

Client: Delta Mining Consolidated (DMC)  
Value: R 115 million  
Services: Mining infrastructure design  
Project Duration: July 2013 – Ongoing

# Rietkuil Coal Mine, Mpumalanga

## Font-end Infrastructure Development: Detail Design

### The Task

A site to the east of Delmas, part of the Central Witbank Coal Field, was identified by the client for the development of a new open cast coal mine. It was estimated that the reserve would yield approximately 3 million tonnes of coal annually, with an estimated lifespan of 20 years.

### Design Services

Nurizon was appointed to undertake the detail front-end civil engineering infrastructure designs for the new mine facility. The company was also involved in the environmental consultation process, relating to wetlands in the vicinity of the development, river diversion modelling, post-mine development rehabilitation works and a facility optimisation study.

Geometric design was a key component of the project deliverables and included the creation of a complete digital terrain (DTM) model for the site to assist with accurate bulk earthworks quantity calculations, costing and detail design drawing production. Other design services comprised a geotechnical investigation, stormwater management and associated infrastructure design (including pollution control dam), water balance model, earthworks platform design, wet services design, pavement engineering design of internal mine haul roads (from the pit to mine plant areas) and facility structures design, e.g. workshop facilities and crusher tip platform.

### The Result

A complete front-end civil infrastructure design was delivered to DMC with associated tender documentation, within the allocated project timeframe.

