

CASE STUDY

Reinforcement & Liner Protection | Basal Reinforcement & Dam Linings | Tormin Mine, Koekenaap

June 2013

Client Tormin Mine

Contractor Joetsie Civils

Consultant Obsideo

Products **Neoweb™ 330b** | 27 400m²
RockGrid® PC 50/50 | 27 400m²
Bidim® A4 & A6 | 6 050m²
Multi-Cell® 50mm | 6 050m²

Rep Norrin Stone

Problem

The area of Koekenaap, where Tormin mine is situated, is extremely sandy with little or no in-situ building material. Due to the isolation of the area, transportation of suitable civil engineering materials was economically unviable. **RockGrid® PC** was recommended for the reinforcement of the subgrade, and **Neoweb™** cellular confinement system for load support. These two reputable products would enable the internal roads to accommodate the heavy mine vehicles.

Solution

During the project **RockGrid® PC 50/50** was installed over the subgrade. **Neoweb™ 330b** (200mm high) was then placed over the layer of **RockGrid® PC**.

Waste water ponds were built during construction of the mine roads, and **bidim® A4 and A6** were specified for protection of the HDPE pond linings. Since these high performance geotextiles offer optimum thickness in their weight class, a high degree of protection is provided.

To provide dual protection, a 1mm HDPE liner was sandwiched between a bottom layer of **bidim® A6** installed directly over the in-situ material of the ponds, and an upper layer of **bidim® A4**. The in-plane drainage characteristic of **bidim®** dissipates pore water pressure build-up beneath the liner, while heavy grade **bidim® A4** is the ideal cushioning protection above a liner. The inclusion of **bidim®** greatly extends the life and maintains the integrity of a lining system.

For protection against foot and light traffic, especially on the slopes of the ponds, **Multi-Cell® 50mm** was installed.

Benefits

The ease and speed of installation of all these **Kaytech** products not only impressed both consultant and contractor during these projects, but saved a significant amount of money in time, construction costs and expensive transportation of imported materials.



Neoweb™ being placed over the RockGrid® PC to reinforce the subgrade.



bidim® A6 placed over the insitu subgrade to protect the HDPE liner.