

Client: Transnet
Value: R700 000 (Fees)
Services: Geotechnical investigation
Project Duration: Mar 2015 – May 2015

Transnet Railway Lines, Mpumalanga

Geotechnical Investigations

The Task

The purpose of the geotechnical investigations was to determine the soil properties for the design of proposed railway loops, as well as the extension of existing railway lines for Transnet's Phalaborwa and Komatipoort railway lines.

Design Services

Nurizon was appointed to undertake a geotechnical investigation for the mainline loops on the Phalaborwa and Komatipoort railway lines, which consisted of a desktop study, site investigation works, laboratory testing and technical analysis.

The site investigation consisted of the following elements.

- 44 tips pits excavated to a maximum depth of 3m, profiled and sampled according to approved standards;
- 44 DCP (Dynamic Cone Penetrometer) tests;
- Laboratory testing; and
- Technical analysis and reporting.

The Result

The geotechnical investigation technical report provided information regarding the geology, in-situ material/rock properties (level of bedrock), founding recommendations (prediction of bearing capacities), the presence of ground water, excavatability, material stability, identification of problematic soil conditions and the suitability of in-situ material for foundation design, road and rail building material and general fill.

