



GEOFABRICS CASE STUDY



GABION WALL STABILISES LANDSLIDE SITE IN COFFS HARBOUR

PRODUCTS USED

GABION BASKET

- Constructed with double-twisted steel wire mesh to create flexible, permeable, and continuous structures, ideal for gravity retaining walls, erosion control, channel linings, revetments, and hydraulic structures.
- Manufactured for an expected working life of up to 120 years, ensuring long-term durability and performance
- High-grade polymer coating provides exceptional corrosion resistance and structural strength
- Can be built up to 5–10 metres in height

REINFORCED GEOMAT

- A reinforced three-dimensional geocomposite, strengthened with a double-twist steel wire mesh for better surface protection of very steep slopes and areas susceptible to erosion
- Provides up to 200kN/m strength resistance in soil reinforcement applications
- Continuity of lining is easily achieved by lacing the edges together with binding wire or metal rings without overlapping
- Protects seeded topsoil from washout and encourage vegetation

SUGGESTED PRODUCTS

Geofabrics® Geobox™ gabion basket
Geofabrics® Geomat™ erosion control mat

PROJECT DESCRIPTION

In November 2022, the mid north coast of New South Wales experienced record rainfall and widespread flooding, affecting areas such as Grafton, Lismore, and surrounding regions. As a result of these extreme weather conditions, a landslide occurred on Rovere Drive, Coffs Harbour, severely impacting two residential homes at the base of the slope, leaving them partially buried in debris.

The consulting engineers reached out to Geofabrics to discuss options for mitigating the landslide.

OUR SOLUTION

After careful assessment, gabion basket and reinforced geomat were selected as the most suitable solutions for stabilising the site.

The site required thorough preparation, with the removal of debris around the houses and the cleaning and reinforcement of the batter slope. A total of 350 square metres of gabion baskets were installed at the base of the structure to provide foundational support, and 400 square metres of the erosion control mat was applied on the batter for surface stabilisation and protection.

Due to space limitations, there was no room for an anchor trench. As an alternative, a 16-millimetre tendon wire was installed along the crest to secure the reinforced geomat. The tendon wire provided the necessary tensile strength to stabilise the slope and prevent failure, ensuring long-term stability without the need for excavation.

Finally, a native seed mix was applied on the erosion control mat to encourage vegetation growth and help it blend naturally into the surrounding landscape.



350_{m²}
gabion basket
retaining wall

400_{m²}
reinforced geomat
installed



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