

# MACCNEWS

Issue 10

June 2004

The construction season for 2003/4 has now been completed and we have, with your support, continued to grow the business and re-invest into various industry initiatives, education, training and supporting services, in what can only be described as a rather buoyant climate for the industry nationwide. Feedback from most sectors suggests that nearly everyone has been very busy, so let us all hope that these trends are sustainable across the industry for quite some time yet. 2004 has so far been a very full year for Maccaferri with a number of major technical seminars, workshops and conferences planned. The first of these followed our participation at the Australasian/NZ Geomechanics Conference in early February and

was based on the highly successful and entertaining GCL liner seminar we ran in Auckland in November 2002. This time around we repeated a similar theme in Wellington and Christchurch with four international

presenters who covered a variety of very relevant and state of the art liner topics. Their presentations were highly interesting and well received by those attending.

Winter provides a chance to catch our breath, complete various outstanding tasks and get involved with training workshops with both Contractors and Consultants. Some spaces remain during June through August for these workshops conducted at your premises on subjects from slope and wall software usage, permanent design tools, practical construction tips and training in all our materials, value add services to support tender bids, improved drainage techniques and more.

Please contact us to discuss how we can further help your Team.



Left to Right: Matt Eberle, John Cowland, Ed Kavazanjian, Kelvin Legge, Adrian Gardner at the Christchurch Seminar

Chris Brockliss  
Managing Director

## RAILWAY STATION CAR PARK

The designers of the new Park & Ride adjacent to the Johnsonville Railway Station

had to provide up to 35 parking bays along a busy narrow road in the built up area of Johnsonville, Wellington.

Maccaferri were engaged by the contractor to offer an alternative retaining wall system which was prepared by our Technical Department and submitted to the

engineers for the contract for their review and acceptance.

Many clients nation-wide are making use of Maccaferri's skills and knowledge in the use of geogrids such as **Tensar** and **Fortrac** in soil reinforcement applications to effect cost efficient and practical solutions for walls and steep slopes.

**PROJECT**  
Park & Ride Johnsonville

**LOCATION**  
Johnsonville, Wellington

**CONSULTANT**  
Sinclair Knight Merz Ltd

**CONTRACTOR**  
N. Forsyth Contracting

**DATE**  
Q2 2002

**PRODUCT**  
Fortrac 35



Completed Segmental Retaining Wall

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Continuing to partner  
you **NATION WIDE**

# CLIFTON STREAM PROTECTION

**M**accaferri **gabions** and **Reno Mattresses** have been extensively used for stream bank protection and road construction as part of the development for a new international golf course near Cape Kidnappers, in the Hawkes Bay.

**Gabions** and **Reno Mattresses** were chosen for this green field site for their high erosion and retention qualities and their ability to enhance the environmental biodiversity recovery and sustainability in this eco-tourism development.

The structures blend sound economic engineering and environmental practices, to create a flexible, free draining structure. This provides good water quality benefits and a secure environment for the various plant and animal species that make up the waterway ecosystem.

Other systems such as concrete walls and monolithic concrete block systems for this type of application do not provide natural habitats in waterways and can cause significant imbalances of alkalinity and balance of flora and fauna regimes. Even in urban environs, small stepped **gabions** are often preferred for safety reasons in flooding and their ability to be soil pocket infilled to aid the establishment of vegetation and other special features.

The Contractor achieved a high standard of **gabion** construction in sometimes difficult conditions to help create a successful project with installed **gabion** costs proving how efficient **gabion** systems remain as a retaining structure in today's environment.



Gabion and Reno Mattresses under construction



Final works in flood

<b>PROJECT</b>
Clifton Stream Protection
<b>LOCATION</b>
Cape Kidnappers, Napier
<b>CONSULTANT</b>
Holmes Consulting Group
<b>CONTRACTOR</b>
Fulton Hogan, Napier
<b>DATE</b>
Q3 2003
<b>PRODUCT</b>
PVC Gabions, Reno Mattresses
Bidim A24



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ISO 9001

# ENKAMAT FOR FORESTRY SPILLWAY

**E**nkamat was chosen for an overflow bypass channel and spillway as part of the upgrade for an existing collection pond.

**Enkamat** is a 3-D turf reinforcement mat that provides permanent reinforcement to the vegetal root system on the stream banks, enabling vegetation to withstand high erosion resistance from flood velocities.

The channel was excavated to a depth of 2.5m with sides shaped to a 1:2 batter. **Enkamat** was then laid down the slopes and across the invert with overlaps of 100-200mm facing downstream. Due to the steepness of the slopes and the loose gravelly soil, pinning was specified at a 0.5m grid.

Seed was mixed with the soil and spread into the matting with an extra hand scattering of seed on the surface. A special grass seed mix (Duraturf Park Blend) comprising of Joust perennial rye grass and chewing fescue was used to limit the maintenance requirements. This mix is used in low maintenance parkland areas and contains no clover which would normally boost grass growth. Despite sowing at the start of winter, good grass strike was experienced.

**Enkamat** has been successfully used on a variety of vegetal turf reinforcement applications in New Zealand over the past 15 years. These include, stream and river bank work, dams, lakes, steep slopes associated with earth fills and cover soils for liners.

Comprehensive design guidelines are available on request.



Enkamat secured prior to seed and topsoil placement



Seed and topsoil placed in Enkamat



Revegetation of newly completed Enkamat spillway channel

**PROJECT**  
Forestry Spillway

**LOCATION**  
Hawkes Bay

**CONSULTANT**  
MWH Hastings

**CONTRACTOR**  
Fulton Hogan, Napier

**DATE**  
Q2 2003

**PRODUCT**  
Enkamat 7018



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# SH6A RETAINING STRUCTURES

Our congratulations to Quentin Meyer and his team and to Fulton Hogan (Central) for successful completion of some very interesting and substantial retaining structures on the Frankton Road, gateway to Queenstown.

Maccaferri were involved with design suggestions at pre-tender stage as well as technical support during construction. The solutions developed by Maccaferri resulted in the supply of **gabions**, **Terramesh**, **Fortrac** geogrids and **BioMac-C300** erosion blanket at this high profile and challenging site.

The following is an extract from Transit NZ's web site courtesy of Transit N.Z.

"This project is unique not only for its setting but for the innovative approach to blending the road environs with the surroundings. This means dealing with the geological constraints of the area and at the same time protecting and enhancing the natural environment and vistas in a tourist region.

Substantial rock walls, necessary on the upper hill side of the project, rise up to 13m above the road. The schist rock used in the **gabions** was recycled from the rock unearthed during excavation and was carefully placed within the **gabions**.

An alternative retaining wall has also been used. This involved compacted layers of fill being progressively



Prior to construction

wrapped in geogrid fabric in the retaining wall that extends below the new widened section of road and footpath. The exposed facing of the wall is further wrapped in a **BioMac-C300** coconut fibre matting providing a surface suitable for planting mostly local grass".



SH6A with the Completed Gabion Walls

<b>PROJECT</b>
SH6A Frankton Queenstown Carriageway Improvements
<b>LOCATION</b>
Queenstown
<b>CONSULTANT</b>
MWH Dunedin
<b>CONTRACTOR</b>
Fulton Hogan Central
<b>SUB CONTRACTOR</b>
Quentin Meyer
<b>DATE</b>
Q3 2002
<b>PRODUCT</b>
Gabions & Terramesh Fortrac Geogrid & Biomac

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Kathleen Currin  
Assistant Accountant

Kathleen joined the Maccaferri Team in February 2002



Tonia Scheglova  
Accounts Clerk

Tonia became part of the busy Team at Maccaferri in July 2003

For further information about these projects or any of the products listed freephone 0800 60 60 20



offices:

Auckland

Ph: (09) 634 6495

Fax: (09) 634 6492

## MACCAFERRI

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Napier

(021) 916 736

(06) 836 6647

Christchurch

(03) 349 5600

(03) 349 5004



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**PHONE: 0800-60-60-20**

[sales@maccaferri.co.nz](mailto:sales@maccaferri.co.nz) [www.maccaferri.co.nz](http://www.maccaferri.co.nz)