AGS GROUND RISK CONFERENCE
INTRODUCTION

NEIL PARRY

CHAIR OF AGS

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AGS Association of Geotechnical & Geoenvironmental Specialists

HOUSEKEEPING & TODAY'S PROGRAMME

- **GEOTECHNICAL CONFERENCE OVERVIEW:** Stephen Lawrence West, AGS Acting Geotechnical Working Group Leader and Director at Ramboll
- **GROUND RISK - WHERE DO I START?** Dr Jacqueline Skipper, Senior Partner and Senior Geologist at the Geotechnical Consulting Group
- **MANAGING RISK FOR A DEEP BASEMENT EXCAVATION:** Dr Andrew Smith, Technical Director at Coffey Geotechnics
- **REFRESHMENT BREAK**
- **INVESTIGATION AND TREATMENT OF CHALK SOLUTION FEATURES:** Allan Bell, Regional Director at Hydrock
- **IDENTIFYING AND MINIMISING RISK THROUGH A VALUE ENGINEERED GEOTECHNICAL SOLUTION & CASE STUDY :** Eric Downey, Senior Engineering Geologist at Structural Soils
- **THE APPLICATION OF ADVANCED CONTINUOUS SURFACE WAVE DATA TO MANAGING GROUND RISK:** Chris Milne, Director at Ground Stiffness Surveys
- **13:00: LUNCH**
- **GEOENVIRONMENTAL CONFERENCE OVERVIEW:** Vivien Dent, AGS Contaminated Land Working Group Leader and Associate Technical Director at RSK
- **AN OVERVIEW OF LEGAL DEVELOPMENTS UNDER PART IIA AND CONTAMINATED LAND:** Stephen Tromans, QC, Barrister at 39 Essex Chambers
- **GROUND GAS RISK – THE RISK FROM INCORRECT CHARACTERISATION:** Gavin Allsopp, Principal Geo-environmental Engineer at NHBC
- **REFRESHMENT BREAK**
- **WASTE CLASSIFICATION FOR SOILS – AN AGS PRACTITIONERS' GUIDE:** Mike Plimmer, Technical Director at Geotechnical & Environmental Associates
- **CREOSOTE-TAR SEEPAGE PORTSLADE BEACH:** George Flower, Technical Director GeoScience at Arcadis Consulting UK
- **CONFERENCE SUMMARY:** Neil Parry, AGS Chair and Technical Director at Geotechnical Engineering
- **16:30: EVENT ENDS**

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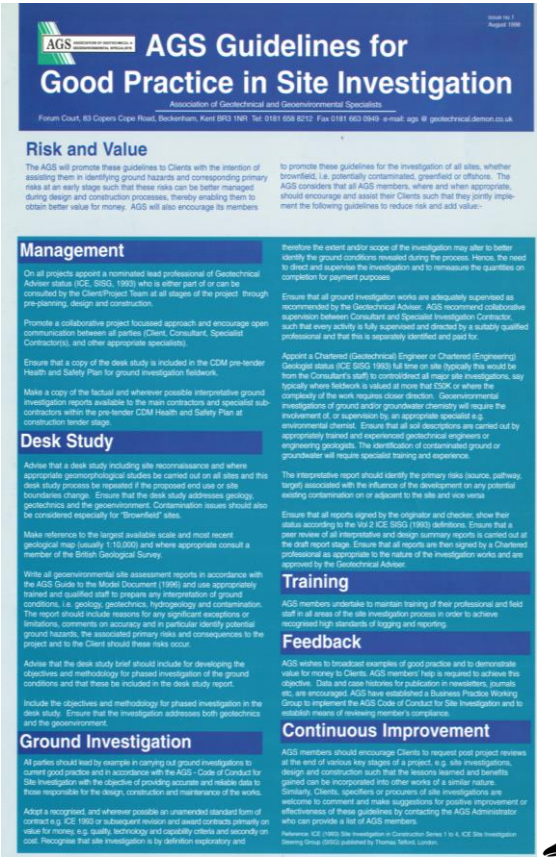
AGS - PROVIDING GUIDANCE AND ADVICE

30 Years of AGS

AGS membership across majority of geotechnical and geoenvironmental sectors

Unique position to advise on risks



AGS Guidelines for Good Practice in Site Investigation

Association of Geotechnical and Geoenvironmental Specialists

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Risk and Value

The AGS will promote these guidelines to Clients with the intention of assisting them in identifying ground hazards and corresponding primary risks at an early stage such that these risks can be better managed during design and construction processes, thereby enabling them to obtain better value for money. AGS will also encourage its members to promote these guidelines for the investigation of all sites, whether brownfield, i.e. potentially contaminated, greenfield or offshore. The AGS considers that all AGS members, where and when appropriate, should encourage and assist their Clients such that they jointly implement the following guidelines to reduce risk and add value:-

Management

On all projects appoint a nominated lead professional of Geotechnical Adviser status (ICE, SISG, 1993) who is either part of or can be consulted by the Client/Project Team at all stages of the project through pre-planning, design and construction.

Promote a collaborative project focussed approach and encourage open communication between all parties (Client, Consultant, Specialist Contractor(s), and other appropriate specialists).

Ensure that a copy of the desk study is included in the CDM pre-tender Health and Safety Plan for ground investigation fieldwork.

Make a copy of the factual and wherever possible interpretative ground investigation reports available to the main contractors and specialist sub-contractors within the pre-tender CDM Health and Safety Plan at construction tender stage.

Desk Study

Advise that a desk study including site reconnaissance and where appropriate geomorphological studies be carried out on all sites and this desk study process be repeated if the proposed end use or site boundaries change. Ensure that the desk study addresses geology, geotechnics and the geoenvironment. Contamination issues should also be considered especially for "Brownfield" sites.

Make reference to the largest available scale and most recent geological map (usually 1:10,000) and where appropriate consult a member of the British Geological Survey.

Write all geoenvironmental site assessment reports in accordance with the AGS Guide to the Model Document (1996) and use appropriately trained and qualified staff to prepare any interpretation of ground conditions, i.e. geology, geotechnics, hydrogeology and contamination. The report should include reasons for any significant exceptions or limitations, comments on accuracy and in particular identify potential ground hazards, the associated primary risks and consequences to the project and to the Client should these risks occur.

Advise that the desk study brief should include for developing the objectives and methodology for phased investigation of the ground conditions and that these be included in the desk study report.

Include the objectives and methodology for phased investigation in the desk study. Ensure that the investigation addresses both geotechnics and the geoenvironment.

Ground Investigation

All parties should lead by example in carrying out ground investigations to current good practice and in accordance with the AGS - Code of Conduct for Site Investigation with the objective of providing accurate and reliable data to those responsible for the design, construction and maintenance of the works.

Adopt a recognised, and wherever possible an unamended standard form of contract e.g. ICE 1990 or subsequent revision and award contracts primarily on value for money, e.g. quality, technology and capability criteria and secondly on cost. Recognise that site investigation is by definition exploratory and therefore the extent and/or scope of the investigation may alter to better identify the ground conditions revealed during the process. Hence, the need to direct and supervise the investigation and to remeasure the quantities on completion for payment purposes.

Ensure that all ground investigation works are adequately supervised as recommended by the Geotechnical Adviser. AGS recommend collaborative supervision between Consultant and Specialist Investigation Contractor, such that every activity is fully supervised and directed by a suitably qualified professional and that this is separately identified and paid for.

Appoint a Chartered (Geotechnical) Engineer or Chartered (Engineering) Geologist status (ICE SISG 1993) full time on site (typically this would be from the Consultant's staff) to control/direct all major site investigations, say typically where fieldwork is valued at more that £50K or where the complexity of the work requires closer direction. Geoenvironmental investigations of ground and/or groundwater chemistry will require the involvement of, or supervision by, an appropriate specialist e.g. environmental chemist. Ensure that all soil descriptions are carried out by appropriately trained and experienced geotechnical engineers or engineering geologists. The identification of contaminated ground or groundwater will require specialist training and experience.

The interpretative report should identify the primary risks (source, pathway, target) associated with the influence of the development on any potential existing contamination on or adjacent to the site and vice versa.

Ensure that all reports signed by the originator and checker, show their status according to the Vol 2 ICE SISG (1993) definitions. Ensure that a peer review of all interpretative and design summary reports is carried out at the draft report stage. Ensure that all reports are then signed by a Chartered professional as appropriate to the nature of the investigation works and are approved by the Geotechnical Adviser.

Training

AGS members undertake to maintain training of their professional and field staff in all areas of the site investigation process in order to achieve recognised high standards of logging and reporting.

Feedback

AGS wishes to broadcast examples of good practice and to demonstrate value for money to Clients. AGS members' help is required to achieve this objective. Data and case histories for publication in newsletters, journals etc. are encouraged. AGS have established a Business Practice Working Group to implement the AGS Code of Conduct for Site Investigation and to establish means of reviewing member's compliance.

Continuous Improvement

AGS members should encourage Clients to request post project reviews at the end of various key stages of a project, e.g. site investigations, design and construction such that the lessons learned and benefits gained can be incorporated into other works of a similar nature. Similarly, Clients, specifiers or procurers of site investigations are welcome to comment and make suggestions for positive improvement or effectiveness of these guidelines by contacting the AGS Administrator who can provide a list of AGS members.

Reference: ICE (1993) Site Investigation in Construction Series 1 to 4. ICE Site Investigation Steering Group (SISG) published by Thomas Telford, London.

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AGS AND MANAGING RISKS

Working Groups

- Data Management
- Business Practice
- Contaminated Land
- Geotechnical
- Laboratories
- Loss Prevention
- Safety

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AGS GEOTECHNICAL & GEOENVIRONMENTAL

Report Type	Ref	Site description, scope, rules of engagement	Historical Search	Walkover	Field Results	Lab Results	Ground Conditions/ Parameters	Derived Values	Characteristic Values	Design Values	Design calculations, drawings and recommendations	Supervision, monitoring and maintenance requirements	Comments
Desk Study Report	BS, BS15, EC7, UK Spec	●	●	○									
Factual Report	BS, EC7	●	○	○	●	●							
Field Report	BS, BS15 EC7, UK Spec	●		○	●			○ (EC7 only)					Sign off by responsible person/ Responsible Expert (BS15) required to comply with EC7
Interpretative Report	BS	●	○	○	○	○	●	○			○		
GIR	BS15, EC7, UK spec	●	●	●	●	●	●	●					GIR can be in separate parts or a single report
GDR	EC7, UK Spec	●	●	●	●	●	●	●	●	●	●	●	
GBR	BS15	●					●						To be agreed with contracted parties and risk allocation defined.
GFR	BS15												Contents as specified or to BS8002 and BS8004

Key
○ optional requirement
● mandatory requirement

BS – BS5930:1999+A2:2010, Code of Practice for Site investigation (Withdrawn).

BS15 – BS5930:2015 Code of practice for ground investigations

UK Spec– UK Specification for Ground Investigation, 2nd Ed, Site Investigation Steering Group ICE,2006

EC7– BS EN 1997–1:2004+A1:2013 Eurocode 7. Geotechnical design. General rules./ BS EN 1997–2:2007 Eurocode 7. Geotechnical design. Ground investigation and testing. (including UK National Annexes to EC7)

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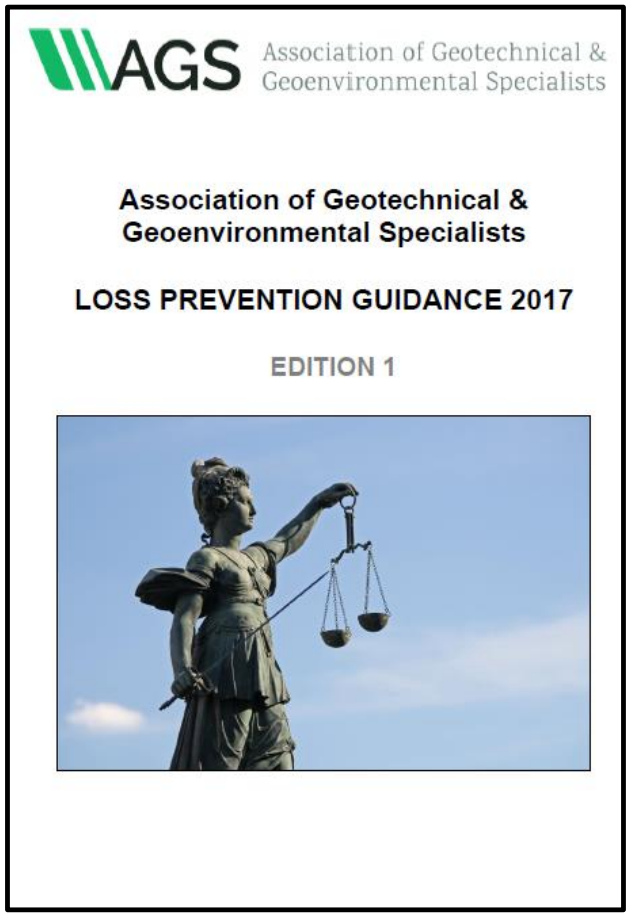
AGS & OTHER RISKS

Legal Exposure



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AGS & OTHER RISKS

Ground Data

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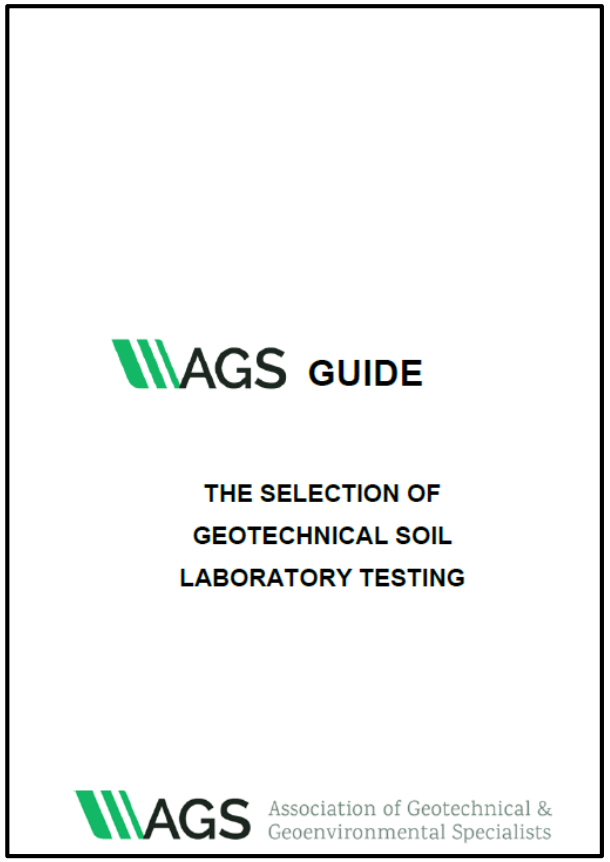
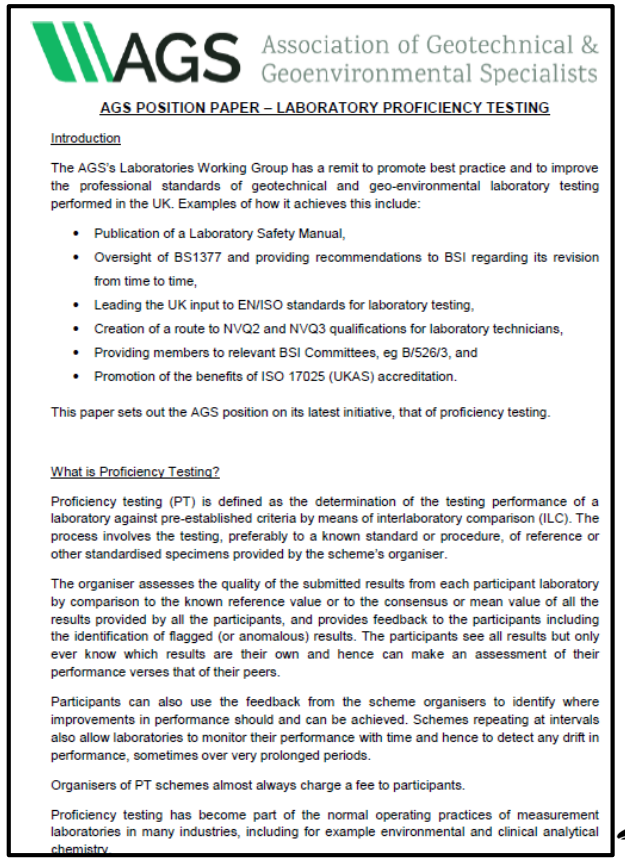
AGS & OTHER RISKS

Laboratories





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AGS POSITION PAPER – LABORATORY PROFICIENCY TESTING

Introduction

The AGS's Laboratories Working Group has a remit to promote best practice and to improve the professional standards of geotechnical and geo-environmental laboratory testing performed in the UK. Examples of how it achieves this include:

- Publication of a Laboratory Safety Manual,
- Oversight of BS1377 and providing recommendations to BSI regarding its revision from time to time,
- Leading the UK input to EN/ISO standards for laboratory testing,
- Creation of a route to NVQ2 and NVQ3 qualifications for laboratory technicians,
- Providing members to relevant BSI Committees, eg B/526/3, and
- Promotion of the benefits of ISO 17025 (UKAS) accreditation.

This paper sets out the AGS position on its latest initiative, that of proficiency testing.

What is Proficiency Testing?

Proficiency testing (PT) is defined as the determination of the testing performance of a laboratory against pre-established criteria by means of interlaboratory comparison (ILC). The process involves the testing, preferably to a known standard or procedure, of reference or other standardised specimens provided by the scheme's organiser.

The organiser assesses the quality of the submitted results from each participant laboratory by comparison to the known reference value or to the consensus or mean value of all the results provided by all the participants, and provides feedback to the participants including the identification of flagged (or anomalous) results. The participants see all results but only ever know which results are their own and hence can make an assessment of their performance verses that of their peers.

Participants can also use the feedback from the scheme organisers to identify where improvements in performance should and can be achieved. Schemes repeating at intervals also allow laboratories to monitor their performance with time and hence to detect any drift in performance, sometimes over very prolonged periods.

Organisers of PT schemes almost always charge a fee to participants.

Proficiency testing has become part of the normal operating practices of measurement laboratories in many industries, including for example environmental and clinical analytical chemistry.

AGS & OTHER RISKS

Safety