



SERVICE DATA SHEET

Cable Percussion Boring

Cable percussion is routinely carried out on site using 150 or 200mm casing and tools, although the Company has the capacity to use 250mm, 300mm or larger diameters for specialist requirements e.g. deep multi-layered strata conditions. Our in-house drilling crews are some of the best in the business, who regularly drill boreholes to depths in excess of 40 metres in extremely challenging ground, where necessary using aquifer protection measures between potentially contaminated interfaces.

Rigs are normally towed by a 4WD vehicle and are fully equipped for standard sampling and in-situ testing requirements. Mobilisation can employ the Company's 10t lorry which is fitted with an integral HIAB and winch system, a facility which can also be useful to gain access in difficult locations. Cable percussion techniques allow the facility for obtaining good quality samples (dependent on groundwater and material characteristics), and where required, boring can be extended into weak rock strata. This relatively low-cost method of investigation provides a good basis to perform various in-situ test procedures, and to install different types of down-hole monitoring apparatus.

Application and Sampling Methods

- ◆ Allows a range of sampling methodologies; open-drive (U100, U100T 'undisturbed' sampling (Class 1 or 2) or modified steel U100 sampling in stiff glacial fine-grained soils (Class 2 or 3). Thin-walled (Shelby) in low or medium strength fine grained soils (Class 1) and hydraulic piston sampling at 100mm, 150mm and 250mm diameters in fragile/soft ground conditions (Class 1).
- ◆ Small disturbed sampling (Class 4), bulk disturbed sampling (Class 4 or 5) depending on sampling and groundwater conditions.
- ◆ Environmental groundwater and soil sampling for heavy metals, asbestos, volatile and semi-volatile organic determinants.
- ◆ Facilitates various forms of in-situ procedure; borehole shear vane, permeability, standard penetration, pressuremeter and down-hole geophysics testing.
- ◆ Allows a wide range of post-boring instrumentation; groundwater and gas (various diameters) single, double, triple or multipoint piezometer/standpipes, vibrating wire, pneumatic, extensometer and inclinometer installations.



Summary

Straightforward deployment to site, although access conditions may need to be factored-in that could require ancillary plant.

The technique provides a good balance between cost effectiveness, technical flexibility and capability for a multitude of subsurface drilling environments.

Is generally considered to be the central pillar of the UK site investigation marketplace using technology that is tried and tested.

Average daily productivity is around 10m in fairly typical soil conditions. Progress rate is dependent on the make-up of the sequence and the presence of obstructions, such as cobbles and boulders.

Not a suitable technique in cemented materials or competent rock strata.

Benefits

- Can operate successfully in most environments with a minimum of associated plant support.
- Operated by fully trained NVQ Level 2 (Land Drilling) and BDA (British Drilling Associated) audited drilling professionals.
- Sampling, in-situ testing and instrumentation requirements can be easily configured to suit the technical objective.
- Reliable technology.
- Cost effective and sufficiently flexible to satisfy most UK soil ground conditions.
- Capable of proving conditions to depths in excess of 40m.

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