Geotechnical Courses
13th July 2010, 12011 Work-shop Rock Description Work-shop
Rock Description Men 14th July 2016, 25th August 2016 14th July 2016, Equindation Design
14th July 2016, 25th August 2016 Geo Foundation Design 28th June 2016











Event Preview

Why you need to be at Brunel University in the first week of July



Investment in Individuals

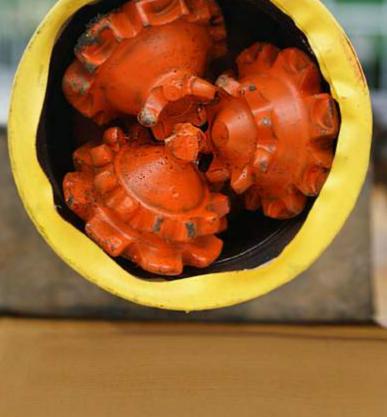
EQUEREUP

A closer look at The Geotechnical Academy's shared learning experience

Precast Pile Perceptions

Aarsleff challenge some people's perceptions on the use of precast piles





Safe and Legal use of Water

Geotechnical Engineering provide a guide to using water on geotechnical sites

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GROUND INVESTIGATION: GETTING IT RIGHT

The true value of a good ground investigation is all too often missed and as an industry we often revert to blaming the client or resigning ourselves to 'lowest cost always wins'. However, the geotechnical industry is full of intelligent, competent, resourceful and hard-working individuals.

Geotechnica 2016 will reflect on the current 'state of the industry', look at what the industry is doing well, lessons learnt from past and ongoing projects, innovations and emerging technologies. It is an inclusive event and will be used to share knowledge, promote best practice and help the industry debate, evaluate and establish initiatives to move forward.

Why should you be at Geotechnica 2016?

- **Communicate** with industry leading practitioners, academia, suppliers and manufacturers.
- **Promote** your specialist services, latest products and innovations.
- **Network** with peers, suppliers, manufacturers, new potential clients and customers.
- **Learn** about different approaches, techniques and what is going on within and around the industry.

Who will you see at Geotechnica 2016?

Over the last eight years Geotechnica has successfully attracted almost every single one of the UK's largest geotechnical companies, from clients to contractors, laboratories to geophysicists - anyone who is anyone in the geotechnical industry has visited Geotechnica. Expect to see the industry's brightest and best minds, as well as some excellent product manufacturers and suppliers.

Conference Keynote Speakers Wednesday 6th July



Chief Scientific Editor QJEGH Editorial Board - The Geological Society & Former Professor - Kingston University

Thursday 7th July

Director of Sustainable Earth Institute -**Plymouth University**

Evening Networking Gala Dinner

Sponsored by Geotechnical Engineering Ltd



Held at Brunel University on Wednesday 6th July

How do you register?

Simply head online to www.geotechnica.co.uk to register now.

CONFERENCE DELEGATE PACKAGES JUST **£150 + VAT** PER PERSON 25% DISCOUNT FOR ACADEMICS / STUDENTS

Contents

Investment in Individuals In this month's issue of theGeotechnica, we take a closer look at The Geotechnical Academy - a shared learning experienced devised and delivered as a collaborative effort by Geotechnical Engineering and Equipe Training. The Geotechnical Academy will be providing taster sessions at Geotechnica 2016 - to register to attend this year's biggest dedicated geotechnical conference and exhibition, click here. Challenging the Perception of Precast Piles Providing an in-depth insight into precast piles are Aarsleff, one of theGeotechnica's valued regular contributors and also one of the UK's leading piling contractors. Although widely used in Europe and beyond, precast piles are only just starting to land in the UK.

Geotechnica 2016 - Why should you be there?

In this issue of theGeotechnica, we look forward to this year's Geotechnica and outline exactly why you should be attending 2016's event. Whether it is to attend the always excellently received conference featuring high profile speakers such as Professors Eddie Bromhead and Iain Stewart; discover the latest product developments and innovations; meet prospective clients, contractors and suppliers, or to catch up with friends new and old – Geotechnica offers something for everyone.

13

Using Water Safely and Legally

Directory

Providing the fifth in a series of pieces for theGeotechnica is Liz Withington, Senior Manager at Geotechnical Engineering Ltd. The safe and legal use of water on geotechnical sites is the subject of Liz's latest advisory pieces.

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DELIVERED IN PARTNERSHIP WITH: RPA SAFETY SERVICES Ltd

IOSH Safe Supervision of Geotechnical Sites

This three day geotechnically focussed health and safety 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).

NEXT COURSE DATES: 3rd - 5th August 2016 7th - 9th September 2016

IOSH Avoiding Danger from Underground Services

This one day geotechnically focussed health and safety 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.

NEXT COURSE DATES: 19th July 2016 24th August 2016

IOSH Working Safely (on Geotechnical Sites)

This one day geotechnically focussed health and safety course 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.

NEXT COURSE DATES: ^{21st July 2016} 16th September 2016



Welcome to the 51st Edition of **theGeotechnica** Bromhead and Jain Stewart: discover the latest - the UK's fastest growing online geotechnically product developments and innovations; meet focussed e-magazine. prospective clients, contractors and suppliers, or to catch up with friends new and old -In the opening article of this month's issue, we Geotechnica offers something for everyone.

take a closer look at The Geotechnical Academy - a shared learning experienced devised Our final contribution and providing the fifth delivered as a collaborative effort by in a series of pieces for **theGeotechnica** is Liz and Withington, Senior Manager at Geotechnical Geotechnical Engineering and Equipe Training. Engineering Ltd. The safe and legal use of water The Geotechnical Academy will be providing taster sessions at Geotechnica 2016 - to on geotechnical sites is the subject of Liz's latest register to attend this year's biggest dedicated advisory pieces. geotechnical conference and exhibition, click As with every new edition of the magazine, the

here. Editorial Team here at theGeotechnica will up, providing an in-depth insight be on the lookout for even more new, original Next into precast piles are Aarsleff, one of and interesting content from all corners of the **theGeotechnica'**s valued regular contributors sector, and would actively encourage all readers and also one of the UK's leading piling to come forward with any appropriate and contractors. Although widely used in Europe relevant content - whether it be a small news and beyond, precast piles are only just starting item or a detailed case study of works recently to land in the UK. completed or being undertaken. If this content is media rich and interactive, then all the better. We are looking to increase the already large readership of the magazine through better Geotechnica social media integration and promotion, as well as improving content month on month.



Following on from Aarsleff's look at precast piles, we look forward to this year's Geotechnica and outline exactly why you should be attending 2016's event. Whether it is to attend the always excellently received conference featuring high profile speakers such as Professors Eddie



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Finally, for any content that is submitted we will ensure that an advertising space, proportionate to the quality of content provided, is reserved should you wish to place an advert in that single edition of the magazine. We hope you enjoy this month's edition of the magazine and are inspired to contribute your own content for the coming editions of theGeotechnica.

Editorial Team, theGeotechnica



INVESTMENT IN INDIVIDUALS

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As geologists, engineering professional as

professionals, whether way we can plan our continuing development geologists, geo-environmental (CPD) for our own individual engineers, structural engineers career objectives and review or civil engineers we all have the value of the activities. By a responsibility to keep our the careful planning, use and knowledge and skills up to date. evaluating of CPD employers By doing this in a structured will gain assurance that you Since

"CPD will be gained by the learning of theory, from practical experience, from mentoring and from the sharing of ideas."

are competent to do your job. Personally you gain credibility with your colleagues and peers, you gain confidence and you are ready to tackle new challenges. CPD will be gained by the learning of theory, from practical experience, from mentoring and from the sharing of ideas.

> 2012, the 🕨



Got the theory but missing the practice?

On-the-ground practical training for aspiring geo-professionals

The Geotechnical Academy is a partnership between Geotechnical Engineering Ltd & Equipe Training, providing a unique, good value, high quality vocational geotechnical CPD and training to propel bright engineers through professional hoops and hurdles.

$\diamond \diamond \diamond \diamond$ Enlisting Now $\diamond \diamond \diamond$

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Or visit our website: www.geotechnicalacademy.co.uk

 Peer support
 Mentoring
 Debate & Discussion
 Demonstrations
 Knowledge
 Transfer \diamond Confidence Building \diamond 8 sessions per group throughout the year







Geotechnical accepted CPD practice by soil providing the theory, the contaminated land geotechnical practice.

"The Academy aims to provide attending delegates with a broad experience of all aspects of working in the geotechnical sector..."

The Academy aims to provide attending delegates with a broad experience of all aspects of working in the geotechnical sector of the construction industry. Over ten modules TGA delivers the theory and

(TGA) has developed the an appreciation of Health and brings the delegates together knowledge and understanding Safety, how to choose the right for a facilitated discussion of over 90 early career geo- site investigation technique, which may be of the day's work professionals in line with insitu testing, instrumentation, or a current geotechnical issue. and rock practical experiences and the physical laboratory testing, opportunity to learn and share how to formulate the ground model and look at geotechnical risk.

> The first part of each day is attend Geotechnica 2016 delivered in the classroom, where we will be providing providing the detailed theory, the the legislation and standards within which each conference. Here speakers subject area operates. examples are used and there is practically demonstrating on ample opportunity to question the subject of the management and develop knowledge.

> After the all-important midmorning coffee break the day's practical activities begin. This may be visiting a local site with a major landslip issue, For more information, please laboratory or learning how to Leader. do a physical laboratory test.

Academy the practice for planning an SI, The final session of the day logging, External speakers are often issues, invited to add further depth to the delegates experiences.

> Does this interest you? For a taster of what TGA can offer you or your team why not Geotechnica 2016 the "Fringe Festival" to the main Real from across the industry will be This will include of risk. managing your data, laboratory testing, site investigation techniques or producing the ground model.

conducting a safety audit on a visit the Geotechnica 2016 rig, carrying out insitu testing, website at Geotechnica 2016 visiting a chemical testing | Home or email TGA Course





CPD Approved Courses for Geotechnical Academy Alumni

Specifying Site Investigations

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 be briefly discussed. The course will look at the aims of SI and categorise the various stages in an investigation.

Soil Description Workshop

From 2007 new European Standards have started replacing the British Standards (Codes) under which investigations in the UK have been carried out. UK working practice will have to change to meet these new requirements but few practitioners are aware of the changes or the timetable. The workshop will comprise a series of lectures on the changes, and lectures on soil description followed by practical sessions describing soil samples.

Rock Description Workshop

From 2007 new European Standards have started replacing the British Standards (Codes) under which investigations in the UK have been carried out. UK working practice will have to change to meet these new requirements but few practitioners are aware of the changes or the timetable. The workshop will comprise a series of lectures on the changes, and lectures on rock description followed by practical sessions describing rock and compiling mechanical logs of rock core.

In Situ Testing

The course will cover both the theory and the practice of various In Situ Testing techniques used on typical geotechnical projects. In addition the courses will consider the effect that Eurocodes will have on the UK's current practice. 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.

Field Instrumentation and Monitoring

The course comprises a comprehensive one day appreciation of the complete process involved in Instrumentation and Monitoring in the geotechnical environment. The course provides an overview of the current guidance documents and their requirements. The course will consider the design of both individual installations and the installation of suites of instruments in the wider site contex.

Geotechnical Foundation Design

This one day course will provide a general overview of foundation design. It will include an assessment of the use and choice of shallow foundations and piles. It will cover the derivation of bearing capacity formula and their use. Exercises will be carried out to calculate the working loads and settlement of simple foundations. The methods used to calculate these will be in accordance with those described in Eurocode

IOSH Working Safely (on Geotechnical Sites)

This one day course is developed by industry specialists within RPA Safety Services and Equipe Training as a foundation to site safety. Its aim is to impart the core safety skills required of those working on geotechnical sites by building on their existing specialist technical skills. After attending the course, candidates should be able to identify hazards on site, understand basic safety legislation, participate fully and confidently in site safety consultation and manage priority risks to a sufficient standard.

IOSH Avoiding Danger from Underground Services

Partnering with RPA Safety Services once again, Equipe provide another IOSH certified health and safety course. This one day course is aimed at anybody involved in specifying, instructing, managing, supervising or actually breaking ground and really addresses the problems and risks related to underground services, which may be encountered during both planning and execution of geotechnical projects.

IOSH Safe Supervision of Geotechnical Sites

Equipe has partnered with RPA Safety Services, an independent occupational health and safety specialist, to provide a unique IOSH certified course for the Drilling and Geotechnics industry. The three day course is certified by IOSH, is specifically focussed on the geotechnical industry and provides a totally unique and relevant Health and Safety course for managers and supervisors.

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28th June 2016 10th August 2016 21st September 2016

IN SITU TESTING - £225 + VAT @Equipe Offices, Banbury 9th August 2016 18th October

GEOTECHNICAL LABORATORY TESTING AWARENESS - £225 + VAT @Brunel University, London 26th July 2016 4th October 2016



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201





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CHALLENGING THE PERCEPTION OF PRECAST PILES

Providing an in-depth insight into precast piles are <u>Aarsleff</u>, one of theGeotechnica's valued regular contributors and also one of the UK's leading piling contractors. Although widely used in Europe and beyond, precast piles are only just starting to land in the UK.

solution for civil engineering sector. and infrastructure projects. of a number Offering benefits and advantages over existing methods, including cost, Aarsleff is proactively challenging the

Precast piles are a robust and mind-set and driving change cost-effective alternative piling throughout the construction

An Engineering Overview

Whilst the UK Construction Industry defaults to Large Diameter Bored Piles for current infrastructure work, In Europe

"Using a combination of vertical and raking piles a solution can be provided that efficiently caters for the vertical and longitudinal actions associated with bridge abutments, piers and many other structures. "

H = 6 m

H=15m

H=6m

 $\gamma = 16 \text{ kN/m}^3$

c. - 25 kPa

E=5 MPa

y = 16 kN/m3

c. = 25 kPa

E=5 MPa

y = 18 kN/m³

Bedrock

y = 18 kN/m

Bedrock ////////

1:3

1128USAR

and beyond, the use of Precast Concrete Driven Piles or Steel Tubes are the norm.

Using a combination of vertical and raking piles a solution can be provided that efficiently Figure 1. nominal diameter.

D = 1.0 m

Figure 2.

B-2.5 m

s=1.4 m

s=3.0 m

s = 1.4 m

caters for the vertical and

longitudinal actions associated

with bridge abutments, piers

and many other structures.

The combination of actions

can be resolved into axial

loading, however, should there

be any resulting lateral load

or induced bending moment

from embankment surcharge;

Engineering Piles can be

A worked engineering overview

of a precast concrete pile

alternative that offers a viable

cost-effective and sustainable

Consider a single span road

bridge with typical bridge end

support loads of say 12,000kN

in compression and 600kN

longitudinal load. Current UK

design approach currently

favours a single row of large

alternative is presented here:

proprietary

Aarsleff's

reinforced to suit.

Consider 1050mm piles, 15m long piles with 10No. H40 full length main bar reinforcement (shown in Figure 1).

- Concrete 65m³
- Weight of Steel = 7.4 tons
- of spoil to 65+ m³ remove.
- allowed for.
- Adiacent and program time.
- Weather dependent.
- Approximate Piling Installation not effected Cost • £40,000 to £45,000 by cold weather and offers a reduction in traffic movements on site.

The alternative option as adopted widely on the continent as shown above for • the same bridge abutment example.

axial and lateral loads applied by the bridge abutment.

- steel.
- remove from site.
- Clean operation.

diameter bored piles in the region of 900mm to 1200mm

Volume

On-site curing time to be

piles cannot be installed in the same day, increasing costs in sequencing arrangement

This offers a saving of 28m³ of concrete and 2.1 tons of

Zero spoil to handle or

"Piles installed in sequence therefore releasing follow on trades earlier and matching or bettering on-site install program compared to opposite."

- Off-site build = Zero curing time on site.
- Factory Quality Piles
- Piles installed in sequence therefore releasing follow on trades earlier and matching bettering or on-site install program compared to opposite.
- Approximate Piling Cost £25,000 to £30,000

After taking these factors into A combination of a single consideration it becomes row of vertical piles with a apparent that using vertical corresponding row of raking and raking piles can efficiently piles as shown in Figure 2 can cater for the vertical and be used to effectively resist the longitudinal actions associated with bridge abutments, piers and many other structures. Not only are the vertical and raking piles efficient, they are also more economically and environmentally friendly.

> For further details contact Aarsleff on 01636 611140, email piling@aarsleff.co.uk or visit Aarsleff.co.uk.



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Thursday 7th July

Director of Sustainable Earth Institute -**Plymouth University**

Evening Networking Gala Dinner

Sponsored by Geotechnical Engineering Ltd

Held at Brunel University on Wednesday 6th July

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CONFIRMED CONFERENCE LINE-UP

Wednesday 6th July

09:00 - 09:15 **Professor Geoff Rogers** Deputy Vice Chancellor (Research) - Brunel University Introduction

Kevnote Address

09:15 - 10:00 Professor Eddie Bromhead Chief Scientific Editor QJEGH Editorial Board - The Geological Society & Former Professor - Kingston University Title: Wise after the fact.

Session 1- Planning: How to establish the right approach to Ground Investigation

10:00 - 10:30 Joe Murphy Head of Health and Safety (Area South) - HS2 Ltd Title: Lessons learnt on HS2

10:30 - 11:00 Tom Phillips

Managing Director, RPA Safety Services Title: Design and CDM - A joined up approach to the principles of good (safe) design.

11:00 - 11:30 Professor Paul Nathanail Professor of Engineering Geology - Nottingham University & Managing Director - LQM Ltd Title: Changes to the Planning system - revised National Planning Policy Framework; Planning & Housing Bill; Brownfield Registers.

11:30 - 12:00 **Morning Break & Networking**

Session 2 - Testing & Sampling: Why bother?

12:00 - 12:30 Technical Director - GEOLABS Ltd **Title:** Geotechnical laboratory testing vs. In situ testing 12:30 - 13:00 Expert Advisor - Norwegian Geotechnical Institute **Title:** Using offshore sample quality methodology for onshore investigations

13:00 - 15:00 Lunch, Networking & Demonstrations

Session 3 - Managing Project Risk through **Ground Specialist Services**

15:00 - 15:30 **Dr Simon Hughes Operations Manager - TerraDat** Title: The importance of Near Surface Geophysics in Geotechnical SI

15:30 - 16:00 Kim Beeslev Managing Director - European Geophysical Services Title: How, When and Why to Geophysically Log in SI?

16:00 - 16:30 Joseph Hobbs Technical Manager - Lankelma Title: CPTs for High Risk Projects

16:30 - 17:00 Mark Hudson

Managing Director - Geoterra Title: Mitigating your Risk – Subsurface laser scanning and multibeam sonar void surveys - What lies beneath & where?









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Thursday 7th July

09:00 - 09:15 Julian Lovell Managing Director - Equipe Group Introduction

Kevnote Address

09:15 - 10:00 Professor lain Stewart

Director of Sustainable Earth Institute - Plymouth University Title: Between a rock and a hard place: communicating contested geoscience to the public.

Session 1- Ground Investigation Techniques

10:00 - 10:30 Project Chairman - AGS/BDA Task Force & Managing Director -Geotechnical Engineering **Title:** Spotlight on the UK Ground Investigation Industry

10:30 - 11:00 David Norbury Director - David Norbury Ltd Title: An overview of European GI

11:00 - 11:30 Senior Engineer (Geotechnics & Tunnelling) - Arup **Title:** *Micro to macro – Are UK linear infrastructure Gls suitable*

for investigating mass soil property characteristics?

11:30 - 12:00 **Morning Break & Networking**

Session 2 - Ground Investigation

12:00 - 12:30 Nick Sartain Lead Geotechnical Engineer - HS2 Ltd Title: Ground Investigation Challenges of HS2 12:30 - 13:00 **Dr Jackie Skipper** Associate Director - Geotechnical Consulting Group **Title:** *Investigating and understanding the ground - why bother?*

13:00 - 15:00 Lunch, Networking & Demonstrations

Session 3 - Innovation and Emerging Technologies

15:00 - 15:30 Eng. Diego Marchetti Partner - Studio of Professor Marchetti Title: The Flat Dilatometer: Applications and Recent Developments 15:30 - 16:00 Dr Roger Chandler Managing Director - Keynetix Title: Transforming Geotechnical Data 16:00 - 16:30 Adrian Wilkinson Director - DroneSurv Title: Drones - The Law and the Benefits

Panel Discussion - Where next for the industry? 16:30 - 17:00 Panel Members TBC

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Geotechnica WHY SHOULD equip^e OUBETHERE? www.geotechnica.co.uk

"Eddie's expertise in stress analysis and academia is sure to provide an exciting and insightful keynote address..."

subject of slope stability that has gained him the most recognition, Eddie's expertise in stress analysis and academia is sure to provide an exciting and insightful keynote address for Geotechnica will titled: "Wise after the fact.".

Geotechnica's second Keynote geocommunication. Speech, this time on Thursday morning, will see a highly recognisable and acclaimed face take to the stage in the form of Professor lain Stewart. Sometimes described as the 'rock star' of the geology world, lain has presented various lecturer and world leading documentaries and feature geoscience to Professor Eddie Bromhead. the BBC, including the BAFTA With a wide-ranging career nominated Earth: The Power still greatly passionate about Stewart's keynote address ground investigation. Although for Geotechnica will place a

Since its conception in 2009, Geotechnica has become the biggest "Geotechnica 2016 and best geotechnically-dedicated conference and exhibition that the UK has to offer. From humble beginnings in marguees in a field on The Upton Estate in rural Oxfordshire, to the excellent purpose-built facilities of the Warwickshire Exhibition Centre, and now the prestigious and esteemed surroundings of Brunel University, Geotechnica has gone from strength to strength in the last 7 years.

In this issue of theGeotechnica, we look forward to this year's Geotechnica and outline exactly why you should be attending 2016's event. Whether it is to attend the always excellently on the current 'state of the received conference featuring high profile speakers such as Professors Eddie Bromhead and Iain Stewart; discover the latest product developments and innovations; meet prospective clients, contractors and suppliers, or to catch up with friends new and old projects, innovations and - Geotechnica offers something for everyone.

Equipe are delighted to University to celebrate their announce that Geotechnica 50th year. This year's event best practice and help the 2016 will be delivered in will feature an outstanding industry debate, evaluate and Brunel conference line-up which will partnership with

will reflect on the current 'state of the industry'..."

be the focal-point of the twoday event.

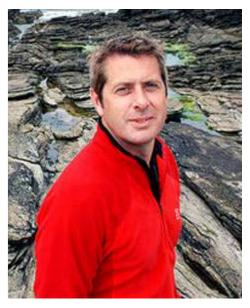
Geotechnica 2016 will reflect industry', look at what the industry is doing well, lessons learnt from past and ongoing emerging technologies. It is an inclusive event and will be used to share knowledge, promote establish initiatives to move forward.

Keynote Speaker excitement

The first week of July 2016 will see two industry leading experts and highly popular figures deliver the keynote addresses for this year's Geotechnica.

Firstly, kicking off Geotechnica 2016's conference will be former Kingston University expert on slope stability, programmes on geology for that spans 5 decades, Eddie is of the Planet. Professor it may be his specialist focus on geocommunication.





Titled: 'Between a rock and a hard place: communicating contested geoscience to the public', Iain will be exploring the issues around how we convey the technical aspects of fracking, CCS, radwaste etc to non-technical audiences. emphasising lt will be interdisciplinary approaches, especially what we can

"Professor Stewart's keynote address place a focus on Titled: 'Between a rock and a hard place: communicating contested the public'..."

learn from the human and behavioural sciences about how ordinary people view the subsurface environment. •



"lain will also be delivering an afterdinner speech on Wednesday evening at Geotechnica's Networking Dinner."

after-dinner an Geotechnica's Dinner. This speech is bound of the project's outcome is purchased online.

Planning: How to establish the right approach to Ground

Investigation

The Geotechnica 2016 conference will provide an invaluable opportunity for the ground investigation industry, its clients and the supply chain, to discuss how best to plan ground investigations in order to obtain the best results possible.

lain will also be delivering This session has talks which speech discuss how planning is key on Wednesday evening at to the ground investigation Networking process and where the success to be a crowd pleaser, titled: often established. Planning is 'Travels in worlds that don't not only about how the work is exist - the trials and tribulations specified and executed but also of putting geology on the about building a strong team box and the general lessons and ensuring the strengths emerging from a decade of and expertise of the individuals popular science'. Tickets are and each party is used still available to all comers appropriately. This session will for the three-course gala also discuss how proposed Networking Dinner and can be changes to the Planning System may affect geo-environmental ground investigations.

Accurate thorough and planning can save a Ground Investigation incredibly valuable time and money, the savings from which can then be utilised at another stage of

"The first conference session of Geotechnica 2016 will provide instrumental insight into the planning process..."

a project. The first conference session of Geotechnica 2016 provide instrumental will insight into the planning process that will undoubtedly benefit attending delegates to better equip themselves and apply their knowledge when planning their next GI project.

Speakers in this morning session include Joe Murphy,

High Speed 2's Head of Health Framework, and Safety (Area South), who Housing Bill and Brownfield will discuss the lessons learnt Registers. by the HS2 team regarding the planning of one of the largest infrastructure UK's projects ever undertaken. Following on from Joe will be Tom Phillips, Managing Director of industry health and safety specialists, RPA Safety Services. Tom will delve into the subject of Construction Design and Management Regulations – something which was highly discussed at last year's Geotechnica. This year Tom will explain how CDM and GI design can join together to and safe, overall design. Finally,

Planning &

Testing & Sampling: Why bother?

session's focus on planning are presentations from some of the world's leading specialists **alternatives** on geotechnical testing and sampling.

The value of geotechnical in situ testing." laboratory testing is currently in the spotlight and many leading consultants are open up the debate but also disputing the need. As sample offer methods for quantifying quality and representativeness guality and suggesting form the principles of a good, is often unquantified and time alternatives to laboratory constraints on projects are testing such as in situ testing. Professor Paul Nathanail will tightened the usefulness of Opening up the session explain the changes to the laboratory test results as part will be GEOLABS Technical planning system, including of the design tool is becoming Director and geotechnical the Nation Planning Policy less critical. This session will



Prof. Jain Stewart Prof. Eddie Bromhead Including: Concrete Canvas, GEOLABS, Itasca, Lankelma

"This session will open up the debate but also offer methods for Following on from the morning quantifying quality and suggesting to laboratory testing such as

PLUS MUCH MORE!





laboratory testing expert Dr John Powell. Dr Powell will discuss the merits of geotechnical laboratory testing, whilst also comparing and contrasting the merits and pitfalls against in situ testing. Completing the session will be Tom Lunne, Expert Advisor at the Norwegian Geotechnical Institute, and also one of the world's leading experts on CPT. Tom will explain how offshore sample methodology can be used for onshore investigations in order to obtain the very best samples.

Managing Project Risk through Ground Specialist Services

"The final session of Geotechnica's first day will place a focus on some of the more specialist services available for the ground investigation sector."

The final session of Geotechnica's first day will place a focus on some of the more specialist services available for the ground investigation sector.

provide This session will essential insights into the benefits of How, When and Why clients and specifiers should employ or deploy ground specialist services. Specialist Demonstrating the advantages



services such as geophysics, of CPT usage on high risk CPT, surveying etc are thought projects will be Lankelma's to be commonplace but are Technical Manager, Joseph often not specified on projects Hobbs. Finishing off the first because they are seen to be day of talks and completing the over-complicated, expensive session of specialist services or just poorly understood. will be Geoterra's Managing The technical experts within Director, Mark Hudson. Mark this the benefits of using such of subsurface laser scanning services, raise awareness of and multi-beam sonar void new technologies and provide surveys, focussing on how that useful advice for specifiers and can help to mitigate project users.

Taking up the case for the Ground use of specialist geophysics in GI are Dr Simon Hughes of TerraDat and also Kim Beesley, Managing Director of European Geophysical Services. Both will discuss the importance of geophysics and also provide a guide as to how and when geophysical logging can be best utilised.

session will highlight will discuss and explain the use risk.

Investigation Techniques

Day two of Geotechnica 2016's conference will place an overall spotlight on the ground investigation industry, and discuss what is going well and what needs to be improved.

Following on from the first Session on Wednesday, the theme for this session will

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"Attendees of Geotechnica 2016's conference will have the opportunity to directly discuss the Task Force's motives, aims and ambitions for creating a clear, unbiased picture of the current UK Gl industry."

start with a review of the 'state of the industry'. This will be a summary of where the industry is now and if it is in a strong moving forward. position The session will also discuss whether the UK can learn from international lessons

practices and techniques.

theGeotechnica has recently published updates and information on the Association Geotechnical of and Geoenvironmental Specialists and British Drilling Associations' new Task Force initiative. The Initiative's Position Paper has recently been published and Geotechnica 2016 will see its Chairman, Andrew Milne of Engineering, Geotechnical discuss the paper's content. Attendees of Geotechnica 2016's conference will have the opportunity to directly discuss the Task Force's motives, aims Innovation and Emerging and ambitions for creating a Technologies - Where next clear, unbiased picture of the for the industry? current UK GI industry.

Other speakers in this session Geotechnica 2016 will focus include: Professor Norbury who will ask whether way the UK GI sector can make the UK industry can acquire any large steps forward is product wisdom from other European and service innovation. infrastructure projects; Ben Gilson of Arup who will

examine the linear history of UK GI infrastructure projects, and whether any lessons can be learnt regarding their suitability for investigating mass soil property characteristics; Nick Sartain, Lead Geotechnical Engineer on HS2 who will reveal the challenges that have arisen on the HS2 project; and finally Dr Jackie Skipper of the Geotechnical Consulting Group who will emphasize why investigating and understanding the ground is so vital to even the smallest of projects.

final The session of David squarely on innovation. One

This session will discuss hot

topics within the industry testing, which will help forge a better site visits and production of a and stronger industry moving ground model. An important forward. The speakers will aspect of The Geotechnical most varied and highlight new approaches, Academy is to allow delegates innovation and emerging to gain knowledge through a technologies which if embraced shared learning experience could open up a new direction with delegates from different for the industry and new opportunities.

Speakers in this final session include Diego Marchetti who will discuss the flat dilatometer, Dr Roger Chandler who will delve into the world of digital data management for geotechnical projects, and finally Adrian Wilkinson of DroneSurv who will explain the benefits of using drones for GI projects.

The Geotechnical Academy

"The Geotechnical Academy will again be at Geotechnica to demonstrate how it can provide a unique learning experience for young geoprofessionals."

The Geotechnical Academy will again be at Geotechnica to demonstrate how it can provide a unique learning experience for young geo-professionals. The training is designed to be fundamentally vocational, with many opportunities throughout the modules to participate in practical activities such as rig audits, insitu

laboratory testing, facets of the geotechnical industry. The Geotechnical Academy frequently brings together main contractors, specialist contractors and geo-environmental and geotechnical consultants, all

months – a testament to the with very different experiences success of previous year's of the industry. exhibitions. Geotechnica has This year at Geotechnica, The always boasted the most Geotechnical Academy will varied and robust line-up of host their own complimentary exhibitors in the UK, however seminar, offering an innovative the offering in 2016 sees a learning experience for all host of brand new names. geo-professionals as well as Companies from all areas and providing an opportunity to corners of the industry will experience first-hand the be represented, with the very type of experience delegates best in geophysics, ground can expect if they attend The investigation specialists, Geotechnical Academy. The geotechnical product event is being supported by innovations, environmental ALcontrol, Lankelma, Keynetix, and geotechnical laboratories, Equipe and Geotechnical drilling rig, plant and equipment Engineering Ltd who, along with suppliers, instrumentation and other companies, all contribute geothermal specialists all out to individual Academy modules to impress the hundreds of throughout the year. attendees.

Come along and experience Geotechnica 2016 will be The Geotechnical Academy held on 6th and 7th July at Fringe Festival across both Brunel Universtiy, London. days at Geotechnica and Tickets for this year's event contribute to enabling your are £150 + VAT per person geo-professionals to provide and registration closes on a quality service to the the 1st July. To register for construction industry. your place and for more information, visit WWW. Packed exhibition line-up geotechnica.co.uk; follow us on Twitter @equipegroup The exhibition line-up for this and visit the Equipe Group year's event is completely sold

out, and has been for many LinkedIn page.

"Geotechnica has always boasted the robust line-up of exhibitors in the UK, however the offering in 2016 sees a host of brand new names. "

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USING WATER SAFELY AND IFGAIIY

Providing the fifth in a series of pieces for theGeotechnica is Liz Withington, Senior Manager at Geotechnical Engineering Ltd. The safe and legal use of water on geotechnical sites is the subject of Liz's latest advisory pieces.

Out on site in the ground to use an unauthorised to everyone from the new site engineer to the most experienced drilling operative.

to site you need to establish in which water company area your site is in."

Before you even go to site investigation purposes we can you need to establish in which take water from this source, water company area your but it must not be used for site is in. Useful maps can be drinking or cooking purposes. found at Ofwat or CON29DW. It is a serious criminal offence

investigation industry we standpipe and so to find a frequently need to use water licensed provider you need to for drilling operations and contact the individual water soakaway testing. But where company or suppliers such as do we get this water from, <u>AQUAM</u> to arrange a hire. Only what tools do we need and standpipes issued by the water what legislation covers the company or their agent and extraction? In this article with a current completed hire we hope to provide useful, agreement can be used in each clear and practical guidance particular water company area.

Once on site you need to establish where to get the water from. You will need to "Before you even go identify a "washout hydrant". A washout hydrant is owned by the water company and is an accessible valve in a water supply main that is used to run dirty water out of a system following repair work. Its metal cover is usually marked to contaminate with a WO. For our ground

Do not take water from a Fire

"Taking water from a fire brigade hydrant is therefore both an offence and also has the potential drinking water supplies."

Brigade hydrant, they are owned by the Fire Brigade and must not be used by anyone

drinking water supplies. Fire the Water Industry Act 1991. hydrants are easily identified by their yellow colour and are often accompanied by a yellow H plate.

Once the correct washout has been identified and the correct standpipe is ready for use there are a number of stages to remember:

You will be connecting to 1. the public water supply system.

else. Taking water from a fire You are responsible for taking brigade hydrant is therefore steps to avoid contamination. both an offence and also has Failure to do so may render the potential to contaminate you liable to prosecution under

> Is the washout in a connection point. location that is safe for both the operative and members of the public? If not, find another washout.

Open the valve slowly 7. Lift the cover safely using (no more than one turn every the appropriate lifting keys. 30 seconds) to remove debris Protect the open cover from hydrant and washout 4. using appropriate signage and bowl, do not fill the chamber.

guarding to National Road and Most hydrant valves open

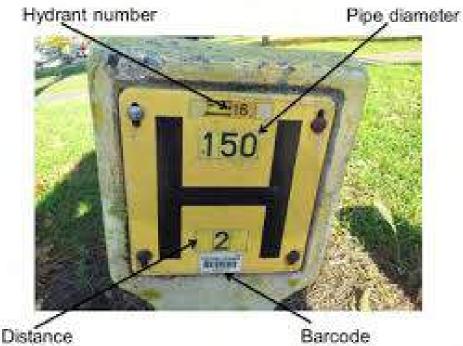


Street Work standards.

If the washout hydrant chamber is full of water or debris, it should be cleaned out to at least 150mm below

Remove the covering cap 6. from hydrant bowl and retain in a safe place.





anti-clockwise.

Close the valve slowly

making sure that standpipe taps are closed.

attach the standpipe 9. Open the valve slowly, and

(no faster than one full turn every 30 seconds) and check for leaks. If opened too quickly there is a risk that in older systems you may cause a mains burst.

10. If you are unable operate the valve or to the hydrant leaks, seek an alternative hydrant and report the faulty apparatus.

Where a flexible hose is 11. connected to the standpipe, care must be taken to ensure that the end of the hose cannot become submerged in the bowser or IBC. An air gap must be maintained if used to fill any receptacle, bowser or tank.

In frosty conditions 12. drain the standpipe to prevent damage to backflow device, and take appropriate precautions with water spillage.

Close down the hydrant 13. valve slowly, check for leaks, remove standpipe, refit cap and replace chamber cover securely.

Standpipes should to be 14. dismantled and the hydrant cover replaced when not being used.

standpipe 15. The and must be stored and kev transported away from other contaminated materials, containers and fittings.

And of course, if you are still not confident in carrying out these procedures you can ask for help, either from a competent colleague or ask for further training from one of the water supply companies.

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