

## **Bramhoek Dam – South Africa’s 1st Grout Enriched Roller Compacted Concrete Dam**

E. LILLIE, Bramhoek Consultants JV, Johannesburg, SA.

M.J.E. NEUMANN, Bramhoek Consultants JV, Johannesburg, SA.

L. VAN ZYL, Concor Roads and Earthworks, Johannesburg, SA.

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**SYNOPSIS.** The Bramhoek Dam forms the lower reservoir to the Ingula Pumped Storage Scheme. Although only 337m long and 37m high, the dam incorporates interesting features and has proved a challenge to construct. The presence of extensive huge dolerite boulders tightly bedded in clay required a combination of 70t excavators and blasting to reach suitable founding. For speed and economy of construction, the upstream and downstream faces are composed of grout enriched roller compacted concrete (GE-RCC). An extendable mobile conveyor belt with a reach of 41 metres was used where access was restricted. To accommodate flood inflows, even while the scheme is in generation mode, a high capacity outlet in the form of two 2.8m diameter pipes was installed.