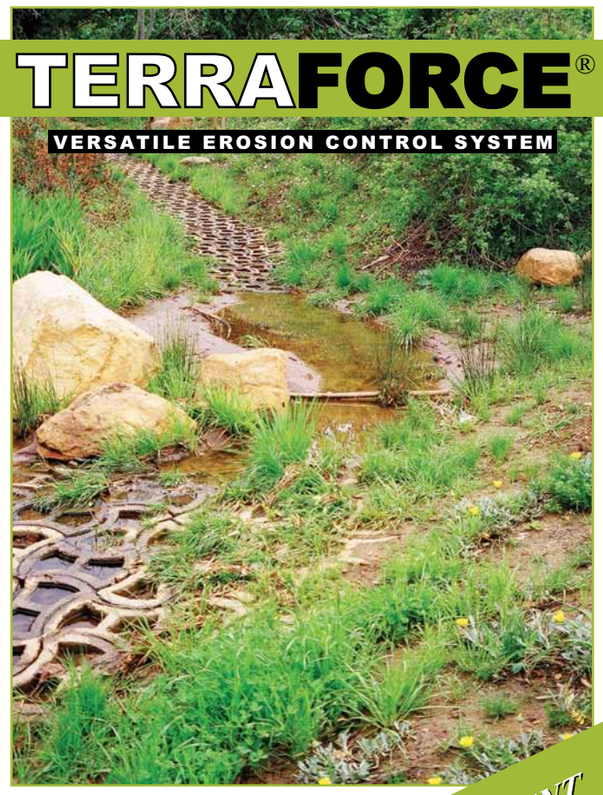
TERRAFORCE®

VERSATILE EROSION CONTROL SYSTEM



TERRAFIX
100,120,150

PROTECTING YOUR ENVIRONMENT

View more benefits,
features and case studies on:
www.terraforce.com

STORM WATER CONTROL IN AGRICULTURE

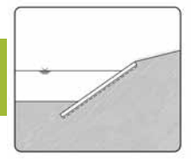
BRIDGE ABUTMENTS

PERMEABLE SLOPE STABILISATION

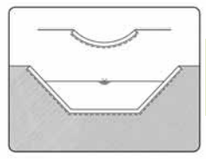
DAM SPILLWAYS AND INLETS

STORM WATER CHANNELS WITH OR WITHOUT STILLING BASINS

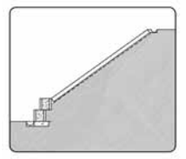
PERMEABLE STREAM LINING WITH COMPLETE PLANT COVER



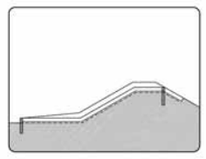
RIVERBANKS AND SHORES



STORM WATER CONTROL



SLOPE PROTECTION



DAMS AND SPILLWAYS

PLANNING ALTERNATIVES

Terrafix units offer unequalled design options to cope with most site conditions.

Typical appplications:

General erosion control
Riverbank and lakeshore protection
Storm water control and spillways
Embankments and slope stabilsation
Bridge abutments

WHY TERRAFIX?

Rampant urbanisation and poor farming practices lead to increased water run-off and unbridled soil erosion as never before. Rivers have to cope with increased peak runoff while at the same time more and more are canalised. This requires increased and improved bank protection systems to safeguard people and property. Outside urban areas, reliable bank and bed protection is also required for causeways, estuaries, spillways and irrigation canals.

A heavy responsibility thus rests on the shoulders of engineers, architects and designers to ensure that their projects impact positively on the environment of future generations.

PRESERVE OUR SOIL, IT IS PRECIOUS!

ALL ABOUT TERRAFIX

Terrafix is an interlocking environmentally acceptable element, made of high strength concrete. It was specifically designed to provide a flexible lining where cost-effective protection against wind and water erosion is required. They are available in three different thicknesses and can be laid in a variety of configurations to suit most site conditions.

This makes it the ideal product to help combat the rapid degradation of our rivers and streams, caused by unbridled urbanisation and poor farming practices all over South Africa and the world. Terrafix can help prevent our soil being eroded away, while still being permeable enough to help preserve our precious ground water reserves and biodiversity.

CHARACTERISTICS

The elements are made out of durable concrete and therefore can safely be used in most saline or polluted conditions. Units interlock laterally and offer a secure yet flexible lining.

They are highly permeable but can be made impermeable by either placing an impervious membrane underneath the blocks or by grouting the structure with concrete or mastic. The system offers one of the most cost-effective and speedy erosion control methods and provides a perfect regime for establishing vegetation. Stability improves as vegetation takes root.

Terrafix units are available in three thicknesses, namely 100, 120 and 150 mm. They can be laid in different configurations ranging from four blocks to 10 blocks per square metre. This way over-design and overspending is avoided.

APPLICATIONS

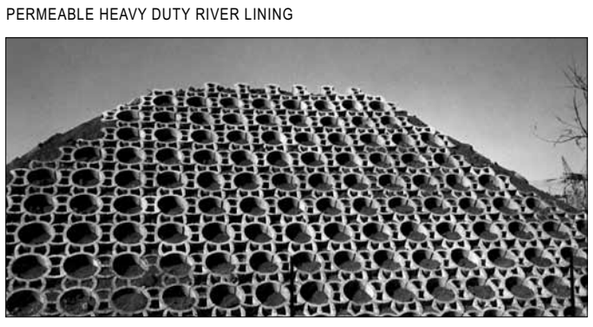
Embankments and slope stabilisation:

Road and railway bridge abutments can be protected against wind and water erosion with good effect and erosion problems or aesthetic considerations of embankments and cuttings can be effectively countered with the TERRAFIX system. Protection is offered to a varying degree by allowing the choice of appropriate laying patterns and thicknesses.

Riverbank and shoreline protection:

Works subject to wave erosion may be protected with TERRAFIX. The lining can be strengthened with ground anchors or made impervious by employing

PERMEABLE HEAVY DUTY RIVER LINING



LIGHT SLOPE PROTECTION

CAUSEWAY

REINFORCED SLOPE STABILISATION

partial or total concrete or mastic grouting. Hydrostatic pressure relief openings must be provided where necesarry.

The system lends itself to providing an effective lining for river banks, canals, resevoirs and lakes. Under such circumstances it is essential to carefully design a suitable filter underneath each structure in order to prevent leaching of fines. Woven or non-woven geotextiles are considered to be most suitable .

Erosion at the toe of the bank is prevented by continuing the lining to below anticipated depth of scour. Below the waterline, cells should be filled with coarse material and with topsoil above normal waterline.

Graded rock or woven/non-woven geotextile filters are to be provided where necessary, to prevent leaching of fine soil particles.

Stormwater control and spillways:

The elements are used for lining dam spillways and sloping weirs, storm water attenuation ponds or downstream aprons. They are also ideal for lining water courses of varying sizes from small ditches to large canals. In designing such structures a roughness coefficient of 0.04 (CERC 1984) has to be assumed.

DESIGN CONSIDERATIONS

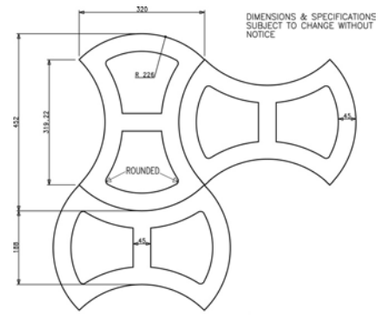
A feasibility study into the hydraulic applications of the TERRAFIX system by the division of Earth, Marine and Atmospheric Science and Technology of the CSIR has revealed very positive characteristics. A copy of this report is available on request.

Information contained in this brochure is furnished as a guidline only. The responsibility for correct utilisation, design and construction shall rest with the controlling engineer or contractor.

For best results and technical advice, contact our recommended contractors. For hydraulic applications, the CSIR can also be approached.

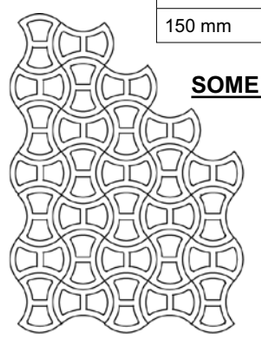
Please consult our website at www.terraforce.com for more information on TERRAFIX and any of our other quality products.

BLOCK DIMENSIONS
TERRAFIX®

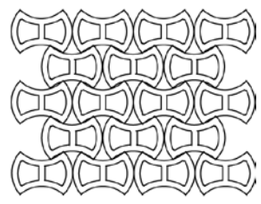


Height	Mass	Infill Volume
100 mm	± 13 kg	0.004
120 mm	± 16 kg	0.005
150 mm	± 21kg	0.006

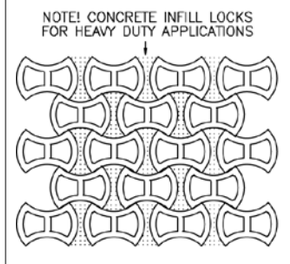
SOME PATTERN VARIATIONS



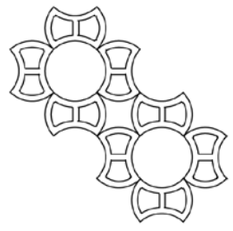
± 10 blocks per sq.m



± 9 blocks per sq.m



± 7.5 blocks per sq.m



± 4 blocks per sq.m