

# Site Investigation

## Ground Investigation, Engineering and Design

High quality data concerning ground conditions is essential. The information it unearths can lead to structural and foundation design which is safe to construct as well as preventing unexpected costs due to project extensions, changes in design and structural failures. Soil Mechanics comprehensive range of professional services, depth of expertise and extensive laboratory facilities place it at the forefront of the ground investigation industry.

### Plan to Build

Geotechnical know-how, tried and tested methodology and proven project management can all contribute to the quality of a ground investigation and the information it provides. To this end, every project we work on is thoroughly pre-planned from the outset to ensure that our extensive drilling resources and highly skilled field operations, backed up by excellent analytical and technical support teams, are deployed efficiently and effectively to deliver a report of recognised value. The benefits are significant:

### Geotechnical Investigation

- Preliminary study to reduce the geotechnical and environmental risks
- Flexible and responsive to site-specific circumstances
- Early project involvement cuts level of financial risk and uncertainty
- Timely hazard recognition improves the quality of technical decisions
- Appropriately designed, resourced and managed investigations increase the reliability of construction costs and time estimates
- CDM regulated
- Factual reporting on a wide range of geotechnical and environmental properties
- Interpretative reporting which draws conclusions and makes design recommendations
- All projects are carried out in accordance with ISO 9001, ISO 14001 and other standards as appropriate.

### Laboratory Services

It is clearly important that testing is carried out to the highest standards for both geotechnical and environmental testing, including all aspects of chemical testing. Our laboratories are UKAS accredited to carry out most tests on soils and deliver analysis on, for example:

- Soil and rock classification
- Strength testing, including CBR and triaxial compression



- Compaction testing
- Consolidation testing
- Permeability testing
- Chalk testing
- Ground source heat testing
- Advanced testing (direct simple shear and resonant column)
- Contamination analysis.

#### Technical Services

Advice and the provision of consultancy services are available from our technical team of professional engineers, engineering geologists and environmental specialists. Our advice covers, for example:

- Foundation design for highways, buildings and other structures
- Slope stability analysis
- Ground remediation
- Causes of failure and settlement
- Contamination assessment.

#### Site Services

Soil Mechanics' capabilities cover an extremely broad spectrum of ground investigation and include:

- Land and marine cable percussive boring
- Land and marine rotary drilling
- Wire line techniques
- In situ testing including vane tests, CBR tests and plate loading tests
- Most types of pressuremeter testing and other field instrumentation
- Environmental drilling and sampling
- Gas control and collection
- Geotechnical and environmental instrumentation
- Ground water monitoring.

*Site investigation is a relatively low cost activity that delivers high returns on investment particularly where the consequences of 'unforeseen' ground events can often appreciably exceed the value of the ground investigation contract.*

