

Client: GDF Suez Energy
Value: R3.5 million
Services: Geotechnical investigation; rotary core drilling
Project Duration: Mar 2015 – April 2015

Kathu Solar Plant, Northern Cape

Geotechnical Investigation

The Task

The Kathu Solar Plant is a thermoelectric generation power plant, consisting of a 100MW water steam cycle plant, harvesting solar energy by means of a Parabolic Trough Collector field. The site is located in the Northern Cap Province of South Africa, approximately 10km north-west of the town of Kathu.

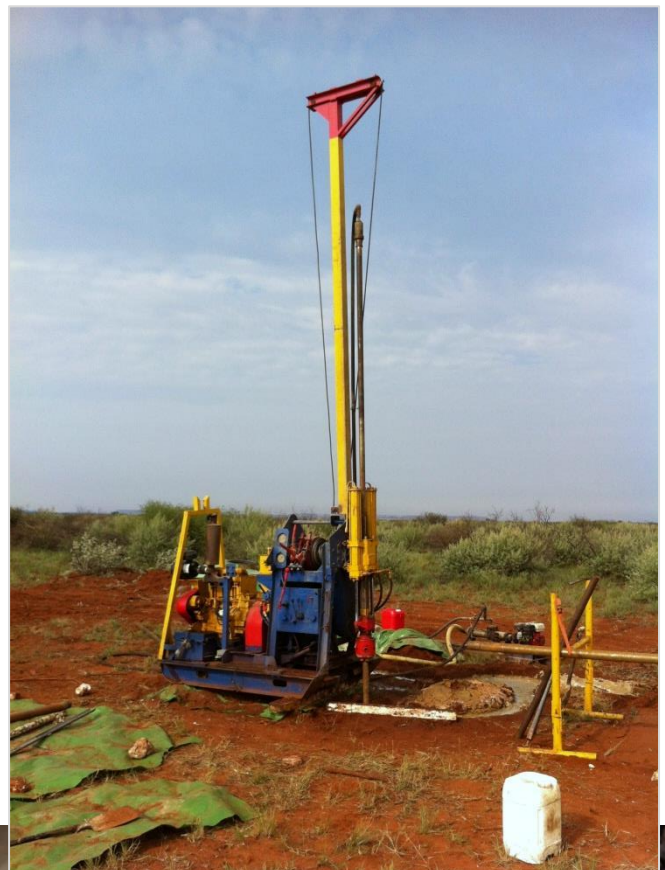
Design Services

Nurizon was appointed to undertake a geotechnical investigation for the solar plant development, which consisted of a desktop study, site investigation works, laboratory testing and technical analysis.

The site investigation consisted of the following elements.

- 26 rotary core boreholes, drilled to a depth of 15-20m each and within the Solar Field area;
- 2 rotatory core boreholes, drilled to a depth of 40m each. The first borehole was located in the Salt Tank area and the second in the Turbine area;
- 100 percussion boreholes to a depth of 5m each. The purpose of these boreholes was to determine the subsoil thickness;
- Test pit profiling and sampling for borrow pit areas;
- Pressure meter testing; and
- Laboratory testing.

The rotary borehole cores were required to determine the soil properties, rock depth and any potential cavities and were logged as part of the investigation



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 building material and general fill.



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