

ROCKFALL PROTECTION SYSTEMS

Product: STEELGRID HR50

Problem

The National Route 10, Section 6 extends through an approximately 15m high side cut at 47.6 km. The length of cutting exposed along the roadway measures some 60m.

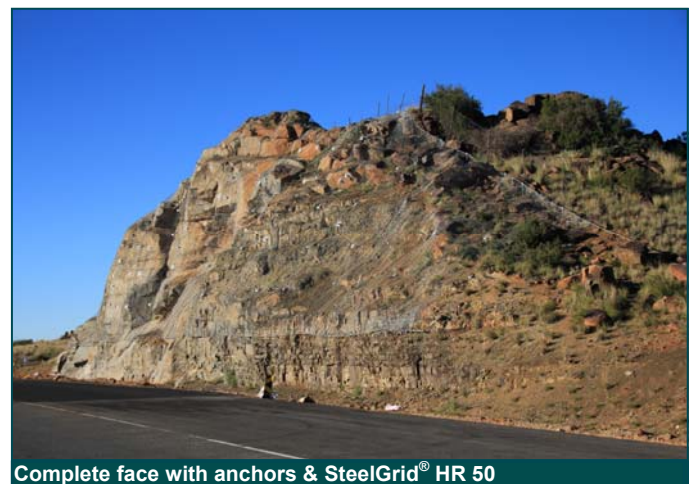
The medium to widely spaced jointing within the dolerite is continuous and pervasive and as such results in large block sizes being present within the cutting face. The unfavourable dip of several of these joints result in the formation of wedge and plane failure kinematic conditions for the joint blocks. Corestone weathering developed in the upper portion of the cutting results in rounded cobbles and boulders of the dolerite set within completed weathered dolerite.

Solution

The primary remedial measures and construction had taken place on the western face of cutting and will comprise of the following:

- Barring down of loose material over selected portions of cutting
- Anchoring of the potential unstable rock blocks by means of either 3m or 6m long rock anchors
- Installation of Maccaferri Steelgrid HR50 Rockfall netting or equivalent anchored to the rock by means of 2m and 3m long rock bolts. Rope access methods.
- Hand packed dental mortar on isolated highly fractured zones.
- The erection of a temporary low energy barrier (LEB) approximately 30m long by 1.5m high adjacent to the surfaced shoulder to protect the road from falling or bouncing rocks during construction.

- Traffic accommodation comprising of the temporary closing of the Northbound lane during daylight (working) hours and re-erected to maintain full protection the road.



Client name:

SOUTH AFRICAN NATIONAL ROADS

Main contractor name:

WEPEX

Consultant:

MELIS & DU PLESSIS CONSULTING ENG

Product used:

STEELGRID HR50

Construction info:

Construction date:	JULY 2011
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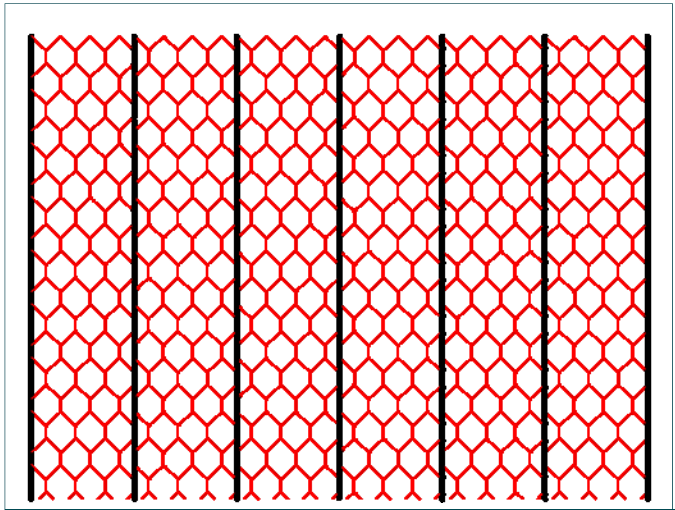
Completion date:	FEBRUARY 2012
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Complete face with anchors & SteelGrid® HR 50



HR-Link connector used with SteelGrid® HR mesh



Schematic diagram of Steelgrid® HR30

<p>Maccaferri SA (Pty) Ltd t/a Maccaferri Africa</p> <p>Head Office: Durban Branches: Cape Town East London Johannesburg Tongaat (Factory)</p>	<p>P O Box 815 New Germany 3620</p> <p>National Tel: 087 742 2710 International Tel: + 27 31 705 0500 Fax No: 087 742 2734</p> <p>www.maccaferri.com/za</p>	<p>Engineering a Better Solution</p>
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