#### CHANNEL PROTECTION

### CASE STUDY

# BRISTOL BUENAVENTURA GOLF & BEACH RESORT

Pacific Ocean Coastline; Panama GEO PRODUCTS, LLC | PANAWEB

### Background

The primary objective was to protect the banks of a canal within a luxury hotel located 85 miles west of Panama City on the Pacific Ocean coastline. Within the resort, walking paths and gazebos were strategically placed amid a winding man-made canal. The vegetated canal required wall slope angles of 1:1 to 3:1, potentially unstable. The resort was in need of a solution that would suit not only the needs of the fast-paced construction schedule, but the budget and aesthetic of the manicured grounds as well.



Before





Geo Products, LLC

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# **Technical Information**

MATERIALS USED: EnviroGrid® EGA30 4" 4,000m2 APPLICATION: Channel Protection PROJECT LENGTH: 3 week installation



Geotextile Layer



EnviroGrid® Geocell Layer

# Design Solutions

First, a nonwoven geotextile layer was laid atop the sub-base material to act as a separator to impede erosion between the layers. Then, the 4-inch geocell layer was installed and filled with local material; a mixture of local sand and soil. After the geocell was put into place, stabilizing the slopes, a layer of sod was laid directly on top.



EnviroGrid® Geocell Infilled with Native Sandy Soil

# Results

EnviroGrid® was able to combat erosion control issues by confining the local soils in order to provide stability to the steep man-made slopes. The complete site preparation, installation and finishing work was completed by local gardeners in about three weeks.



Sod and Vegetation