

Retaining Structure and Soil Reinforcement
Solutions

MacGrid[®] WG

MACCAFERRI

Soils are engineering materials. Due to the increasing demand for land available for development, construction projects often encounter problematic soils. All soils have poor resistance to tensile stresses and under load, soils are prone to movement and potential failure.

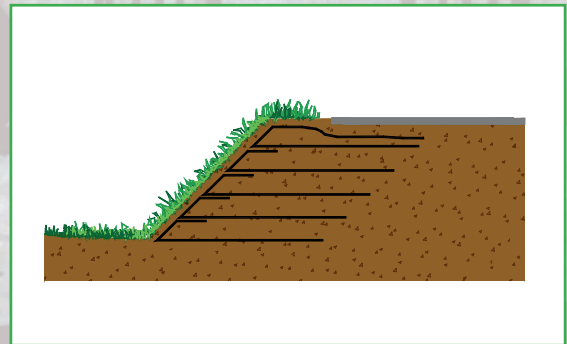
Instead of replacing these soils with more competent and expensive materials, Soil Reinforcement techniques can be used.

Significant improvements in soil stability can be realized when a reinforcing material, appropriate for the prevailing conditions, is incorporated into the soil.

This accords with Maccaferri's "Environmental Solutions" mission and the promotion of "Sustainable Development" through the re-use of on-site materials.

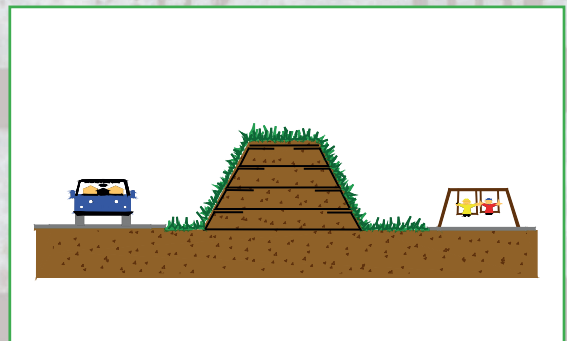
Reinforced Steep Slopes

- Maccaferri geogrids are a great solution for slope reinforcement. They will enhance the stability of the slope for parking lots, road widening, and most locations where slopes are to be steepened.
- Consider: MacGrid® WG Series geogrids, MacGrid® EG Series geogrids, ParaDrain, ParaLink.



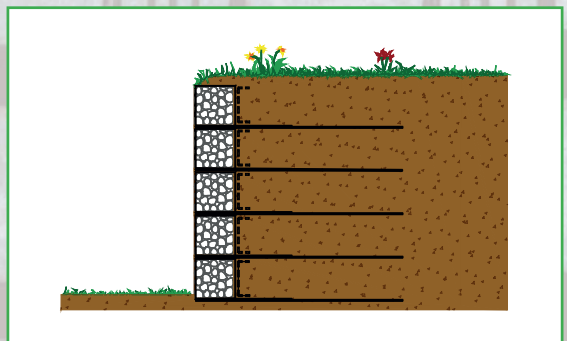
Sound (Noise) Barrier

- Steep faced structures minimize land-use and maximizes developable land area.
- Vegetated slope face enhances visual appeal.
- Consider: MacGrid® WG Series geogrids, MacGrid® EG Series geogrids, ParaDrain, ParaLink.



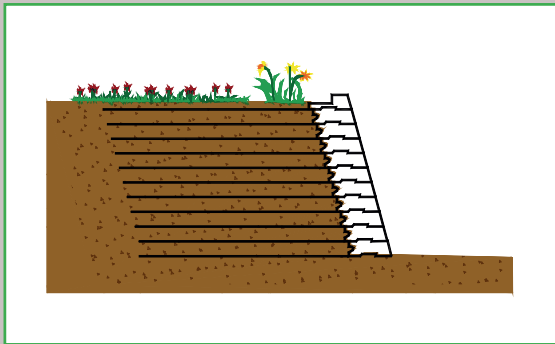
Steel Mesh Reinforcement & Geogrid Combination Hybrid Structures

- Combine Terramesh® woven steel mesh with polymeric geogrids to form a superstructure for high walls or slopes. This unites the stiffness and constructability of the steel mesh for the facing and the strength and versatility of the geogrid for the reinforcement.
- Consider: Terramesh®, Green Terramesh®, MacGrid® WG Series geogrids, ParaDrain, ParaLink.



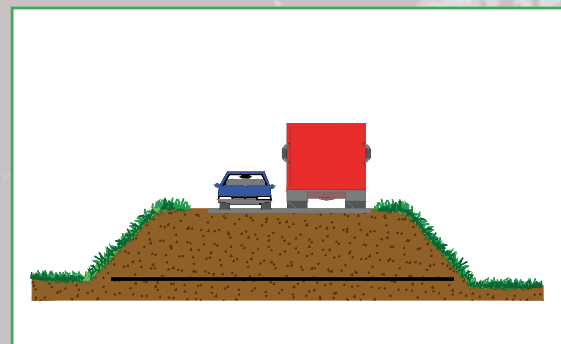
Soil Reinforcement Can ...

- Reduce costs of construction
- Increase land available for development
- Provide vegetated slope face to minimize visual impact
- Re-use on-site materials (where possible)
- Reduce construction land-use
- Reduce import of environmentally expensive quarried materials



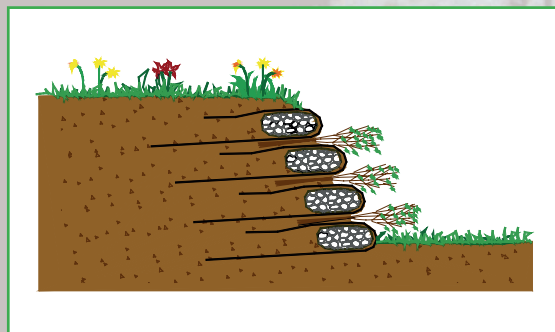
Segmental Reinforced Walls (SRWs)

- Maccaferri knitted geogrids offer one of the best interactions between blocks and geogrid in the segmental wall industry. MacGrid® WG series geogrids can be used with a variety of block manufacturers.
- Consider: MacGrid® WG Series geogrids, MacGrid® EG Series geogrids.



Embankments & Base Reinforcement

- Maccaferri has a large range of products for the reinforcement of embankments. MacGrid® WG series geogrids and MacTex® HSW (high strength woven) geotextiles have been specially developed to perform over soft foundation soils.
- Consider: MacGrid® WG series geogrids, MacTex® HSW geotextiles, ParaLink.



Soil Bioengineering Application

- MacGrid® WG series geogrids can be combined with soil bioengineering techniques such as brush layering, Green Gabions® and EnviroLog® to provide the structural strength within an environmentally integrated system*.
- Consider: MacGrid® WG and EG Series geogrids, ParaDrain.

* Ask for Maccaferri Soil Bioengineering documentation.

MacGrid® Geogrids for Soil Reinforcement

MacGrid® WG geogrids are used for soil reinforcement, made from high molecular weight, high tenacity polyester multifilament yarns. The yarns are woven under tension in the machine direction and finished with a PVC coating. MacGrid® is engineered to be mechanically and chemically durable, and resistant to biological degradation. For information on ParaLink, ParaDrain, MacGrid® EG, and MacTex® HSW, please contact your local Maccaferri office.

MacGrid® WG Series



Technical Data for WG Series Geogrids (75 Years)

Type	Ultimate Strength MD (kN/m)	Tensile Strength @ 5% Strain MD (kN/m)	Long Term Design Strength in Sand MD (kN/m) 75 Years	Creep Limited Strength MD (kN/m)	Grid Aperture Size (MDxXD) (mm)	Roll Size (m)
WG5	55	27	28	34	25 x 24	3.9 x 100
WG6	65	32	33	40	25 x 23	3.9 x 100
WG8	80	40	41	49	26 x 24	3.9 x 100
WG11	110	55	56	68	25 x 25	3.9 x 100
WG15	150	75	76	93	25 x 26	3.9 x 100
WG20	200	100	102	124	24 x 27	3.9 x 100

Notes:

- All data are minimum average roll values represent a 97.5% confidence level, calculated as the mean minus two standard deviations. Fifty percent of test values will exceed the typical value listed above.
- Creepage reduction factor used to determine the LTDS has been evaluated at breakage.
- Long Term Allowable Design values are for sand.
- The technical information supplied for this product type is subject to change at any time without notice.
- Rolls can be smaller.

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