



Basement GI in Central London

Client	GEA
Location	Central London
Duration	2-days
Scope	CPTu with lubrication module, pressuremeter testing

Instructed by Geotechnical and Environmental Associates (GEA), Lankelma carried out a single CPT to 26m, using our lubrication module, and six pressuremeter tests to 20m in a car park in Central London. The basement rams were transported on the back of a pick-up, enabling testing in the low headroom car park.

The lubrication module was used to help the cone penetrate the underlying London Clay. Using water to form a lubricating layer to reduce the friction between the rods and the ground, the system has proved particularly effective.

The system has very low flow, operates below 2 bar pressure and is sealed from the penetrometer leaving measurements unaffected.



Typically, maximum penetration depth would be between 18-20m, with a push force of 18 tonne, but using the lubricating module we have reached depths of 30m with just 5 tonne of push force.

The CPT and pressuremeter data provided profiling and geotechnical parameters for pile design in the London Clay and Lambeth Group units.