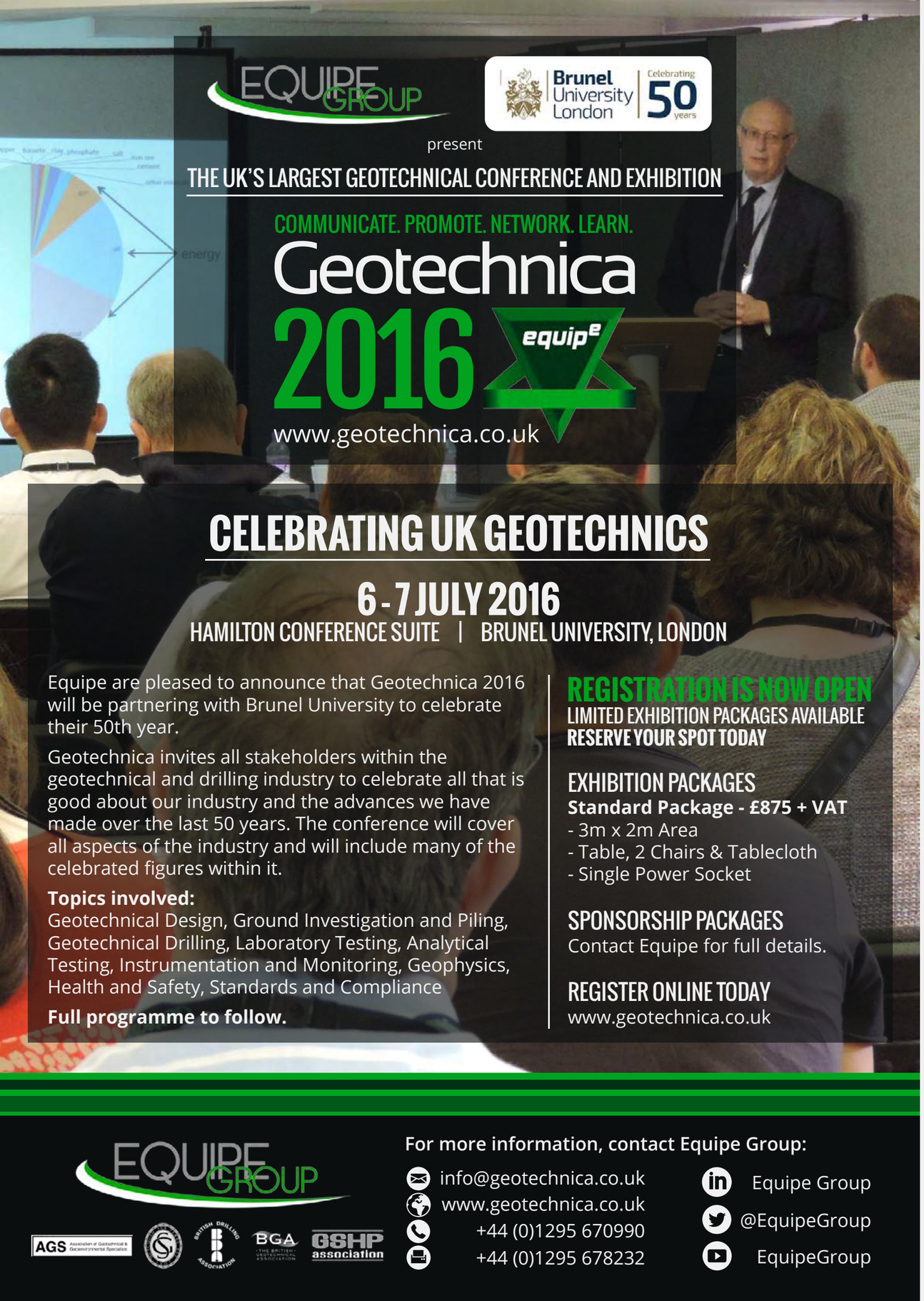
Equipe Training

Course Prospectus

2016

...driving our industry forward



Course Prospectus - Breakdown:

- Health and Safety Courses
- Geotechnical Courses

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Health & Safety Courses

TRAINING COURSES

IOSH SAFE SUPERVISION OF GEOTECHNICAL SITES

In partnership with: RPA SAFETY SERVICES Ltd

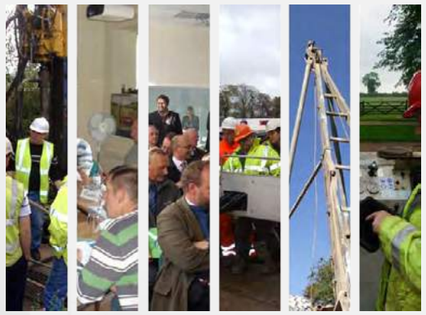
Course Outline

This three day course has been developed by industry specialists and is a unique course for managers and supervisors involved in projects in the drilling and geotechnical industry. The course is certified by IOSH and has been approved by The Environment Agency, Thames Water, AGS and BDA and also meets all of the requirements of the UKCG (formerly the Main Contractor's Group).

The Health and Safety at Work Act, 1974 requires an employer to provide whatever information, instruction, training and supervision as is necessary to ensure, so far as is reasonably practicable, the Health and Safety at work of its employees. Within legislation this has been further galvanised in CDM which provides more clarification regarding the duty of care of employers to its employees and specifies particular qualifications for supervisors before they are deemed competent. The course covers all of the typical health and safety issues expected from such a detailed course but also includes health and safety aspects more relevant to drilling and geotechnical site work.

Course Contents

- Legislation, Codes of Practice and Guidance
- Introduction to Risk Assessments
- Hazard Identification and Assessment
- Accidents, Incidents and Near Misses
- COSHH – including Dust and Asbestos
- Assessment of Typical Hazards including:
  - Mechanical Hazards – Rig guarding
  - Noise
  - Services – Buried and Overhead
  - Vibration
  - Working at Height
  - PUWER & LOLER
  - Excavations and Trial Pitting
  - Plant and Vehicle Movements
  - Working on Highways
  - Lone Working
  - Radiation Sources
  - Confined Space
  - Fire
  - Manual Handling
  - Environment
- Principle roles within CDM
- Construction Phase Plan
- First Aid and Welfare
- PPE



The course also comprises break-out sessions covering human factors and the production of risk assessments and tool box talks as well as written and practical assessments including a work based assessment to be completed after the three day course.

Learning Outcomes

At the end of the course the delegates should be able to:

- Understand legal obligations and duties of supervisors and managers
- Have an appreciation of current legislation and guidance
- Understand the risk assessment process
- Identify hazards
- Plan and supervise safety aspects on geotechnical sites
- Prepare succinct and coherent risk assessments

Delegates who successfully pass the written and practical assessments at the end of the course are awarded an IOSH certificate in the 'Safe Supervision of Geotechnical Sites'

Who should attend?

The course is aimed at managers and supervisors who are or will be expected to be involved on sites where geotechnical works are carried out. The course is designed for delegates from any sector of the Drilling and Geotechnical Industry but of equal relevance to those from other sectors where drilling and geotechnical work is part of the project.

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TRAINING COURSES

IOSH WORKING SAFELY (ON GEOTECHNICAL SITES)

In partnership with: RPA SAFETY SERVICES Ltd

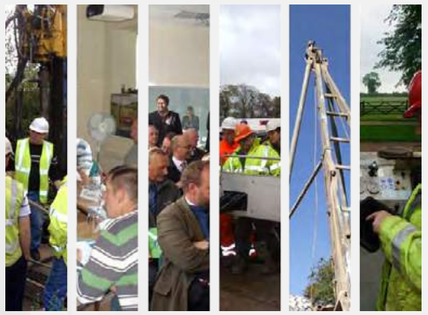
Course Outline

This one day course is the IOSH Working Safely course tailored for the geotechnical industry and has been developed by industry specialists as a foundation to site safety for all personnel involved in projects in the drilling and geotechnical industry. Its aim is to impart the core safety skills required of those working on geotechnical sites by building on their existing specialist technical skills and making it relevant to their place of work.

After attending the course, candidates should be able to identify hazards on site, understand basic safety legislation and personal responsibilities and be able to participate fully and confidently in site safety consultation. The course also conforms to the requirements of training for the CSCS scheme for entry onto construction sites.

Course Contents

- Duties and Responsibilities
- Role of HSE
- Safe Systems of Work
- Accident Reporting
- Hazards on Geotechnical Sites
- CDM Regulations
- Typical Hazards
- Risk Assessments
- First Aid
- Welfare



Learning Outcomes

At the end of the course the delegates should be able to:

- Understand their legal obligations and responsibilities
- Appreciate the role of HSE, legislation and guidance
- Identify hazards
- Understand the role of risk assessments
- Follow a safe system of work

Delegates who successfully pass the written and practical assessments at the end of the course are awarded an IOSH certificate on 'Working Safely'.

Who should attend?

The course is aimed at graduates, new entrants to the industry and those seeking a relevant annual health and safety refresher.

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TRAINING COURSES

IOSH AVOIDING DANGER FROM UNDERGROUND SERVICES

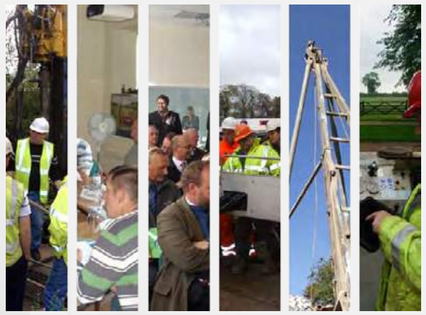
In partnership with: RPA SAFETY SERVICES Ltd

Course Outline

This one day course follows the requirements and guidance set out within HSG47 and includes the four chapters; identifying and managing the dangers; planning the work; detecting, identifying and marking and safe excavation. Important aspects include the use of real examples from the geotechnical industry and delivery by chartered advisors who are from within the industry. This course is definitely not another CAT and Genny course and is the only externally verified course in the UK carrying the IOSH badge.

Course Contents

- Consequences of getting it wrong
- Current Legislation and Guidance
- Risk Assessment
- What's in the ground
- Maps and plans
- Safe systems of work
- Safe digging practices
- CAT and Genny training
- Alternative detection methods
- Written Assessments



Practical elements will be carried out outside and delegates will require PPE. Delegates who successfully pass the written and practical assessments at the end of the course are awarded an IOSH certificate on 'Avoiding Danger from Underground Services'.

Learning Outcomes

At the end of the course the delegates should be able to:

- Understand the guidance within HSG47
- Understand the importance of maps and plans
- Appreciate the limitations of maps and plans
- Plan the work and create a safe system of work
- Understand safe digging practices
- Have a practical appreciation of using a CAT and Genny
- Have an awareness of other detection techniques

Who should attend?

This course is aimed at anybody involved in specifying, instructing, managing, supervising or actually breaking ground and carrying out intrusive work.

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Geotechnical Courses

TRAINING COURSES

GEOTECHNICAL FOUNDATION DESIGN

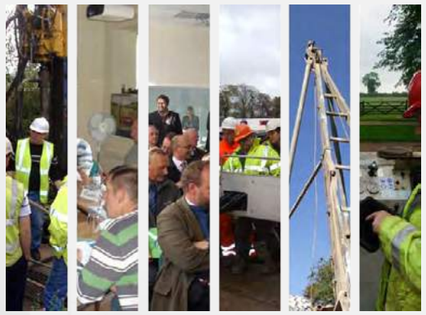
Course Outline

This one day course will provide a general overview of foundation design for geotechnical practitioners and engineers. The course will look at how information is obtained and then used to provide a design for simple shallow foundations. It will also look at the derivation of the formulae used for basic foundation design.

The methods used for the foundation design calculations will be in accordance with those described in the current British Standards (Eurocodes) including an introduction to limit state design and use of partial factors.

Course Contents

- Assessment of the use and choice of shallow foundations and piles
- Derivation of bearing capacity
- Calculate the working loads and settlement of simple foundations
- Overview of pile foundations
- Introduction to Limit State Design and Partial Factors
- Calculation of pile working loads in accordance with Eurocode
- Ground improvement techniques



Various pile types are looked at and a basic design to Eurocode will be made. This course will include practical exercises using the methods defined in the current British Standards (Eurocode).

Learning Outcomes

At the end of the course the delegates should be able to:

- Assess ground conditions with respect to suitable shallow foundations
- Calculate bearing capacity, settlement
- Assess ground conditions with respect to piled foundations
- Calculate simple pile foundations
- Use partial factors and carry out Limit State Design for simple foundations
- Have an appreciation for the use of ground improvement techniques

Who should attend?

This course will give a practical introduction to foundation design for geotechnical practitioners and engineers who may have only a limited knowledge of how to choose and design a foundation.

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TRAINING COURSES

SOIL DESCRIPTION WORKSHOP

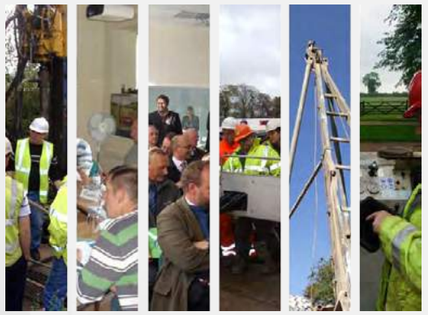
Course Outline

This one day course will bring delegates up to speed on the changes within the British Standards and provide a detailed approach to soil description practices and techniques. Practitioners will learn about how to follow compliant soil logging techniques within this course.

The workshop will comprise a series of lectures on the current British Standards, logging and descriptive processes followed by practical sessions describing soil samples.

Course Contents

- Introduction to current British Standards
- Impact on Existing Codes and Changes to Practice
- Description of Coarse Soils
- Practical – Coarse Soils (Sands & Gravels)
- Description of Fine Soils
- Practical – Fine Soils (Clays & Silts)
- Description of Organic and Man Made Soils
- Practical - Organic and Man Made Soils



Learning Outcomes

At the end of the course the delegates should be able to:

- Understand the requirements of the British Standards
- Distinguish between fine, coarse, man-made and organic soils
- Carry out a compliant and consistent description of soils
- Understand the effect of the drilling process on sample quality
- Understand the process required to produce engineering logs from individual sample descriptions
- Understand the provenance and determine how representative a sample is

Who should attend?

The course is aimed at graduates, new entrants to the industry and practitioners seeking a refresher to enable comprehensive engineering logging of soils. The course is equally relevant to those logging trial pits, boreholes, exposures or samples in the laboratory.

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TRAINING COURSES

ROCK DESCRIPTION WORKSHOP

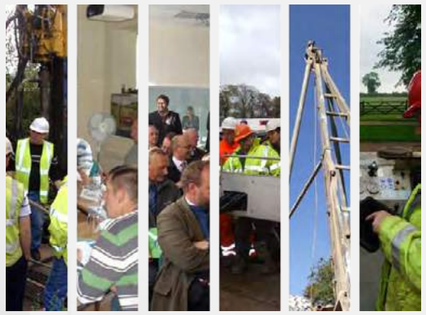
Course Outline

This one day course will bring delegates up to speed on the changes within the British Standards and provide a detailed approach to rock description practices and techniques. Practitioners will learn about how to follow compliant rock logging techniques within this course.

The workshop will comprise a series of lectures on the current British Standards, logging and descriptive processes followed by practical sessions describing rock samples, cores and compiling mechanical logs of rock core.

Course Contents

- Introduction to current British Standards
- Impact on Existing Codes and Changes to Practice
- Origin of rock types and their identification
- Description of Rock - word order
- Practical – Description of rock from hand specimens
- Mechanical logging of rock core
- Practical – Logging of rock core
- Rock testing to aid logging



Learning Outcomes

At the end of the course the delegates should be able to:

- Understand the requirements of the British Standards
- Distinguish between fine, coarse, man-made and organic soils
- Carry out a compliant and consistent description of rocks
- Understand the effect of the drilling process on rock core quality
- Understand the process required to produce engineering logs from individual sample descriptions
- Produce a mechanical log of rock core
- Appreciate the use of in situ tests as an aid to rock description

Who should attend?

The course is aimed at graduates, new entrants to the industry and practitioners seeking a refresher to enable comprehensive engineering logging of rocks. The course is equally relevant to those logging trial pits, boreholes, exposures or samples in the laboratory.

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GEOTECHNICAL LABORATORY TESTING AWARENESS

Course Outline

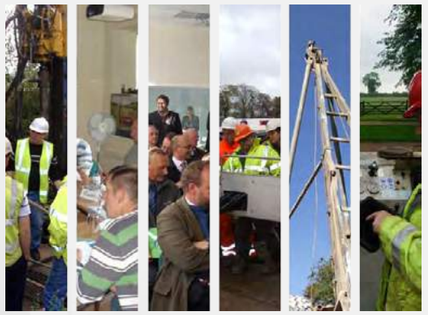
This one day geotechnical training course comprises a comprehensive one day overview of the complete process involved in Geotechnical Laboratory Testing from sampling through to interpretation.

The course provides guidance on scheduling and sampling requirements including sample types and sizes and revised regimes to comply with the current British Standards. Parameters obtained from testing will also be considered with respect to their appropriateness for use in geotechnical design. During the day some typical laboratory testing equipment will be used to carry out tests and to give a greater understanding of how the tests are conducted. Through the day we shall be looking at the tests often specified, consider the information required by the laboratory to carry out the tests, how the results are calculated and what to expect and look for in the results.

Course Contents

- Why test?
- Classification tests
- Earthworks testing
- Strength testing
- Settlement and Permeability testing
- Basic chemical testing for soil properties
- Specialist testing

The relationship of various parameters with each other will also be studied.



Learning Outcomes

At the end of the course the delegates should be able to:

- Identify appropriate samples for particular tests
- Understand the limitations of tests
- Understand why and which testing would be most appropriate
- Have an appreciation of how to schedule laboratory tests
- Understand why it is important to determine an appropriate and structured testing regime
- Recognize accuracy of results
- Have an appreciation of what the results mean and how they are obtained

Who should attend?

This course is aimed at geotechnical practitioners involved in specifying, instructing, managing, supervising or actually breaking ground and carrying out intrusive work.

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TRAINING COURSES

IN SITU TESTING

Course Outline

The course will cover both the theory and the practice of the typical tests and techniques used on geotechnical projects. In addition the courses will consider the requirements of the current British Standards (Eurocodes).

In situ testing is an essential part of a well-planned ground investigation as it is arguably the best method for obtaining true geotechnical parameters. Tests obviously vary in complexity and appropriateness and should never be taken in isolation without an understanding of the likely ground conditions and geology. This course provides an overview of in situ tests used in common practice and some of the more specialist tests together with their advantages and limitations.

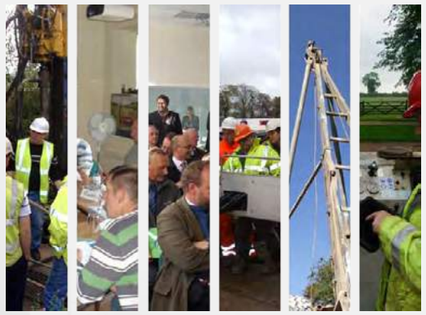
Course Contents

This course will look at the various methods used to obtain properties such as:

- Soil density
- Soil strength
- Soil stiffness
- Soil permeability

The course will consider tests such as:

- Standard Penetration
- Borehole Penetration Vane
- Falling Weight Deflectometer
- Plate Bearing
- Sand & Water Replacement
- Permeability Test
- Nuclear and Non-Nuclear Density Gauge
- Pocket Penetrometer
- Hand Shear Vane
- Dynamic Probing
- TRL Probe
- CBR's
- Packer Test



Learning Outcomes

At the end of the course the delegates should be able to:

- Understand the practical application of In situ tests
- Understand the limitations of tests
- Understand why and which in situ testing would be most appropriate
- Have an appreciation of how to schedule in situ tests
- Understand why it is important to determine an appropriate and structured testing regime
- Recognize accuracy of results
- Have an appreciation of what the results mean

Who should attend?

This course is aimed at geotechnical practitioners involved in specifying, instructing, managing, supervising or actually breaking ground and carrying out intrusive work.

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FIELD INSTRUMENTATION AND MONITORING

In partnership with: Geo Geotechnical Observations

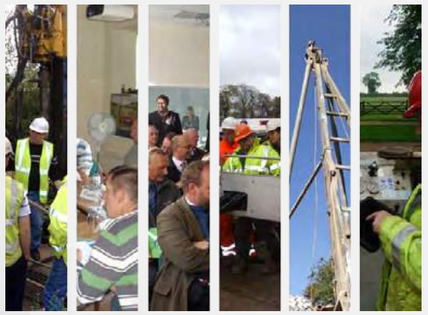
Course Outline

This one day course comprises a comprehensive one day appreciation of the complete process involved in Instrumentation and Monitoring in the geotechnical field environment.

The course provides an overview of the current guidance documents and their requirements. Through the day we shall be looking at typical geotechnical field instrumentation specified to monitor groundwater, pore pressures, slope stability and settlement. The course will consider the design of both individual installations and the installation of suites of instruments in the wider site context. It will discuss types of instrumentation available and methods and techniques for the installation process. The course will also examine the monitoring process to enable instrument checks and performance and validation of the data.

Course Contents

- Current British Standards and guidance
- Choosing and Designing appropriate installations
  - Standpipe Piezometers and Standpipes
  - Vibrating Wire Piezometers
  - Suction Probes
  - Inclinometers – vertical and horizontal
  - Extensometers
- Datalogging and Dataloggers
- Monitoring regimes
- Data validation – in the field and office



Learning Outcomes

At the end of the course the delegates should be able to:

- Have an appreciation of why instruments would be required
- Understand what parameters different instruments can obtain
- Understand the limitations and response times of different field instrumentation
- Design an installation using appropriate installation methods
- Recognise good and poorly completed installations
- Develop a monitoring programme
- Have an appreciation of what the results mean and how they are used

Who should attend?

This course is aimed at geotechnical practitioners involved in specifying, instructing, managing, supervising or actually installing geotechnical field instrumentation.

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TRAINING COURSES

SPECIFYING SITE INVESTIGATIONS

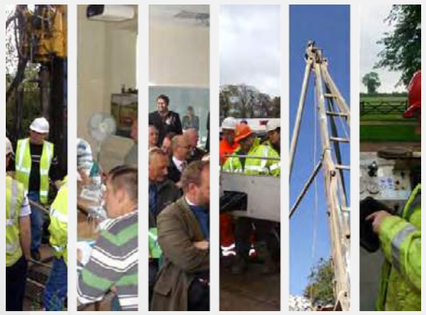
Course Outline

This one day course will look at the various methods available to carry out intrusive and non-intrusive investigation. Whilst the course will concentrate on geotechnical methods some geo-environmental methods will also be briefly discussed.

The course will start by looking at the aims of the investigation and categorise the various stages in a Site Investigation from Desk Study to Reporting.

Course Contents

- Assessing the Designers requirements
- Compiling a Desk Study
- Choosing the optimum drilling and sampling techniques
- Scoping the Ground Investigation
- Assessing the health, safety and environmental impact
- Laboratory testing considerations
- Instrumentation and Monitoring
- Data collation and Reporting



Summary

At the end of the course the delegates should be able to:

- Recognise the importance of assessing the Designers requirements
- Understand the contents of a Desk Study
- Carry out a scope of a simple Ground Investigation
- Assess the health, safety and environmental impact of the field work
- Consider laboratory, instrumentation and monitoring requirements
- Understand the documentation to be completed

Who should attend?

This course is aimed at graduates and geotechnical practitioners who have started or will be involved in the planning and implementation of Site investigations.

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ROTARY DRILLING APPLICATIONS

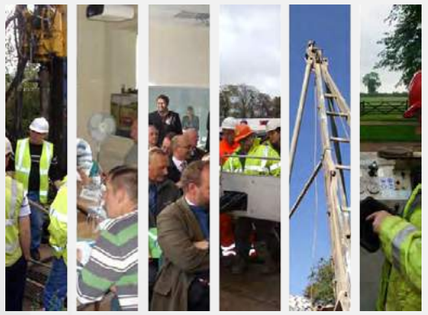
Course Outline

This course is a must for trainee drillers, drilling support operatives looking to upskill and drilling engineers serious about following good practice, improving efficiency and maximizing quality.

The course is typically two days but can be modified to suit the level of training required for the individuals. The course incorporates theory in the classroom backed up with hands-on practicals. Attendees will obtain a better understanding of the ranges of plant and equipment available, choice of drilling techniques, choosing the right equipment for the job, choosing the right flush, drill bits, coring and core barrels and also about how geology and hydrogeology may affect the drilling process.

Course Contents

- Rigs and Applications
- Ancillary Plant
- Rotary Drilling Techniques and Equipment
  - o Open Holing
  - o Percussive inc. Window Sampling and Down The Hole Hammer
  - o Coring – conventional and wireline
- Applied Geology in Drilling
- Mini Mud School
  - o Down-hole behaviour and characteristics of polymers
  - o Improving borehole stability
  - o Maximising efficiency using polymers or additives
  - o Care of your mud system
- Flushing Media
  - o including polymers
- Coring and Core Barrels
- Health, Safety and Environmental Aspects
- PUWER & LOLER Requirements & Inspections
- Techniques



Learning Outcomes

At the end of the course the delegates should be able to:

- Choose the optimum drilling technique
- Choose the optimum flush medium
- Understand the plant and equipment required
- Choose the optimum core barrels and bits in relation to geology
- Carry out basic maintenance checks on the rig
- Check the safety and environmental compliance of the rig
- Understand the documentation to be completed

Who should attend?

This course is a must for trainee drillers, drilling support operatives looking to upskill and drilling engineers serious about following good practice, improving efficiency and maximizing quality.

Mini Mud School

In collaboration with Clear Solutions International Limited, Equipe also offer a one day or half day Mini Mud School. This course covers:

- Maximising productivity – when should polymers be considered
- Maximising hole integrity during drilling and installing
- Understanding the use of muds and polymers
- Measuring – viscosity etc
- Stabilisations
- Applications

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TRAINING COURSES

ROTARY DRILLING AWARENESS FOR ENGINEERS

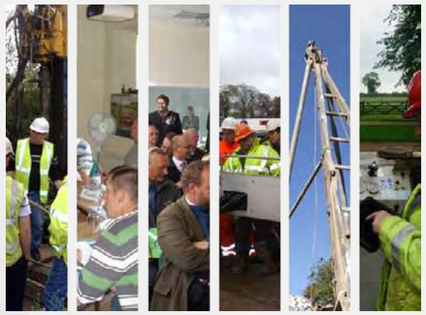
Course Outline

This one day course provides an in depth insight into the use of rotary drilling techniques within geotechnics. The course will look at the optimum techniques to obtain the information or parameters required or to maintain hole integrity for installations. The content is equally relevant for rotary drilling for ground investigations, geothermal wells and water wells.

The course is a unique opportunity to learn about drilling techniques as well as assessing and observing rigs in operation. The content will include drilling techniques and equipment, advantages and limitations and new technologies as well as the legislative requirements which impact on rotary drilling. The course will comprise some theory in the classroom but will also be based outside with rotary drill rigs in action.

Course Contents

- Update on current British Standards in relation to drilling
- Rotary Drilling Techniques and Equipment
  - o Percussive inc. Window Sampling and Down The Hole Hammer
  - o Open Holing
  - o Coring – conventional and wireline
- Advantages and Limitations of the techniques
- New techniques and innovations
  - o Sonic (Rota-Sonic)
  - o Flush mediums including use of polymers
- Health and Safety – PUWER & LOLER inc. Rig Guarding
- Health and Safety Audit on Drill Rigs
- Environmental Issues



The course will include practical demonstrations and a hands-on audit of the Equipe rotary rig.

Learning Outcomes

At the end of the course the delegates should be able to:

- Have an appreciation of different rotary drilling techniques and equipment
- Understand the advantages and limitations of different techniques
- Ask the right questions to the drill crew
- Check the safety and environmental compliance of the rig
- Understand the documentation to be checked
- Carry out a simple rig audit

Who should attend?

This course is a must for geotechnical practitioners supervising rotary drilling operations so that they can understand the drilling activity, maximise core recovery and quality of the work and interact more knowledgably with the drill crew.

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