

ZOOLAKE COMMUNITY PROJECT

JOHANNESBURG, GAUTENG , SOUTH AFRICA

Slope Protection

Problem

The client's challenge was to address the issue of soil erosion at Zoo Lake in Johannesburg, South Africa. The lake covers an area of 466,000m² and serves as a catchment for rainwater in the surrounding area. As the city grew, impermeable surfaces increased, leading to an increased flow of water into Zoo Lake and erosion on its banks. This erosion caused soil to wash into the lake, decreasing its water storage capacity and affecting the quality of the water feeding into the stormwater system.

Solution

Phase 2 of the Zoo Lake Erosion Project involved using 550m² of MacWeb W which was used on the slopes to increase its shear resistance and stability. MacWeb W is a cost effective, lightweight, and expandable cellular confinement system, manufactured from UV stabilised, coated slit film woven geotextile strips which are alternatively stitched to form a continuous honey-comb square mat. Biojute is a coarse, biodegradable fabric woven into an open mesh from rugged heavy jute yarn, this was used in conjunction with the MacWeb W to provide immediate erosion control and a stable medium to support healthy plant growth. A gabion retaining wall of 28m at a height of 0.5m was placed alongside the existing retaining structure/wing walls of the culvert to rebuild the profile of the area.

Client: The Zoo Lake Users Committee (ZLUC)

Designer / Consultant: Maccaferri Africa

Contractor: Community surrounding Zoolake

Products used (Qty.)

- Macweb 450m²

Date of construction: 11/2021 - 02/2022

[Google Maps](#)

[Google Earth](#)



Before Construction



Before Construction



During Construction



During Construction



Construction Completed



Construction Completed