



TeMa
Technologies
and Materials

South Africa



SLOPE STABILITY & LINER PROTECTION LAYER

NATURE OF INTERVENTION

Many modern landfills make use of ancillary storage facilities to contain contaminated liquids such as leachate and stormwater runoffs. These facilities are usually lined to protect the surrounding environment using geomembranes and other layer works.

These liners in turn need to be protected from exposure to atmospheric elements such as UV and from mechanical maintenance and cleaning methods. This is usually achieved by a covering layer placed throughout the basin. This covering layer often requires stabilizing, particularly on the steeper side slopes which aim to maximize storage capacities, and which often have poor interface friction themselves due to the underlying plastic liner.

Through the introduction of various Geosynthetics products, to replace conventional construction materials, durability, cost and performance of composite liner systems has greatly improved leading to lower maintenance requirements, economising and improved efficiencies over extended design and operational lifespans.

Location:

Stellenbosch, South Africa

Products:

- *TeMa-CELL HD 20-200 EU-E geocells*

Quantity:

- *5600 sqm*

Application:

Slope stabilisation and liner protection

Date:

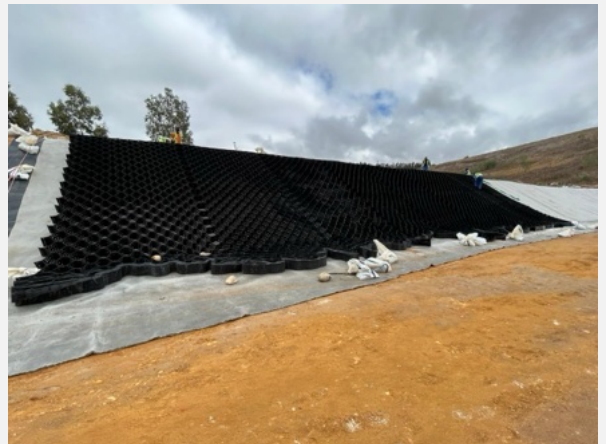
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SOLUTION

TeMa-CELL HD20-200 EU-E (HDPE geocell system with perforated & textured sidewalls with welded seams), underlain with a nonwoven protection geotextile was used to stabilize the cover layer material on the side slopes and to provide for adequate liner protection throughout the dam basin.

Because the product was installed over a geomembrane liner, holding pegs were not suitable and a tendon and ballast system was used to suspend the geocells panels in an open position whilst being filled.

The TeMa-CELL – reinforced layer will ensure the projection layer is retained in place during both operation and maintenance.



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