

KALBA HANGING GARDENS
KALBA, SHARJAH, U.A.E.

Reinforced Soil Walls and Slope Reinforcement

Problem

The Hanging Gardens located in Sharjah-Kalba Road was recently inaugurated by H.H. Dr. Sheikh Sultan bin Muhammad Al Qasimi, Supreme Council Member and Ruler of Sharjah. This spectacular garden offers a cascading waterfall, blooms that are vibrant, and hidden walkways that wind through the mountains of Kalba. This project features an artificial waterfall that's one of its main attractions. Located on the steep slopes of the high rock-filled embankment for the road on the upstream side, this cascade falls from a height of 55m. Because of the steepness and stability of the road embankment, it was necessary to geotechnically stabilize the core of the cascading waterfall before adding the huge rock boulder skin that provides the waterfall with a natural appearance.

Solution

Maccaferri's Terramesh MSE Wall system was used as the core of the cascading waterfall due to its flexibility and ability to be covered with the outer layer of materials required in the project. Our ParaLink 300 high strength geogrid was used in the steep slope to ensure global stability. A series of small and medium-high Terramesh walls were installed along the slope in order to match the landscaping designed by the consultant. The finished Terramesh surface was covered with gunnite concrete, followed by a waterproofing membrane, and finally large boulders clad with grout. This project involved Maccaferri Middle East in design, supply, and construction assistance for Terramesh MSE walls for slope stabilization.

Client: Government of Sharjah. Roads & Transport Authority

Designer / Consultant: Cracknell Landscape Design LLC

Contractor: General Mechanic Company

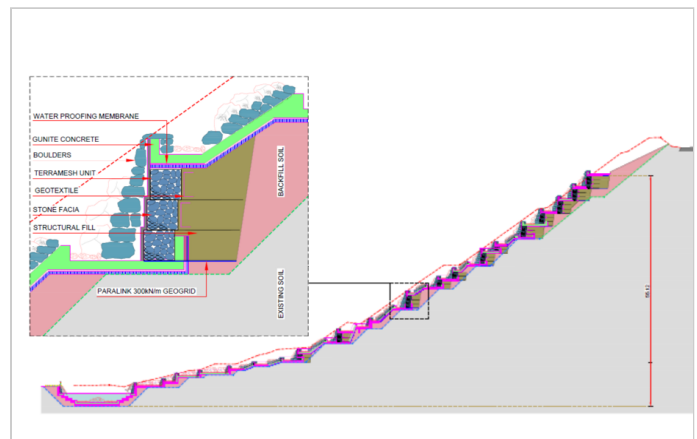
Products used (Qty.)

- Terramesh Terramesh : 2500 m2
- MonoAxial GeoGrids Paralink 300 : 900 m2

Date of construction: 03/2022 - 01/2024

[Google Maps](#)

[Google Earth](#)



Section of waterfall with Terramesh core



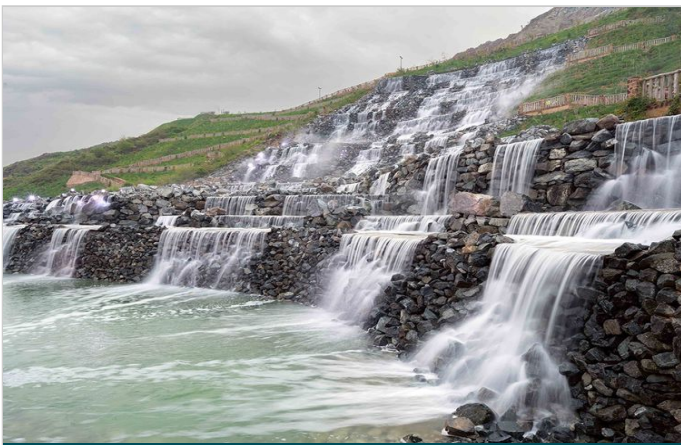
Installation of Terramesh core in progress



Installation of Terramesh core in progress



Applying of gunnite concrete cover in progress



Completed project: Close view of Cascading Waterfall



Completed project: Close view of Cascading Waterfall



Distant view of the Hanging Garden with Cascading Waterfall (Google Images)