

CLARK INTERNATIONAL AIRPORT TERMINAL, PHILIPPINES

Durable GEOTUBE® solution for Clark Airport waterway revetment



Industry:	Site development
Application:	Airports
Location:	Philippines
Product:	GEOTUBE® SFM

Overview

GEOTUBE® SFM Revetment Structure for Artificial Waterway at Clark International Airport Terminal.

Challenge

The Clark International Airport in the Clark Freeport Zone is making progress in the aviation industry with its modern passenger terminals. It serves as a northern gateway and an alternative to the main airport in Metro Manila.

As part of the project, an artificial waterway is being created to collect water runoff within the airport. However, the abundance of lahars (thick debris slurry) in the area poses

a significant concern for erosion in the waterway. To address this, a revetment structure is needed for erosion protection.

Solution

To protect against slope erosion, we proposed using **GEOTUBE® SFM** for the waterway section. This solution offers excellent robustness, abrasion resistance, and durability. A special substrate integrated into the upper

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CASE STUDY

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surface of the sand-filled mattress promotes rapid vegetation growth, ensuring long-term vegetation cover.

Before installation, a layer of **MIRAFI**® Polyfelt® TS 60 non-woven geotextile is placed on the slope to separate and prevent scouring during hydraulic filling of the sand-filled mattress.

The **GEOTUBE**® SFM rolls are then laid on the slope, running parallel in tubular sections with a 1:1 slope (45-degree angle). The mattresses are hydraulically filled with sand through top openings. A small hopper is used to introduce the sand, which is washed down with water. Adjacent rolls are joined by seaming on-site.

Finally, the sand-filled mattresses are anchored in a trench at the top of the slope.

Result

The **GEOTUBE**® SFM serves as revetment for the entire waterway network at the new Clark Airport Terminal.

The rolls are easy to transport, and installation is quick and straightforward, requiring simple equipment. Skilled labor is not necessary. This erosion protection solution offers long-term effectiveness due to its high robustness, durability, abrasion resistance, and UV resistance. A site revisit showed significant growth of natural vegetation covering the sand-filled mattresses.



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