

PHOENIX GREEN TERRAMESH™
PHOENIX, KZN

GEOTECHNICAL / REINFORCED SOIL WALLS

Product: Green Terramesh™

Problem

In 1995, Transnet Housing commenced with the development of the Clayfields residential area in Phoenix. The project entailed construction of low cost housing and access roads.

Clayfield Drive is one of the roads that was constructed during this time. This road required retaining structures on either side of the fill to raise its level to that of the existing connecting road level. Poor soil conditions were evident in this area and post construction settlement was anticipated.

Solution

Green Terramesh™ walls (a reinforced soil application), 3m high consisting of units 600mm high with tail lengths 3m long, were constructed on either side of the road. The front face of each unit was inclined at 70° to the horizontal, with a BioMac™ layer behind the PVC coated mesh, followed by a galvanised mesh panel to provide additional support. A layer of topsoil was placed immediately behind the mesh face of the wall to facilitate the growth of vegetation.

A selected backfill was chosen and compacted to a 95% MOD. AASHTO behind each unit.

All the units were laced together, on the facing only, with PVC coated binding wire.



During construction

Date: Mar 1996



During construction

Date: Jun 1996

Client name:

TRANSNET - HOUSING DEPARTMENT

Main contractor name:

ASPHALT CONSTRUCTION

Consultant:

CROUSE, WOLFE ASSOCIATES

Product used:

GREEN TERRAMESH™

Construction info:

Construction date: MARCH 1996

Completion date: JULY 1996

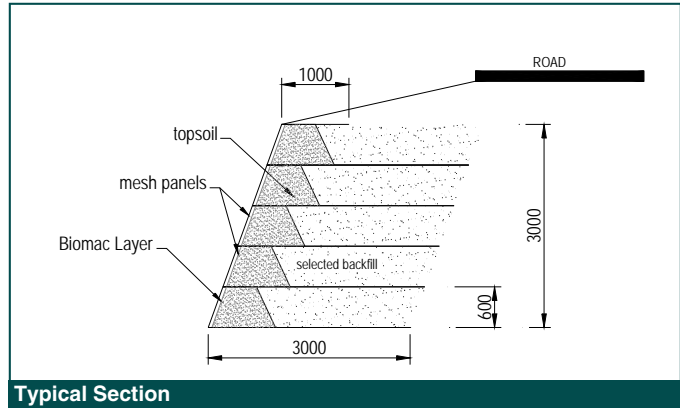


After construction

Date: Jan 1997

Benefits

- The use of the Green Terramesh™ System alleviated the need for rock and rock packing;
- The system did not require any extra foundational preparation - the foundation was merely levelled;
- The PVC coated mesh can be expected to survive 120 years in Durban's hot and humid climate;
- The coir fibre layer on the front face of the wall allows indigenous flora to establish on it;
- The strength and flexibility of the mesh reinforcement has counteracted any differential settlement that may have occurred.



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