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# CASE STUDY

**Reinforcement | Subgrade Stabilsation | Willow Glen, Pretoria East** Jun 2012

Client Imperial Holdings

Contractor Advance Project

Consultant WSP

Product **TriAx** | 855m$^2$
**bidim**® | 920m$^2$

An equivalent of **2 555** recycled PET bottles was used in this project

## Problem

A recent project in Solomon Mahlangu Drive (formerly Hans Strydom Road), Willow Glen, Pretoria East, entailed the construction of two motor showrooms for Imperial Holdings. For construction of the slipway at the intersection with Solomon Mahlangu Drive, the consulting engineers and contractor conformed to specifications as stipulated by the Gauteng Department of Roads and Transport (Gautrans).

***bidim® A2** laid as separation*

Soon after compaction of the sub-grade was completed, cracks began appearing, indicating evidence of clay in the soil.

## Solution

After the inspection by Gautrans, the consulting engineers recommended the use of **bidim® A2** and **Tensar TriAx TX 160** as ground stabilization for the upper layer works.

***TriAx** easy to roll out*

**bidim® A2** was installed as the separation geotextile in the subgrade stabilization.
**Tensar TriAx TX 160** was installed as the mechanically stabilising geogrid tasked to distribute the impact load evenly over a larger area.
A granular G5 material was imported and placed in a 200mm layer over the **TriAx TX 160** grid and then lightly compacted. A second layer of G5, 150mm thick, was placed on top of this, which was then

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covered in a layer of G1 material. These layers were capped with an asphalt surface layer.

**Benefits**

In comparison to the conventional way of importing dump rock with a separation geotextile, the use of **bidim® and TriAx** in this application was extremely cost effective. In addition to this was the minimal installation time (just 1.5 hours) to lay down the **bidim®** and **TriAx**. Neither further excavations nor removal of spoil material were necessary and the project was completed in one month.

*Ready for the G5 layer*