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Engineering a Better Solution

GLOBAL ENGINEERS

In the second half of the 19th century, we invented Gabions and dramatically changed the civil engineering landscape. We are still changing today. We work every day to find better solutions for our clients at every degree of latitude and longitude. Our worldwide network grows through innovation and diversification of sectors of activity and through an increasing range of high quality and environmentally friendly products and applications.

Maccaferri's motto is 'Engineering a Better Solution'; We do not merely supply products, but work in partnership with our clients, offering technical expertise to deliver versatile, cost effective and environmentally sound solutions. We aim to build mutually beneficial relationships with clients through the quality of our service and solutions.

OFFICINE MACCAFERRI GROUP PROFILE

Founded in 1879, our Group soon became a worldwide reference in the design and development of advanced solutions, with offices in over 70 countries and 30 factories worldwide.

Our mission is to pursue excellence through continuous improvement, while delivering to customers engineered solutions that are innovative, advanced and environmentally friendly. We are committed to outstanding safety, quality and sustainability, to create value for all stakeholders as well as our communities.

MACCAFERRI APPLICATIONS



RETAINING WALLS
& SOIL REINFORCEMENT



HYDRAULIC WORKS



ROCKFALL PROTECTION
& SNOW BARRIERS



EROSION CONTROL



SOIL STABILISATION
& PAVEMENTS



BASAL REINFORCEMENT



COASTAL PROTECTION,
MARINE STRUCTURES & PIPELINE
PROTECTION



DRAINAGE OF STRUCTURES



SAFETY & NOISE BARRIERS



LANDSCAPE & ARCHITECTURE



FENCING & WIRE



AQUACULTURE NETS/CAGES



ENVIRONMENT, DEWATERING
& LANDFILLS

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MACCAFERRI

MACCAFERRI



Solutions for Developers

Housing, Commercial & Education

SOLUTIONS FOR DEVELOPERS

Level differences, vulnerable embankments, watercourses or soft ground; whatever challenge your development poses, Maccaferri has the solutions to help overcome them.

Maccaferri provides specialist great looking solutions. Each one engineered to offer you the best of both worlds: structural integrity and aesthetic appeal.

Concrete blockwork cleverly designed to have all the character of a traditional masonry wall. Welded gabion baskets that create clean, uniform lines, or biodegradable solutions that encourage a lush, green vegetative finish. With Maccaferri, you can have the retention or protection that you need with the appearance your customers and clients want.



Quality through and through

High quality materials play a huge part in our solutions. Our BBA certified double-twist gabion mesh with our new PoliMac® coating, offers greater performance to protect against the environmental conditions predicted in 120 years time.

You will also find that our solutions are designed to re-use site won materials wherever possible, reducing waste and carbon footprint as well as saving you money. Our key products have **Environmental Product Declarations**, an independently verified and registered document to communicate transparent carbon footprint information.

Everything you would expect from a market leader in geotechnical solutions – and more.



Design, supply and install

Not only do we engineer the solutions and manufacture the products, we also offer a complete design, supply and install service. That way, we can value-engineer at each and every stage of your project to deliver the highest quality finish at the best price.

Alternatively, if you have your own install team, we can provide you with a supply price that includes a professionally indemnified design. Or, if it's simply our tried and trusted materials you want, we can guide you through the best options for your needs and budget.



Talk to us

Simply tell us which option works best for you - our complete design, supply and install service; design and supply; or supply only - and we'll work with your development team to provide exactly that.

The earlier you can involve us, the greater the opportunity to value engineer and deliver real cost savings, just as we have done for some of the world's largest engineering projects, as well as smaller-scale, local projects.



MASS GRAVITY RETAINING WALLS WOVEN GABION WALLS

Whether you're looking for the most cost effective retaining wall or the most aesthetically appealing, we have a solution to suit every brief and budget.

Woven Mesh Gabion Walls

Engineered from double-twist hexagonal steel wire mesh that has been protected against corrosion, these woven baskets are ideal for areas prone to settlement or scour, providing both strength and flexibility.

Constructed with a flush or stepped face, gabion baskets are installed on a compacted granular levelling pad. They are then filled with locally quarried stone that is hand-placed on all exposed faces to ensure the best aesthetic.



Benefits of Woven Gabions:

- M** GalMac® advanced galvanised coating for up to 60 year design life
- M** PoliMac® coated option for over 120 year design life
- M** Accommodates settlement
- M** Porosity helps drain soil fills
- M** Can incorporate mitred corners and tight radii
- M** Can accommodate fence post sleeves
- M** BBA-HAPAS certified and UKCA marked



Architectural Gabions/Street Furniture

Eye-catching feature walls and entrances. Designated areas for parking or planting. Architectural screens that block areas such as bin stores from view. Whatever finishing touches you are hoping to achieve, our architectural gabions help make it possible.

They can be filled with your choice of local or specified stone and can even incorporate features such as seating or viewing windows.

Benefits of Architectural Gabions:

- M** Heavy gauge welded wire mesh
- M** Accommodates shaped features
- M** Stone infill can be local or specified



Welded Gabion Walls

Offering many of the benefits of their woven counterpart, welded gabion walls help achieve clean, uniform lines in areas where there is minimal risk of settlement, making them particularly popular for architectural and landscaping applications.

Benefits of Welded Gabions:

- M** Welded finish creates clean, uniform lines
- M** GalMac® advanced galvanised coating for up to 60 year design life
- M** Accommodate mitred corners



REINFORCED SLOPES TERRAMESH® FAMILY

High wall or steep slope. Stone finish or soft, green vegetative cover. You'll find our different soil retention systems all come with one thing as standard: durability.

Green Terramesh®

Green Terramesh® encourages a lush, vegetative finish combining double twist hexagonal steel wire mesh geogrid with an integral rapid-to-install fascia. This fascia of a rectangular steel frame, angle supports and erosion matting creates slopes at a 70 degree angle.

The frame and angle supports help minimise the lumps and bumps associated with a traditional 'wrapped face' reinforced soil slope and speeds up construction.

Matting and mesh secure soil in place and the use of site won materials saves on costs and road miles, making for a green solution in both senses of the word.



Benefits of Green Terramesh®:

- M** Gives reinforced slopes a green, vegetative finish
- M** PoliMac® coated with 120 year plus design life
- M** BBA-HAPAS certified & UKCA marked



Mineral Terramesh®

Mineral Terramesh® creates reinforced soil slopes with a rock faced finish at angles up to 70°. This "maintenance-free" system has an integral steel frame that delivers clean uniform lines.

Selected stone fill is placed in a thin layer behind the front face to create the desired aesthetic.

Benefits of Mineral Terramesh®:

- M** Ideal for tall structures
- M** Maintenance free
- M** Integral steel frame delivers clean uniform lines
- M** PoliMac® coated with 120 year plus design life
- M** UKCA marked
- M** Re-using site won materials reduces cost and environmental impact



Terramesh® System

Terramesh® System consists of a double twist woven wire mesh gabion fascia unit and an integral factory-fitted soil reinforcement geogrid.

The system is straightforward and rapid to construct; gabion stone is placed in the face unit, and structural backfill is placed and compacted on the geogrids.

Benefits of Terramesh System:

- M** BBA-HAPAS certified and UKCA marked
- M** Flexible - accepts differential settlement
- M** GalMac® Al/Zn and PoliMac® coated woven mesh for unparalleled life
- M** Easy to construct and used in conjunction with our geogrids
- M** Saves on gabion stone costs vs traditional gabion walls



SEGMENTAL RETAINING WALLS MACWALL®

Durable reinforced soil wall system engineered with the use of segmental blocks. Concrete block finish with ParaGrid® geogrid soil reinforcement.

MacWall®

The segmental block retaining wall system with the appeal of a traditional masonry wall and the engineered reassurance of soil reinforcement. The concrete blocks have a split-face finish for an authentic stone look, a choice of colours to complement your development and the added options of curves, corners and steps.

A mortarless build with our soil reinforcement geogrid ParaGrid® inbetween blocks and then backfilled.



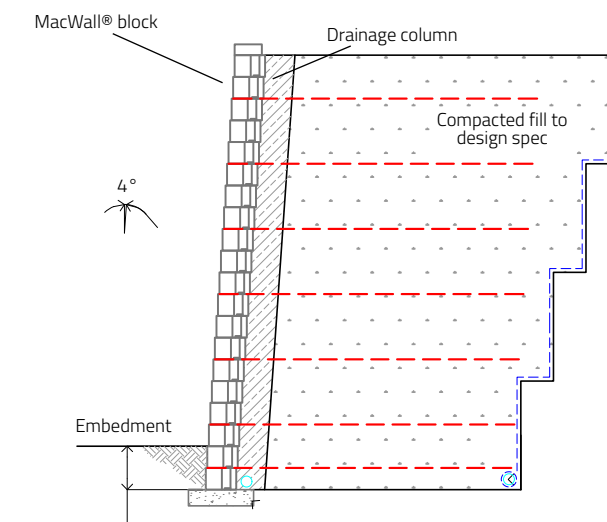
Benefits of MacWall®:

- M** Split-face finish for authentic stone look
- M** Choice of colours to complement development
- M** Can incorporate curves, corners and steps
- M** Quick, mortar-free dry build
- M** BBA Certified option*

* Certificate 17/H268 – Anchor Vertica Wall System for Reinforced Soil Retaining Walls



MacWall® typical section



WATER MANAGEMENT EROSION PROTECTION

Protecting vulnerable slopes, embankments and infrastructure from the threat of erosion starts with identifying the scale of the risk.

Reno Mattress® Plus

Best suited to areas at risk of high velocity erosion, above or below the water, our Reno Mattress® Plus is made out of flexible double-twist woven steel mesh and filled with stone.

For a vegetated aesthetic, we can fill the void between the stones with seeded topsoil and add biodegradable matting before securing the mattress lid. This way, vegetation can take hold but with the robust protection provided by the mattress.



Benefits of Reno Mattress® Plus:

- M** Protection from high velocity erosion
- M** Range of thicknesses
- M** GalMac® galvanised and PoliMac® coated to protect against corrosion
- M** Option for topsoil/matting to encourage vegetation
- M** BBA certified & CE marked



MacMat®

MacMat® geomats are designed to be secured to vulnerable slope faces in order to prevent surface erosion run-off. MacMat® is secured to the ground using suitable pins as required for the project.

Benefits of MacMat®:

- M** Suitable for exposed slopes susceptible to erosion by wind and rain
- M** Provides immediate protection and promotes rapid growth of vegetation by reinforcing the root structure
- M** Minimal maintenance required
- M** Range of mats available to suit exposure conditions



SUDS (Sustainable Urban Drainage System)

Planning on constructing a channel or retention pond to help capture and manage rainwater run off?

Our range of geotechnical solutions include erosion protection for swales and channels, as well as lining systems for ponds and storage areas - amongst them, 'green' solutions that encourage vegetation without compromising on technical reliability.

BioMac®

Providing immediate protection to slopes under threat from wind, rain or surface water run-off, our BioMac® biodegradable matting meets the requirement.

The matting takes the full impact of the elements, protecting topsoil and seeded slopes and preventing washout until sufficient growth has taken place to control erosion without further assistance.

Benefits of BioMac®:

- M** Protects newly created slopes from the elements
- M** Coir fibre or coir-straw fibre mix
- M** Matting biodegrades over time to be replaced by vegetation

MacLine® GCL Bentonite Liner

When you're thinking of an impermeable pond or channel lining, think no further than MacLine® GCL- a composite geosynthetic clay liner.

Delivered on a roll, it's simple to install and doesn't require heat-sealed seams like other membrane liners.

Benefits of MacLine® GCL:

- M** Simple to install
- M** Self-sealing in the event of small punctures
- M** Can be re-vegetated once confinement layer is placed
- M** Complements our Reno Mattress® Plus and other Maccaferri products



ADDED VALUE SOLUTIONS

With the most immediate priorities addressed, Maccaferri has a number of other specialist solutions that can help protect or add value to your development.

MacMat® R

Our MacMat® R solution can soften the look of a steel soil nailed or anchored slope by establishing new vegetation. MacMat® R provides the perfect surface stabilisation layer. It is ideal for usage where the soil nailed slope has sufficient topsoil to sustain vegetation, its 3D polymer open-matrix reinforced by our double twist mesh delivers strength between nail heads.

GeoMac®

When introducing a layer of topsoil to a slope use GeoMac®. GeoMac® is an evolution of our Reno Mattress®. Lined with a geotextile filter fabric, it's in-filled with stone, layered with topsoil and seed, then covered in a biodegradable matting. Secured against a slope face, GeoMac® enables vegetation to establish.

Erosion Control

We offer a range of erosion protection solutions to suit the slope and severity of erosion forces expected. Most of these products are also designed to facilitate the reestablishment of vegetation on the slope.



Rockfall Mitigation

We offer a range of solutions to help prevent rockfall hazards; everything from mesh systems that stabilise rock slopes, to ETAG 027-certified barriers that intercept falling rocks. Just tell us your challenges and our engineers will recommend the best Maccaferri solution.

Noise Barriers & Visual Screening

Our stone-filled gabions are known for their excellent acoustic absorption which protects developments from excessive noise created by motorways, railways or local amenities. These solutions blend into their surroundings and we have a range of options for different heights.



Basal Reinforcement

When developing sites over soft ground, old mine workings or voids, our BBA-certified ParaLink® high strength geogrid will stabilise embankment foundations. ParaLink® enhances resistance to embankment failure and improves the overall structural integrity.

Soil Stabilisation

When providing access over soft ground, to prevent rutting or limit differential settlement, MacGrid® EG and MacTex® geotextiles will help improve the subgrade capacity of flexible pavements, highways and parking areas. Both are simple to unroll and install and our engineers will assist you to identify which is the best solution for your needs.

Working/Piling Platform

When you require a piling platform, you can rely on our reinforcement and separation geosynthetics, MacGrid® and MacTex® to provide the bearing capacity you need.

