

Drilling Services

Ground Investigation in Guinea, West Africa



Ecologia undertook a cone penetration tests (CPTU) programme for a major ground investigation scheme related to the preliminary design of a mining service wharf in Guinea, West Africa, on the behalf of a leading mining company.

The main investigation area consisted in a mangrove swamp and access was only possible by boat or helicopter; due to the extreme condition Ecologia fully demountable CPTU rig Geo Easy was chosen for his limited track bearing load. The following parameters have been digitally recoded on the site laptop during each CPTU and transferred into the software for geotechnical parameter elaboration:

- Point resistance (Mpa)
- Side resistance (Mpa)
- Neutral pressure (KPa)
- Rate penetration (cm/s)
- Tilt Inclination (°)
- Pore pressure (KPa)

In the first stage CPTU's were focussed to guide where the main port infrastructure should be located along with the railway link between the port and the proposed mine. In addition, the tests provided accurate geotechnical parameters for subsequent foundation design such friction angle, relative density and undrained cohesion to a maximum depth of 30m.

