

Case Study

Service: Dynamic Cone Penetrometer (Equivalent CBR Value)

Location: Simpson Road, Bromley

Client: Erith Contractors

The Dynamic Cone Penetrometer is a test (CPT) designed for rapid in-situ measurement of the strength of soil. The robust and simple design means that the DCP is convenient and suitable for use in locations where access may be difficult.

Plethora of published research supports the correlations between recorded measurements with the DCP and conventional CBR values, providing accurate interpreted equivalent CBR values. A typical test takes only a few minutes and provides a very efficient method of obtaining soil properties. No use of heavy equipment or kentledge is required.

The 8kg free fall hammer is lifted and dropped through a height of 575mm. The distance of penetration of the cone tip is then recorded and the cycle repeated. Continuous measurements can be made down to a required depth. Where sub-pavement layers have different strengths, the boundaries can be identified and the thickness determined.

All test procedures & calculations are based on Highway Agency's DTP Interim Advice Note 73/06 Rev1 2009 and Report 587 published by the Transport Research Laboratory (TRL) in conjunction with Transport for London,

Key to images:

1. DCP test was carried out to determine CBR values of made-up ground intended for use as a piling mat.
2. Depth of penetration being read from the attached rule.
3. Engineer repeats the process to the required depth.
4. Software analysis of recorded data.

