

Project Management

International

Cone Penetration Testing (CPT) at Ada, Ghana

Client: Dredging International
 Location: Ada, Ghana
 Period: June 2011

Cone Penetration Testing (CPT) at Ada, Ghana

The Employer, Dredging International, requested PMI to perform a CPT campaign in order to assess soil conditions in order to reduce engineering uncertainties and to authenticate stability for the construction of Groynes. These Groynes are part of a coastal protection infrastructure to prevent further beach erosion.

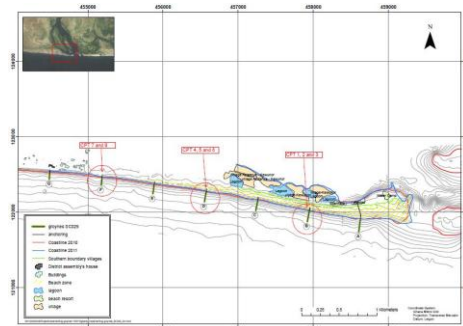
Scope of Works

The scope of works comprised of the following:

- The performance of 8 No Electric Piezocone Penetration Tests (CPT's) to a maximum depth of 20m or refusal.

The Works

PMI mobilized shortly after contract award and completed the 8 Electric Piezocone Penetration Tests (CPT's). The tests were executed on the beach, on the footprints of 3 planned Groynes.



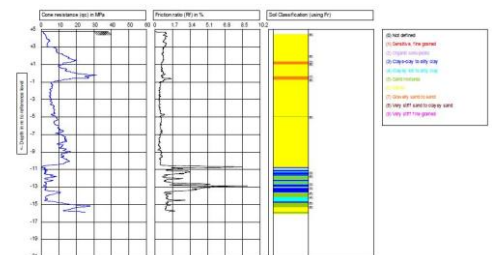
A 200kN Geomil penetrometer was used to carry out the tests.

At every test location, the CPT equipment, mounted on a steel skid, was levelled before testing. Rods were pushed down in lengths of 1m at a constant speed of 2cm/s.

The piezocone took continuous log of the following until sounding was stopped at the desired depth or refusal:

- Cone Resistance (q_c)
- Frictional resistance (f_s)
- Pore water pressure (u_c)

These measurements were used to interpret and derive soil profiles as well as the design parameter required by the client.



Conclusion

After a successful completion of the CPT campaign, processing and delivering the report, it was confirmed that the derived information had a major impact on the design of the Groynes.