

This project supports these UN Sustainability Goals

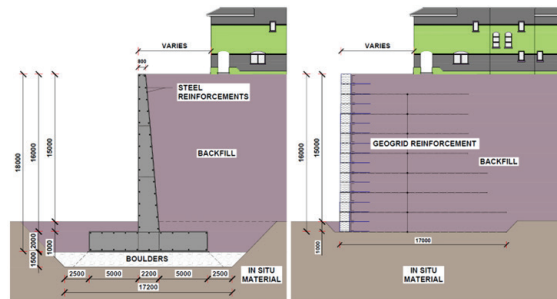
Providing A Cost-Effective And Sustainable Solution With Paramesh MSE Wall At A Seaside Development In Egypt

Telal El Sokhna is a real estate development project along the longest beach line in Ain El Sokhna, Egypt. To ensure a panoramic view of the sea for the community, the architect designed the project at several levels, which necessitated a long and high retaining wall (560m long & 19m high), parallel to the shoreline.



Company: Maccaferri
Client: Roya Developments
Location: Ain El Sokhna, Egypt
Application: Reducing costs and boosting sustainability by replacing a cantilever wall with a gabion faced MSE wall
Benefits: Environmental sustainability, cost and time savings, improved safety

The original design consisted of high cantilever walls for soil retention. However, through Maccaferri's local agent Strata Soil Systems, the contractor proposed a gabion faced Paramesh MSE wall as a cost and time effective alternative. This choice was primarily influenced by the need for the wall face to integrate with the surrounding mountains, since the gabion could be filled with local stones.

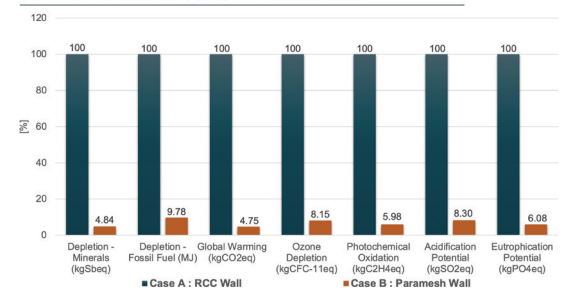


The International Geosynthetic Society (IGS) is a learned society dedicated to the scientific and engineering development of geotextiles, geomembranes, related products, and associated technologies. We are registered as a non-profit corporation.

Bearing capacity was the key aspect in the design of retaining wall options because the in-situ soil was insufficiently competent, requiring deep excavation for a concrete wall, while a Paramesh MSE wall could be constructed at a shallow depth. Implementing the Paramesh MSE wall resulted in a 40% cost savings for the client.

An MSE wall was also the environmentally friendly option, evidenced by a comparative Life Cycle Assessment carried out between this and the original cantilever wall design. The MSE approach lowered the environmental impact by more than 90% in each of several impact categories studied. The Telal El Sokhna project demonstrates how sustainability can be achieved with geosynthetics in soil retention applications without compromising traditional engineering design requirements.

COMPARATIVE LCA RESULTS : RETAINING WALL



To find out more, contact Maccaferri Middle East by emailing at info.ae@maccaferri.com.

The IGS Sustainability Committee is committed to communicating the positive environmental impact of using geosynthetics, improving worldwide understanding of the sustainability benefits of geosynthetic materials, and supporting the geosynthetics industry maximize the sustainability potential of their projects. For more information, visit our webpage at www.geosyntheticssociety.org/sustainability.

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