensions / Quantity		
SCGR390050 Soil cover ESC Green		3.9m x 50m		
POLYBLK250400025 Polythene Black 250 micron		3.9m x 50m		
SECONDARY MEASURES				
Un-filled sediment tube, silt fence and accessories		See pages 6-7		
Erosion Control Tubes	See pages 8			

Concentrated Water Flow Management

Temporary clean or dirty water diversion channels and flumes are lined specifically when slopes are steeper than 3H:1V for flumes or if velocities exceed 1m/s in channels.

Geotextiles are
a quick
and
easy to
install
option for
lining

Geotextiles are a quick and easy-to-install option for lining. Often two layers are required. This is usually a non-woven filter fabric to mitigate fines movement and water flows under the structure, and a woven top layer for impermeability. Woven layer is normally placed under non-woven layer.

The grade of geotextile lining depends on expected duration of the diversion. For short

term, up to 12 months use a Bidim A14, for up to 24 months use Bidim A29. If a woven lower layer is required, use Mactex woven geotextile over Bidim A14 for up to 24 months.

Follow construction guidance in local guidelines, ensuring the batter face is smooth and all voids eliminated. Barring other recommendations, pin the fabric at 0.5 metre intervals.



Code	Product	Dimensions / Quantity
MTEXSECWOV390050	M/	3.9m x 50m
MTEXSECWOV390100	Weedmat, woven geotextile	3.9m x 100m
SCGR390050	Soil cover ESC Green	3.9m x 50m

Decants

SEDIMENT RETENTION PONDS (SRP) AND DECANTING EARTH BUNDS (DEB)

Floating decants are used in sediment retention ponds (SRPs) and in decanting earth bunds (DEBs) to drain the cleaner water at the top of the pond while maximising sediment deposition.

Use silt fences or other sediment control measures around the area during construction. Safety fencing may be required around perimeter of pond.



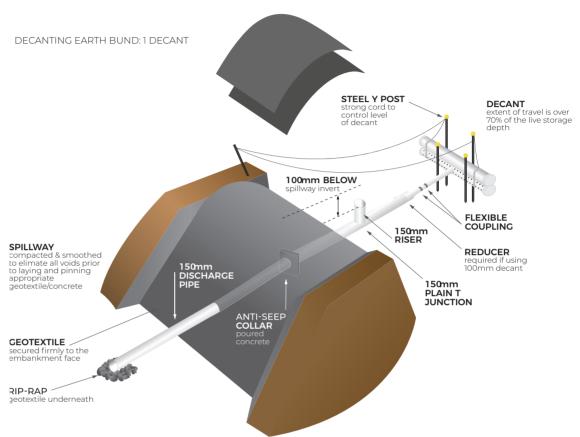
Code	Product	Dimensions		
DECANT-MINI-TBAR	Decant mini T-bar DEB	0.6m, 40 holes		
DECANT100-TBAR-KIT2	Decant T-bar 100mm diameter	2.0m, 200 holes		
DECANT100-FLEX-COUPLING	Flexible Coupling	Each		
DECANT-150-100-RED	Reducer 150mm - 100mm	Each		
DECANT150-TJUNC	150mm Plain Tee Junction	Each		
DECANT100- Y JUNC	100mm Plain Y joiner	Each		
DECANT-HT-EXT-KIT	Decant Height Extension Kit	1.8m Y post + rope guide		
DECANTPP ROPE220	Decant Rope Black 4mm (Danline)	220m rolls		
STEELYPOST15C	Y post, 4-6 per decant bar	1.5m		
ADDITIONAL SUPPORTING MATERIALS				

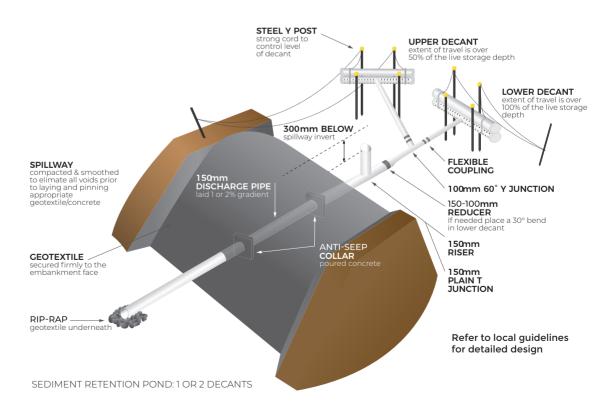
Floating decants are used in SRPs and in DEBs to drain the cleaner water at the top of the pond

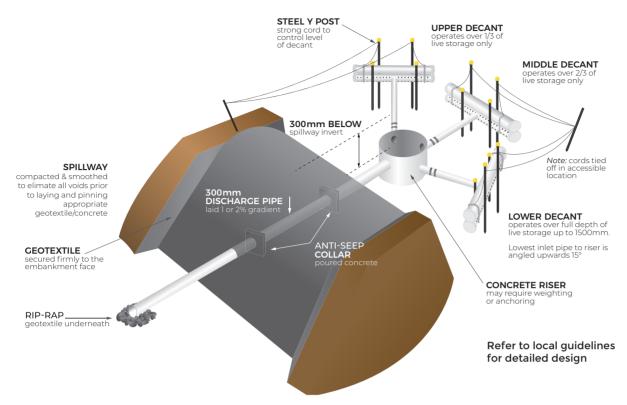
Silt Fence Products	See pages 6-7
Safety Fencing	See pages 6-7
Sediment Control	See pages 6-7



Decant kitsets (100mm) for Sediment Retention Ponds (SRPs) and Decanting Earth Bunds (DEBs) are supplied as drilled and assembled "T" bars with the full range of fittings ready to be put together on site. Additional accessories including PVC connectors, flexible coupler, steel Y posts, extension kit and rope.







SEDIMENT RETENTION POND: 3 OR MORE DECANTS

Decant Selection Guidance

Decant Arms	Outlet Pipe Diameter*	Spillway Intake**		
2 or less	150mm	150mm upstand	Under 0.3 ha	DEB, 1 decant
			Up to 1.5 ha	SRP, 1 decant
			Up to 3.0 ha	SRP, 2 decants
3 or more	300mm	1050mm concrete manhole	Up to 5.0 ha	SRP, 3 decants



Download Sediment Retention Pond and bund Calculator

^{*} Guide only. Number of decant arms can also be determined according to number of holes required for site soil type. See ECAN Erosion and Sediment Guide Table 7.8.

 $[\]ensuremath{^{**}}$ Per GD05. Consult local council guidelines for specific requirements



Lay Flat Flumes

Code	Product	Dimensions
LF-FLUME150S050	Lay Flat Flume Single loop 150mm X 50M	
LF-FLUME250S050	Lay Flat Flume Single loop	250mm X 50M
LF-FLUME350S050	Lay Flat Flume Double loop	350mm X 50M
LF-FLUME450S050	Lay Flat Flume single loop	450mm X 50M
LF-FLUME550S050	Lay Flat Flume single loop	550mm X 50M
LF-FLUME650S050	Lay Flat Flume Double loop	650mm X 50M

Lay Flat Flume Clamps

Code	Product
LF-FLUME150CLAMP	Lay Flat Flume Clamp 150 Dia
LF-FLUME250CLAMP	Lay Flat Flume Clamp 250 Dia
LF-FLUME350CLAMP	Lay Flat Flume Clamp 350 Dia
LF-FLUME450CLAMP	Lay Flat Flume Clamp 450 Dia
LF-FLUME550CLAMP	Lay Flat Flume Clamp 550 Dia
LF-FLUME650CLAMP	Lay Flat Flume Clamp 650 Dia



Download Sediment Retention Pond and bund Calculator



For proper design and installation of ponds, decants, and spillways consult your local council guidance.

Selected links and references are included on page 26.

SediRad™ Rainfall Activated Chemical Dosing System

SediRad is designed to replicate the exact principals of the GD05 rainfall activated dosing device.

It is made using a combination of virgin and recycled plastic material, complete with high spec UV stabilisers.

- Designed to ensure optimum stability on a flat stable surface such as a pallet
- Designed for sediment retention ponds up to 3 hectares
- Central discharge canister in the header tank is drilled to create high and low flow
- Fully replaceable design, ensuring that the correct dosing is delivered as catchments change or the unit is moved from site to site
- Large cap in the catchment tray can be removed to provide easy access for draining the displacement tank and for inspection of the internal workings of the device while on site
- Design of the displacement tank and floc tank ensures that there is a minimum of non-useable chemicals in the device
- · Made from medium density polyethylene
- · Fully recyclable



Protect
downstream
environment
from
sediment
& water
degradation

Code	Product	Dimensions
SEDIRAD200L	SediRad Rainfall Activated Chemical Dosing System	

PAC Sediment Flocculant

PAC Flocculant supplied in 1,000 litre IBC or 200 litre plastic drums. PAC will meet NZ Drinking water standards as per GD05 requirements. A no-charge drum and IBC collection service will be implemented for recycling/reuse of emptied containers.

Product	Dimensions / Quantity
PAC Sediment Flocculant	200ltr ezy action drum pump







Emergency Spillways

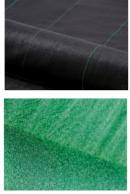
SEDIMENT RETENTION PONDS (SRP) AND DECANTING EARTH BUNDS (DEB)

Emergency spillways are incorporated into Sediment Retention Ponds and Decanting Earth Bunds to safely discharge excess water during a large storm event.

You can use the Bidim A14 nonwoven geotextile to stabilise the emergency spillway and as a level spreader. The batter face must be smooth and all voids eliminated. Place a strong, low

permeability woven geotextile, then cover with the nonwoven geotextile. Secure with the pins at minimum spacing 0.5m apart over the full area of the emergency spillway.

Emergency spillways
Safely
discharge
excess
water
during a
large storm



Code	Product	Dimensions / Quantity
MTEXSECWOV390050	W/	3.9m x 50m
MTEXSECWOV390100	Weedmat, woven geotextile	3.9m x 100m
SCGR390050	Soil cover ESC Green	3.9m x 50m

Drainage Channels & Clean Water Flow Paths

Concrete Canvas® (CC) is a flexible, concrete filled geosynthetic, that hardens on hydration to form a thin, durable, waterproof and fire-resistant concrete layer. Essentially, it is concrete on a roll. Concrete Canvas allows concrete construction without the need for plant or mixing equipment, you simply add water.

Concrete Canvas consists of a three-dimensional fibre matrix containing a specially formulated dry concrete mix. A PVC backing on the bottom surface of the Concrete Canvas ensures the material is completely waterproof. Concrete Canvas can be hydrated either by spraying or by being fully immersed in water. Once set, the fibre reinforcement prevents cracking, absorbs energy from impacts and provides a stable failure mode.

Concrete Canvas is twice as abrasion resistant as standard OPC concrete, has excellent chemical resistance, good weathering performance and will not degrade in UV. Concrete Canvas has good drape characteristics and will closely follow the ground profile and fit around existing infrastructure. Unset Concrete Canvas can be cut or tailored using basic hand tools.

Concrete Canvas can be rapidly unrolled to form a ditch or channel lining. It is significantly faster, easier and less expensive to install than conventional concrete channel lining and requires no specialist equipment. Concrete Canvas can be laid at a rate of up to 200m2/ hour, which is up to 10 times faster than conventional concrete solutions. Concrete Canvas is available in portable rolls for applications with limited access or bulk rolls where access with heavy lifting equipment is possible. The concrete is pre-mixed so there is no need for mixing, measuring or compacting. The speed and ease of installation mean Concrete Canvas is more cost-effective than conventional concrete, with less logistical complexity. Concrete Canvas is a low mass, low carbon technology which uses up to 95% less material than conventional concrete for many applications.

ADDITIONAL INFORMATION (AVAILABLE ON REQUEST)

- 2.3 Concrete Canvas User Guide Hydration & Key Principles
- · 2.4 Concrete Canvas User Guide Equipment List
- · 2.6 Concrete Canvas Installation Guide Channel Lining
- · 2020_Concrete Canvas _GA Handling and Storage
- · Concrete Canvas CCH Material Safety Data Sheet



The speed and
ease of
installation
mean Concrete
Canvas is
more
cost
effective
than conventional
concrete, with
less logistical
complexity



Erosion Control Blankets

ECBS protect exposed soil from surface erosion. They can be seeded under or planted through. These are generally biodegradable for temporary protection whilst vegetation is established.

OPTIONS FOR SEEDING UNDER

The matting is lightweight and open to allow vegetation to grow through, while providing seed protection and surface erosion control until vegetation is established.

Code	Product	Dimensions	
SEEDING UNDER			
Biomac CJ300	Jute-reinforced coir fibre mat	2.4m x 50m	
Biomac CJ450	Jute-reinforced coir fibre mat	2.4m x 50m	
Hessian Roll	Hesian cloth	1.83m x 50m	

OPTIONS FOR PLANTING THROUGH

The matting is thicker for suppression of weed growth and to protect areas between planted vegetation. The thicker mats will typically take longer to degrade.

Code	Product	Dimensions	
PLANTING THROUGH			
Jute 300	Jute fibre mat	1.85m x 50m	
Jute 450	Jute fibre mat	2.4m x 25m	
Jute 650	Jute fibre mat	2.4m x 25m	
Woolmulch R500	Wool fibre mat	2.1m x 30m	

Fasteners

Ground staples are supplied in various lengths and strengths to match the ground and soil conditions on site. Longer pins are used where top soil layers are deep whereas the standard length pins are suitable for fixing down matts over firm ground.

Frequency of pining increases for steeper or undulating slopes. Matting should always be as smooth and intimate to the slope as possible. For further installation guidance refer to the Geofabrics Erosion Mat Installation Guide (via www.geofabrics.co).



Code	Product	Description		
GROUND STAPLES				
GSTAPLE130	Ground Staples - Short	U shape (2.8mm)	130mm	
GSTAPLE230	Ground Staples - Long		230mm	
HEAVY DUTY GROUND STAPLES				
	Heavy Duty Ground Staples - Short	U shape (6.0mm)	170mm	
STAPLEHD Heavy Duty Ground Staples - Long		U shape (6.0mm)	250mm	
BIO PEGS				
BIOPEG175			175mm	
BIOPEG250			250mm	



Staples



BIO PEG



Geofabrics Site Containers

Geofabrics site containers offer you the convenience of having an Erosion & Sediment Control product supply store onsite for your convenience. This saves you time and money with two options available.

Site containers have been a common fixture on large and small sites throughout New Zealand for more than a decade. Geofabrics employ the most experienced staff in the industry when it comes to onsite containers.

FLEXIBLE AVAILABILITY

- A Geofabrics team member will be responsible for stocktaking and organising the replenishment of your containers
- You can have containers available at multiple stages throughout your site. We'll work with you to ensure the correct product at the correct quantities are available when you need them

COST CONTROL

You'll have complete control of all purchasing.
 Stock is used if and when you need it, and you'll know when and where product is being used to apply the correct cost coding

REDUCE DOWN TIME

- All your team members have to do is fill out the container specific book provided when collecting goods and Geofabrics do the rest. No need for multiple order numbers throughout the month
- No waiting for deliveries or working within the constraints of a supplier's business hours

On-site Container Benefits

- Stock is safely stored correctly within the container to ensure your team remains safe when accessing material
- Containers are set up with shelving and racking to ensure ease of use by your team
- Secure your stock from theft or vandalism when no one is on site
- Protect your stock from damage via weather conditions or personnel incidents

OPTION 1: CONSIGNMENT

Geofabrics stock is supplied to your project and you only pay for the product once you've used it.

Stock is owned by Geofabrics and once a month a stocktake will be conducted and you'll be charged via your order number.

This system ensures that your project is run without having to pay for product that you have not yet used.

Freight costs are kept to a minimum, and stock levels can be adjusted when and where you need

If you know that you're going to require a larger quantity of product for an upcoming stage of works, we can adjust to suit your needs.

OPTION 2: PRE-PURCHASE

Geofabrics supply container with stock prepurchased by you.

This means that your company has total control over stock that is held on site. Costs are known before work begins and can be allocated accordingly.

Once a month the container is stocktaken and quantities used are forwarded to your relevant team member to purchase required product.

Erosion & Sediment Control Quick Links

Below is a range of helpful links and documents that will help ensure you are installing the right materials that meat your local guidelines.*

*These document links are current as of 01/12/2022 After this date it is your responsibility to check that these documents are the most current specifications relating to erosion and sediment control for your desired region.

ESC GUIDANCE DOCUMENTS







ECAN ESC Guidance



Waikato RC ESC Resources



Bay of Plenty ESC Resources



Wellington ESC Resources

IECA GUIDANCE DOCUMENTS



Book1



Book2



Book3

ESC TOOLS



IECA Factsheets



ECAN Online Toolbox



Civil Contractors Site Planning



NZTA Guide & Checklists



Tasman DC Checklists

GEOFABRICS CALCULATORS











At Geofabrics, 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 30 years of experience in New Zealand allows our technical staff to provide practical support, based on local conditions. We have supported the infrastructure sector on significant projects such as the Christchurch Gondola. We have branches throughout Australia, New Zealand, Papua New Guinea and the Pacific so can deliver product where you need it, when you need it, while providing local expertise to support your project

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)





