



CAPABILITY STATEMENT

Geotechnical Engineering Limited has been providing ground investigation services since 1961. We currently employ approximately 190 staff and have an annual turnover in the order of £14 million. The Company is independently owned and delivers a comprehensive range of site investigation services to a broad variety of markets, including: transportation, construction, renewable energy, utilities and the environmental sector.

We have earned an enviable reputation for providing high quality services throughout the United Kingdom and regularly work with government agencies, local authorities, Network Rail, National Grid, main contractors and developers.

Our in-house capabilities include a range of drilling services, in-situ testing and monitoring, soil and rock testing, geotechnical and geoenvironmental engineering services and advice.



We employ over twenty-five teams of drillers on a full time salaried basis. Our fleet of drilling rigs includes the multi-purpose **Pioneer**, the **Terrier**, the **P45** and **P60** slope-climbing rigs and the **P45K (EKG)** rig. We also offer **vacuum excavation**, **service tracing and clearance** and **concrete coring** as in-house services.

We have achieved ISO accreditation in the areas of Quality, Environment and Health & Safety. This complements our list of accreditations, which include: RISQS (rail); UVDB (utilities); SafeContractor; CHAS; EXOR and ConstructionLine.

Industry Training

We are able to offer field crews and technical staff certified to:

- National Grid 'Competent Person', 'Person' and BESC;
- Network Rail PTS, DCCR and IWA;
- Safety Passport Alliance (SPA) petrol retail;
- NRSWA Streetworks supervisors and operatives;
- National Water Hygiene Card.



For further details please contact: geotech@geoeng.co.uk or visit our website: www.geoeng.co.uk



Drilling Services

We provide unique solutions for what is often considered to be a very traditional discipline within Civil Engineering by investing heavily in research and development.



One of our well known innovations, the **Pioneer rig**, is a small, track mounted unit, which has the ability to dynamic sample in soft ground and core in rock. This multi-functional rig has proved very popular due to its compact footprint and continuous sampling capability.

More recent innovations include our specialist **P45 and P60 slope climbing rigs**, capable of traversing and working on slopes of up to 45°, negating the need for the expensive and time consuming erection of scaffold platforms, crane lifts and corresponding attendances. This technology has been further developed to install electrodes into failing slopes to facilitate **electrokinetic stabilisation**.

Our drilling capabilities include:

- Heavy duty dynamic sampling to 20m depth, to obtain near-undisturbed continuous samples of up to 112mm diameter, retained in a plastic liner.
- Rotary core drilling to 100m+ depth to obtain continuous rock cores of up to 112mm diameter, in vertical or angled holes.
- Continuous wireline in a maximum of Geobore S size.

- In-situ sampling and testing to BS EN 1997-2:2007 standards, including Category A thin wall (100mm) and piston sampling, SPTs and packer testing.
- Hollow stem auger boring to 30m depth, forming holes of up to 300mm diameter allowing the installation of standpipes of up to 150mm diameter.
- Rotary percussive and open-hole drilling to depths greater than 150m.
- Installations and instrumentation:

Our drilling crews are registered with the CITB and the majority have an NVQ Level 2 in Land Drilling. Each crew member has a current CSCS card and foremen have attended an emergency first aid training course. They receive service avoidance, manual handling and relevant additional driver training (C1, B + E) as well as attending industry specific courses.

Ground Investigation Services

We employ over fifty professionally qualified staff, specialising in geotechnical engineering, geoenvironmental services and ground investigation.



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The engineering team comprises geotechnical and geoenvironmental engineers from recent graduates to chartered professionals with over twenty years' experience and with a range of industry specific and health and safety qualifications.

Our ground investigations are managed by our contract managers and supervised technically by our engineering team. From relatively small projects through to large scale site investigations for major schemes, we routinely carry out fieldwork supervision, soil and rock logging, trial pitting, in situ testing, surveying and monitoring of groundwater and gas.

Results from fieldwork and laboratory testing are usually incorporated into a report. This can take the form of factual data but geotechnical advice can be included. Our geoenvironmental engineers can also provide human health risk assessments, ground water risk assessment, remediation strategies and verification reports.

We can also undertake the design and planning of site investigations, supplying advice where required, including Phase 1 desk study reports, Phase 2 Ground Investigation and Phase 3 remediation planning.

In Situ Testing and Monitoring Service



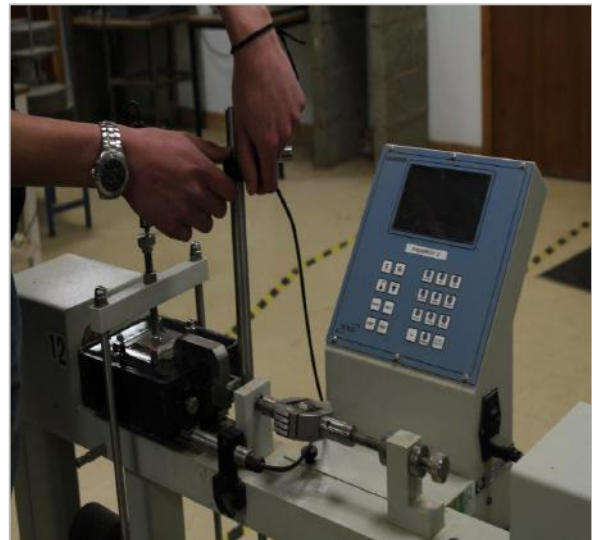
We carry out a range of tests in accordance with BS1377 including plate bearing tests, in situ CBRs, sand replacement density testing and thermal and electrical resistivity measurements. We also offer dynamic cone penetrometer testing.

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Our fully qualified team of technicians provide an instrumentation monitoring service; from routine groundwater and gas monitoring, to more complex data capture and logging of field instrumentation such as inclinometer and vibrating wire piezometer installations. Gas and groundwater samples can also be taken during monitoring visits.

Soil and Rock Testing

We provide a comprehensive UKAS accredited soil and rock testing service at our purpose built laboratory in Gloucester. Our services cover routine classification through to complex data-logged shear box and effective stress tests.



We employ a dedicated laboratory team, trained in soil and rock testing to BS1377 and ISO standards and ISRM approved methods, respectively.

Laboratory technicians are encouraged to complete NVQ Level 2 in Laboratory and Associated Technical Activities. We operate a quality system certified to ISO 17025 and accredited by UKAS.

We have longstanding relationships with other MCERTS and UKAS accredited contamination testing laboratories, making it possible for us to sub-contract specialist geoenvironmental testing.



Electrokinetic Slope Stabilisation

This innovative method of slope remediation involves the introduction of an electrical potential difference across the ground. This induces electro-osmotic flow of ground water, leading to a reduction in pore water pressure, resulting in consolidation of the soil.



Geotechnical Engineering Ltd has developed a slope climbing rig specifically for the installation of the electrode arrays needed for this process.

Vacuum Excavation Services

Our vacuum excavator provides an intrinsically safe method of avoiding dangerous and expensive utility strikes in line with HSG47 industry best practice.



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This method eliminates the risk from damage to buried services, whether it be checking known services or pre-drilling at borehole positions.

Utility Clearance and Mapping

We are able accurately to identify and map utilities within a survey area, using a combination of RD8000 CAT and Genny and Ground Penetration Radar. Services are marked out on site and depth measurements are recorded. All findings can be collated and presented in the form of a CAD drawing of the site.



Land and Topographic Surveying

Our trained survey teams use up-to-date technology to map the features of various sites, creating detailed drawings and plans in a number of different formats.



Further information about all of our services can be found on our website www.geoeng.co.uk or alternatively, enquiries can be forwarded to geotech@geoeng.co.uk.

