

Geo Environmental Services Ltd is a fully certified company by [Qualifications, Accreditations and Partnerships](#) (*Constructionline-Gold, UVDB, CHAS and Trade Associations*) and other leading UK Construction framework supplier registration and qualification schemes.

Voted [Best Geotechnical & Environmental Consultancy](#) at the 2021 **BUILD Magazine** Design & Build Awards and recent Ambassador for [The Institute of Directors IoD Sussex](#) for [Climate Change & Sustainability](#).

Our highly qualified team of consulting Engineers can deliver services from basic assessment to advanced analysis, ensuring that we can support our clients in making the most sustainable choices that deliver the best value over the life cycle of a project.

Our primary target is to deliver projects at a high standard level of quality. From the main office to the engineers on-site, we are always here to help and to provide the best service possible.

- **Locations:** *South East, London, South West, Wales, East Midlands, West Midlands*
- [News](#)

We provide a wide range of [Services](#): Pre-Construction Risk, Basement Impact Assessment, Soil & Water Testing, Gas and Ground Water Monitoring, Validation/Verification, Slope stability and Asset protection.

Site Surveys (also known as [soil surveys and ground/site investigations](#)) are important to understand the likely ground and ground water conditions in order that appropriate foundations can be designed. Unforeseen ground conditions can pose serious problems to developments leading to re-design of foundations, time delays and increased costs. These risks can be reduced by a well-planned phased site survey incorporating Phase 1 and Phase 2 site investigations.

All our employees are safety/quality professionals and certified. We are committed to employ the most talented and technically people to provide the best service to all our clients.

Case studies	Case studies	Case studies
Rail	Water	General
Borough Viaduct	Hardham Water scheme	Acton Gardens
Berkswell Cutting	North Mymms Wastewater	Alpha Cottage
Butt's Bridge Alton	Guildford TW Groundwater Monitoring	Pylands Lane Slope Stabilisation
Norwich Crown Point		Housing



Geo-Environmental

Scope of Services & Case Studies

Market Sectors

- Housing Development
- [Rail](#)
- Highways
- Utilities
- Renewables
- Commercial/Industrial
- Education, Government and Healthcare
- Community, Sports and Recreation

[Case Studies](#)

Applications

- House building
- Commercial/retail premises construction
- Remediation and development of brownfield sites
- School and hospital expansion
- Utilities infrastructure construction
- Industrial site construction
- Decommissioning of plant, infrastructure and structures
- Flood alleviation schemes
- Sports pitches
- Community facilities construction
- Renewable energy infrastructure construction
- Embankment/cutting maintenance for rail and highways
- Earthworks construction
- Mineral safeguards assessments
- Development of agricultural land
- SUDS and conventional drainage

[Case Studies](#)

Environmental Consultancy Services

- Phase 1 Environmental Desk Studies
- Phase 2 Environmental Investigation
- Ground water risk assessments
- Part 2a Contaminated land assessments
- Materials management/waste assessment
- Ground gas risk assessments
- Remediation design and monitoring
- Verification and validation
- Environmental statements/EIA Chapters
- Instrumentation and monitoring

Geotechnical Consultancy Services

- Phase 1 Geotechnical Desk Studies
- Phase 2 Geotechnical Investigations
- Foundation design
- Slope stability assessment
- Subsidence and heave assessment
- Rock stability assessment
- Earthworks design and control
- Soakage tests
- Instrumentation and monitoring

Specialist Consultancy Services

- Materials testing
- Agricultural land assessment
- Traffic management planning
- Building damage assessment
- Basement impact assessment
- Cemetery impact assessment
- Pullout testing
- Ground anchor design
- GSHP feasibility

Technical aspects of work involved in Geotechnical / Environmental Site reports

1. Basic option:
For the majority of sites, we could drill the borehole/s with a **Dynamic/Window sampling** rig (depends on size of project)
2. Intermediate option:
If on a site with suspected dense gravels then to achieve depth, use of a **Cable percussive** rig (depends on size of project)
3. Advanced option:
If were on a site with a geology containing hard rock, to achieve depth we would have to use a **Rotary** rig

Prior to going on any site and as part of the quoting process we would have a look at the geology of the sites and advise you what the best **Drilling method** would be for any given geology. We do this using in-house software that uses GIS software to produce site specific geological maps for us, as well as showing historic landfills, flood risk, etc – example below. We would also look at historic borehole records (if available) to give us a view of the depths of any superficial deposits, or made ground, overlying the bedrock geology.

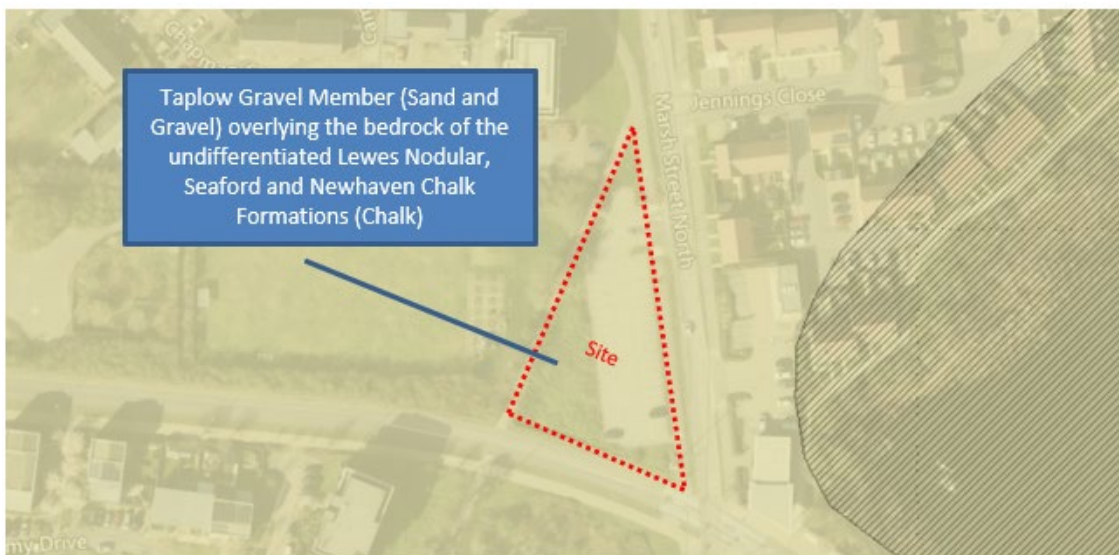


Figure 1- BGS 1:50 map extract of bedrock and superficial geology and artificial ground.

EXAMPLE

GESL can provide a price for **Window sampling and other** rig to 5m and a cable percussive rig to 5m, assuming that:

1. You only require geotechnical testing of any soils – we can undertake contamination assessments of soils but that would be an additional charge.
2. The site is accessible for a rig, in terms of both width and headroom to accommodate the rig.
3. The site does not require an overnight stay (the spread of engineers that we currently have allows us to cover anywhere from the Midlands down to the south coast without having to do that).
4. Buried services records are available and do not reveal a risk of buried services, otherwise there would be an additional charge for a utility clearance with a specialist GPR, CAT and Genny. (Note: regardless of whether the site has been highlighted as clear or not, the site engineer would hand-dig an inspection pit and use their CAT and Genny to double check that services are not present).
5. The site is not at risk from Unexploded Ordnance (UXO), based on the Zetica UXO risk maps, otherwise there would be an additional charge for a preliminary risk assessment and if necessary, attendance of an Explosive Ordnance Disposal (EOD) engineer.



Working with stakeholders

Geo-Environmental have a strong track record of both supporting their Client's Internal Direct Delivery teams and their Tier 1 suppliers with Ground Investigation work.

A good example of this is Guildford STW ground investigation, which was a large £500K project straddling four separate phases.

On such a large project there were many different stakeholders that the company needed to co-ordinate with. As well as Thames Water's project team, the lead consultants were Jacobs. Part of the site was being developed by Balfour Beatty and Guildford Borough Council was also a stakeholder, as part of the land near the existing STW was to be developed for housing. Additionally, the STW had its own Thames Water team, and these had to be consulted for access.

Furthermore, there were parts of the site that were of archaeological interest and the site team worked with archaeologists to support their work.

Finally, we had a supply chain that included six other drilling companies, a cone penetrometer rig, plant suppliers, de-vegetation supplier and laboratories. Access to the different parts of the site was therefore controlled by different stakeholders, with the additional complexity of us having to accommodate a delay for an ecologist, that we had pointed out to the client. Despite these difficulties the team managed to complete the works on time and on-budget.

Achieving projects benefits for our clients

Throughout our projects we always look for ways to make cost savings for our clients wherever possible. The Guildford STW project also contains a good example of this.

On this project a square meterage rate had been agreed for vegetation clearance. It was clear to our consultants, when they undertook the site walkover that the costs for this would be well over six figures. The team managed to agree a day rate with the vegetation clearance contractor, and this saved the client over £50,000.

Cost savings were also made through our waste segregation strategy. This allowed us to reduce the amount of waste that went to landfill, saving the client significant costs from landfill charges.

All samples were barcoded on-site to ensure that all samples could be traced between the different laboratories and ensured that there were clear chains of custody in place, preventing samples from being lost.

Finally, because we had spotted the need to bring in an ecologist, prior to the de-vegetation clearance, we saved the client from substantial delays.

Value of investment in IT

The Company has invested heavily in IT, developing its own suite of software applications and ensuring that all of its staff have new laptops and tablets with SIM cards, allowing them to work remotely and still be connected to the team. This makes it far easier for site engineers to access the information they need and connect with colleagues if they need support.

Continuing the theme, this investment was essential for allowing the smooth running of the Guildford project. A risk on any project such as this, is co-ordinating resources to ensure that the sequencing of works is done in such a way that there are no clashes of resource with other parallel projects and delays on the project itself. Inevitably you also have to be able to react to life events such as staff sickness, equipment failure etc, that require quick resolution. On this project we had to replan several times, swapping in new drilling crews to meet new timescales to fit access windows. This required us to change the sequencing of works a number of times so that we could still make headway on the project whilst we awaited access to parts of the site.



This would have been difficult to manage if we hadn't had the use of our on-line project management software to co-ordinate all activity in terms of both staff and suppliers, across all of our sites.

Because the solution is cloud based it is available to all staff in the field and offices. This allows managers to easily see which staff and suppliers are working on jobs and even individual tasks, and when they are undertaking them – in real time. This allows us to quickly reassign work to other available staff to meet the needs of projects with a fast turnaround of requirements.



Value of working with small specialist organisations

At the start of the project, senior members of the management team will be assigned to the project. These will stay with the project all the way through the project, playing a key part in co-ordinating, reviewing and in some circumstances helping to deliver the services.

In addition to this, the quality of our workforce is very high with the majority of staff being senior or principal engineers. Given that less experienced staff are mentored you are guaranteed to get experienced staff on all ground investigation projects. These senior staff report directly into and have a close working relationship with members of the management team and this enables decisions to be made quickly. Furthermore, having high calibre and experienced staff on-site helps ensure that best practice is followed and any problems that occur can be dealt with pragmatically, and wherever possible, delays and cost overruns can be avoided.

Other benefits of working with Geo-Environmental Services Limited

The Company actively supports the development of our profession by involvement in the industries trade federations; we have chaired the Association for Consultancy and Engineering's (ACE) SME Group and Rail Group, the Green Growth Platform and are active participants in the Environmental Industries Commissions Contaminated Land and Water groups and the ACE's Sustainability, Legal and Commercial and Health & Safety Groups. The Company currently chairs the ACE's Professional Indemnity Insurance Group and provide an Ambassador for the Institute of Directors for Climate Change and Sustainability. Our aim is to work through our trade federations to promote best practice that improves our industries sustainability performance to the benefit of all companies working in our industry; other consultants, suppliers and clients, as well as end users of our services.