

CASE STUDY:

ROAD SLIP REMEDIATION

**NORTH EAST ROAD, CHAIN OF PONDS
SOUTH AUSTRALIA
FEBRUARY 2017**

**CLIENT: DEPARTMENT OF PLANNING
TRANSPORT AND INFRASTRUCTURE**

Maccaferri® Terramesh®

Maccaferri Terramesh is a versatile, modular system for reinforced slope systems and mechanically stabilised earth walls that can be a more cost effective solution than the mass gravity Gabion wall because of the speed of installation and reduced rock fill requirements.

The Maccaferri Terramesh system comprises of a gabion type facing with integral woven mesh soil reinforcement panels that can be used to construct structures with either a stepped front face or vertical facing.

They are pre-assembled units of double twisted wire mesh.

They can be used individually or combined with geogrid reinforcement for the stabilisation of soil slopes in a wide range of applications including slip repair work and steep slope construction.

GEOFABRICS®
Smarter Infrastructure

The Department of Planning Transport and Infrastructure (DPTI) had been advised of a road slip failure near Chain of Ponds, SA, along a section of North East Road. The section of road is reasonably quiet, although important to the region.

Due to a limited budget for such projects, DPTI approached Geofabrics for their advice on a range of economical solutions for reinstatement of the failed slope and road. Green Terramesh was proposed as the retaining system due to its aesthetics, ease and speed of installation and relatively cheap installation costs when compared with concrete and other “hard” solutions. Megaflo drainage system was chosen for within and behind the slope due to its flexibility and strength.

Furthermore, the erosion control blanket on the Terramesh face was an added benefit that would eventually provide a natural look when the vegetation began to grow back and further stabilise the slope.

Geofabrics assisted from the start, offering a range of options to the design team. Green Terramesh was chosen as the preferred solution and a design suggestion was provided to the client by Geofabrics technical hub.

Once the design was confirmed and approved by DPTI, Geofabrics carried out a presentation to the field crew regarding methods of installation. Approximately 10 field staff attended and Geofabrics provided answers to numerous questions relating to the install and product.

> Slip Remediation



Large road slip for remediation.



During installation of the Green Terramesh retaining system.



Completed Green Terramesh structure with vegetation growth.

The retaining system consisted of Green Terramesh, which allowed for confinement of backfill and Tensar RE Grids for soil reinforcement and to increase the soil's shear strength. This enabled the structure to stand up a 60° angle, not at all possible without the use of geosynthetics. It also meant that no concrete or overly heavy machinery were required for the installation.

Once a system was in place, the field staff became very familiar with the process and installation was rapid, which in turn meant that limited time was spent onsite. The reinstated 6 m high slope was opened within five weeks of construction time which meant road closure was kept to a minimum.

Two years on and the structure is performing exceptionally well with no issues or concerns, and it's been noted that vegetation has already started to grow on the exceptionally steep slope, even in the harsh Adelaide climate.