Problem
The plateau at the southern end of the King Shaka International Airport required a 12 meter bank on the south eastern corner. The site restrictions ruled out that the slope could be constructed at the natural angle of repose of 28 degrees of the in situ Berea Red and a retaining wall was considered inappropriate as a soft environmentally acceptable was preferred as the bank was in full view to all who entered the airport through the main gate.

Solution
The Green Terramesh™ with its slope of 70 degrees solved the site restriction problem and also enabled all visitors to be greeted by an aesthetically pleasing green bank in spite of its height of 12 metres.

Design Features
The wall was designed using Maccarelli’s Macstars software enabling the engineers to optimise the length of soil reinforcing using the in situ material as structural backfill.

Client name:
ILEMBA AND ACSA
Main contractor name:
WBHO
Consultant:
PD Naidoo & Associates
Product used:
TERRAMESH™, GREEN TERRAMESH™, MACGRID®, MACDRAIN®, AG200 GEOTEXTILE

Construction Info:
Construction date: July 2008
Completion date: End 2008
Construction
The construction of the wall went smoothly with contractor being able to work without any restrictions. The timing of the construction of the structural layers and the testing of the compaction was important to ensure that the team were not delayed waiting to hear if the densities were approved before commencement of the next layer.

Benefits
The environmental requirements by the client was stringent. The Green Terramesh™ solution, allowed for a complete vegetated solution acceptable to the environmentalist and resolving the engineers additional requirements in using excess amount of in situ Berea Red material available on site.