

CASE STUDY

Subgrade Stabilisation | Roads | Olievenhoutbos, Pretoria

Jul 2013

Client Department roads (Funded by Housing)

Contractor Lonerock

Consultant Nyeleti Consulting

Product **Tensar TriAx™ TX160** | 1500m²

Rep Byron de Cramer

Problem

Roads in Olievenhoutbos needed to be upgraded to paved roads. On site it was noticed that excavations for the new roads had been dug too deep and had reached the natural water table. This resulted in soil being too wet and sludgy to obtain compaction. In order to try solve this problem, dump rock was used as back fill on most of the roads.

Solution

To alleviate the obvious extra cost implications of using dump rock it was decided that Tensar TriAx™ was the ideal product to solve this problem. A 50m trial section was constructed using Tensar TriAx™ TX160. It was used to compact the unbound layers of roads and trafficked areas to create a mechanically stabilised layer.

In-situ soil was prepared prior to laying a separation geotextile. This was followed by the easy installation of Tensar TriAx™ TX 160, which was subsequently covered with a 350mm layer of G5 material.

However, soon after completion a 10-ton roller was causing wave actions over certain areas of the trial section. It had not been sufficiently compacted..

On investigation, it was discovered that Tensar TriAx™ laid in the problem areas had been covered with only a 200mm layer of G5, while satisfactorily compacted areas were covered to a depth of 300mm or more, proving that with the correct depth of G5, the required stabilisation is achieved.

Benefits

Time was saved by using Tensar TriAx™, in comparison to the time and transportation costs that backfilling with dump rock would have amounted to.



TriAx™ TX160 laid over geotextile separation layer



350mm of G5 material placed over TriAx™