

Envirocell Slope Erosion Protection & Re-vegetation Shangri-La Boracay Resort, Aklan, Philippines

Project Data

Project	: Shangri-La Boracay Resort - Slope Erosion & Re-vegetation Project
Client	: Shangri-La Hotel Group
Products Used	: Envirocell 150 + Polyfelt® TS Geotextile

Overview

The project is located on Boracay Island a tropical paradise located at south of Manila.

The project required a road slope protection system that mitigated erosion problems on a cut limestone surface and facilitated the regrowth of vegetation that blends to the natural Boracay tropics.

Applications

To mitigate the new cut slope surface erosion problem, Envirocell cellular soil confinement system with a layer of Polyfelt® TS nonwoven geotextiles were selected. The Polyfelt® TS geotextile acts as a filter and drainage layer between the slope and Envirocell. The Envirocell's purpose was to retain sufficient topsoil on the steep slope and facilitate grass and other vegetation growth.

Product Characteristics

Manufactured from inert Polyethylene, Envirocell is unaffected by the effects of chemicals in soil or degradation resulting from prolonged exposure to sunlight.

The continuous structure of Envirocell is designed to encapsulate and contain soil and moisture for quick vegetation growth on areas of hard slope surfaces where natural growth of vegetation is impossible.

Installation

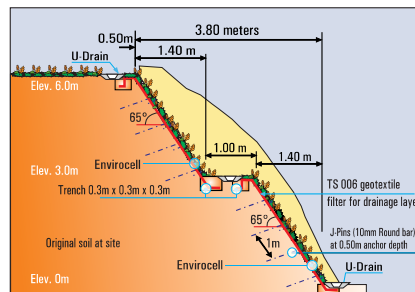
The hard surface slope was cut and trimmed into berms approximately 3m high with a slope inclination of 60° to 70°.

At the top of each slope an anchor trench was dug up to secure the Polyfelt® geotextile filter / separator and the Envirocell. The purpose of the Polyfelt® TS geotextile was to act as a separator between the hard surface and the

top soil and at the same time serve as a drainage layer to collect highly alkaline water seepage from the limestone surface area.

The Envirocell was then laid on top of the Polyfelt® TS geotextile filter and laced together and fixed with cable ties. To hold it firmly to the hard surface slope galvanized J-pins were pegged in a staggered profile at 1.0m spacing.

Top soil was then laid inside the cell confinement system followed by hydro seeding and turfing. The project was divided into two phases; Phase 1 was completed in 2006 and phase 2 completed in May 2008.



Typical cross section of slope.



Trimming of the cut slope of laying of Polyfelt® TS.



Installation of Envirocell over the Polyfelt® TS.



Installed Envirocell with soil backfill.



Reinstated slope after 3 months.

Envirocell® is a registered trademark of TenCate.

Further details of this application and products can be obtained by contacting your nearest TenCate Technical Support Office.

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