





Experts in delivering ground investigation and testing solutions.

Our ground investigation specialists have expertise in;

Drilling, sampling, analysis and reporting of ground information to support follow-on design and construction activities.

We are members of ;

The British Drilling Association (BDA) and the Association of Geotechnical Specialists (AGS), with all drillers trained to NVQ Level 2 in land drilling.

We provide robust data;

Giving the necessary information to enable the relevant follow-on trades to minimise subsequent costs and/or programme implications.

Investing in innovative digital technology

Enabling us to become an industry leading Ground Investigation contractor providing high quality service levels to our clients.

Integrated capability

Providing an end-to-end service from ground investigation to the largest types of foundation engineering with a 36-year track record delivering supporting commercial, highways, rail, marine, energy and utilities works across the UK.

• We operate a directly employed, highly trained and experienced workforce and committed supply chain;

We deploy our workforce and plant right across the UK via our own FORS Silver registered fleet of specialist low loaders and transit vans.

We provide an extensive portfolio of professional ground investigation and monitoring services including:

- Comprehensive range of in-house rigs
- Directly employed drilling and testing teams
- Innovative specialist plant, especially for restricted access requirements







Our Services



DRILLING & SAMPLING

- Cable Percussion
- Rotary Open Hole Coring
- Sonic Drilling
- Window Sampling

REPORTING & MONITORING

- Gas and Groundwater Monitoring
- Noise and Vibration Monitoring
- Laboratory Testing
- Data Analysis and Factual Reporting

PILE TESTING

- Integrity Testing Sonic Echo and Thermal Integrity Profiling (TIP)
- Dynamic Testing CAPWAP
- Static Load Testing

At Strata Geotechnics, we take great pride in our ability to value engineer schemes and the testing is a very important part of the cost, programme and risk reduction process. Amongst the various techniques offered are the three most common pile testing techniques:

- Integrity Testing using Sonic Echo a low cost quality control tool used to detect defects along the pile shaft and is typically carried out on 100% of piles on a project.
- Dynamic Testing by striking the pile with a drop hammer, the force and velocity at the pile top can be measured and analysed using the CAPWAP software to predict the pile bearing capacity and loadsettlement characteristics.
- Static Load Testing involves the measurement of load and deflection at the pile top. The load is applied by jacking against a reaction system and the results are recorded on a data logger. Tests are fully controlled and data recorded using our innovative VESTAT automatic Static Load Testing System with in-built telemetry.
- Other specialist test methods are also available including integrity testing using Thermal Integrity Profiling (TIP), Parallel Seismic testing to determine pile length and pile instrumentation to measure various parameters including strain, temperature and inclination.



Cable Percussion Drilling



Reporting



Foundation Testing



Dynamic Sampling

RAIL

Working closely with Van Elle's specialist rail division, we are able to offer a complete ground investigation package, including provision and operation of Road Rail Vehicles (RRVs) and the latest rig technology.

HIGHWAYS

Strata Geotechnics has extensive experience of carrying out and managing ground investigations for large highways projects throughout the UK. Our experience covers both on-road works, including large Smart Motorways schemes, or offroad works for new road construction projects.

RENEWABLES

Strata Geotechnics has experience of carrying out and managing ground investigations for large windfarm projects throughout the UK. Our low bearing pressure rigs and equipment are able to cope with the toughest terrains and restricted access sites.



Drilling on Highways

What are the advantages of Ground Investigation?

- Limits the risk of unexpected ground conditions during project development
- Mitigates future cost implications and time delays to projects
- Minimises safety risks to site workers and the public

Case Studies



Rail

• White Rose Station

Client: C Spencer Ltd

Overview: Ground Investigation was undertaken to obtain geotechnical information and design parameters for the construction of a new rail station in south Leeds. **Techniques used:** Dynamic Sampling with Rotary Core follow-on (DSRC), Cable Percussion with Rotary Open Hole follow-on (CPROH) and Static Load Testing.

Highways

• A590 Meathop to Beck Heap

Client: National Highways

Overview: The scheme involved investigating the ground conditions beneath the east bound carriageway, central reserve, and toe of embankment to investigate carriageway settlement along a 1.8km section of the A590 to the east of Meathop roundabout.

Rig used: Cable Percussion, Dynamic Sampling Rig with Dynamic Probe

Renewables

• Harburn Head Windfarm

Client: Enel Viento SL and Arcus Consulting Ltd **Overview:** Ground Investigation was carried out to enable the design of foundations, earthworks, roadways and any issues with ground stability due to the mine workings. Utility clearance searches were also carried out to ensure that there were no known services prior to breaking ground.

Techniques used: Cable Percussive extended by Rotary Coring

Smart Motorways

M6 Smart Motorway

Client: Highways England

Overview: Ground Investigation was undertaken to obtain information on the ground conditions and design parameters for the construction of a Smart Motorway. Works included the on-site ground investigation works, laboratory testing and factual reporting. **Techniques used:** Cable Percussive Drilling and

Rotary Drilling

HS2

HS2 Gatemead

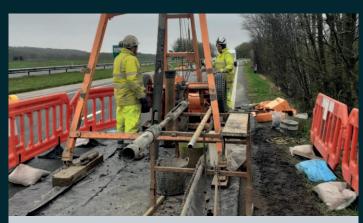
Client: Skanska Costain STRABAG (SCS) Joint Venture **Overview:** The Gatemead and West Ruislip Embankments required stone columns to be installed underneath to increase the bearing capacity of the subsoil and to mitigate the settlements.

Field trials on the permanent works were required to validate the installation parameters and the quality of the stone columns.

Techniques used: Cable Percussion (CP) Drilling and Cone Penetration Testing (CPT). Installation of geotechnical instrumentation and monitoring during Zone Load Testing



White Rose Station



A590 Meathop to Beck Heap



Harburn Head Windfarm





M6 Smart Motorways

HS2 Gatemead

Capabilities and Services



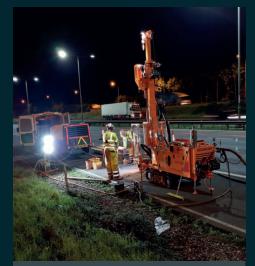
Cable Percussion



Dando 2000

Weight	2.24 tonnes
Length	7.5 metres
Width	1.8 metres (with outriggers)
Mast height	6 metres
Techniques	Cable Percussion
Depth	60 metres
Diameter	150mm to 250mm
Commonly used	GI in superficial deposits

Rotary Drilling



Comacchio 205

Weight	2.5 tonnes
Length	3.28 metres
Width	1.15 metres (with outriggers)
Mast height	4.67 metres
Techniques	Dynamic Sampling, Rotary Open Hole Drilling, Rotary Coring and SPT
Depth	50 metres
Diameter	80mm – 200mm
Commonly used	Shallow superficial deposits and rock
Enhanced Productivity	Geobore Wireline Drilling

Restricted Access



Weight 2.5 tonnes Length 2.8 metres Width 0.78 metres (with outriggers) Mast height 4 and 6 metres Cable Percussion within in restricted access sites Techniques Depth 35 metres 150mm to 250mm Diameter Commonly GI in superficial deposits used

Sonic Drilling



Comacchio 405	
Weight	8.25 tonnes
Length	5.125 metres
Width	2.22 metres (with outriggers)
Mast height	7.745 metres
Techniques	Sonic Drilling, Rotary Open Hole Drilling, Rotary Coring and SPT
Depth	120 metres
Diameter	100mm to 250mm
Commonly used	Superficial deposits and rock
Enhanced Productivity	Geobore Wireline Drilling in rock

VEMOG



13,800kg
6.2 metres
2.45m wide (outriggers contained)
Comacchio 305
Rotary Coring
60 metres
Up to 250mm
Geobore S, Wireline and Rotary Open Holing

VEMOG lorry-mounted ground investigation drilling system is a versatile, self-contained Unimog drilling rig allowing efficient access and set-up for ground investigation services.

Road-going all-terrain drilling rig developed by Strata Geotechnics, the VEMOG can efficiently mobilise, manoeuvre and drill as a single vehicle. No requirement for back-up vehicles, trailers and water bowsers.

Fitted with powerful Comacchio 305 mast and dual head - capable of both dynamic sampling and rotary drilling, including Geobore S and Wireline.

The mast is easily set-up off the rear of the unit, stabilised by outriggers within the width of the body, saving shift time in short working windows and avoiding tracking rigs, and loading plant and equipment on and off trailers.

Winner of 2019 Ground Engineering Award for Equipment Innovation, with judges noting "transferable benefits with the potential to benefit the roads sector through use near to the carriageway edge".



Unrivalled capability and technical expertise:

Total Foundation Solutions

Full end to end capability Investigation - design - construction - test & monitor 25 specialist ground engineering techniques Best value solutions to suit project requirements

Market Leading Capability

Publicly quoted Group 120 strong rig fleet Over 600 directly employed, specialist workforce 1100 projects per annum



GROUND AND SLOPE STABILISATION Drilling, bulk fill and compaction grouting Soil nails and anchors



GROUND IMPROVEMENT Vibro stone columns Rigid inclusions Track bed stabilisation



RETAINING STRUCTURES Contiguous and secant piled walls Sheet piling and kingpost walls



OPEN SITE PILING Rotary bored piles; cased and support fluid, CFA and cased CFA Driven precast, steel tube and H piles



RESTRICTED ACCESS & SPECIALIST PILING Lorry mounted, restricted access & low headroom tracked rigs Drilled piles (various techniques) ScrewFast helical and grip piles



RAIL ENGINEERING Gl, slope, embankment and track stabilisation Comprehensive lineside piling techniques and lineside civils UK's largest RRV piling fleet



MODULAR FOUNDATION SYSTEMS Smartfoot precast ground beams Smartbase precast pile caps & gravity pads ScrewFast steel modular grillages



CONSTRUCTION TRAINING 7 classroom, modern training centre, accredited plant facility and rail test track Management, H&S, plant and streetworks <u>NVQ's & apprenticeships</u>



IN-HOUSE LOGISTICS SUPPORT Dedicated transport fleet Precast piling and beam manufacturing Steelwork fabrication







For more information please contact our specialist team;

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- Members of the Federation of Piling Specialists (FPS) and the British Drilling Association (BDA)
- Network Rail Plant Operator Scheme (POS) provider and Principal Contractor
- FORS Silver accredited transport fleet
- Members of CHAS, Constructionline Platinum, SSIP, SMAS, RISQS Building Confidence, Safemark and SafeContractor
- Supply Chain Sustainability School Gold Member