

Ground Gas 2019

9 May, London

About this event

Ground Gas is returning to **London** on the **9 May**, and will once again provide the latest information on ground gas assessment, verification, validation and protection through a balanced mix of practical case studies, new research and policy updates, combined with interactive Q&A sessions and extensive networking opportunities.

Last year's delegates said

'Very informative and a great update on the current market'

- Kevin Dodds, *Director*, Delta Membrane Systems Ltd

'The topics covered highlighted significant issues in the industry'

-Robert Jiagge, *Regional manager*, ST Consult

'Inspiring, informative day, with a good range of speakers'

- Asa Strickland, *Associate Environmental Consultant*, Sweco Environment

'The highlight of the day was the ability to network and talk to people who are experts in the field'

- Lorraine Droogmans, *Principal Environmental Engineer*, Wardell Armstrong

This event is CPD certified.



Why attend?

Expert panel

This event brings together a mix of regulators, practitioners and consultants to review and discuss policy updates, innovative research and practical solutions to ensure you are best equipped to combat your most pertinent ground gas issues.

Case studies

Learn from hands-on experience in a series of case studies which will provide technical guidance and practical frameworks. You will come away with best practices that you can apply immediately within your organisation

Time efficiency and focus

Remove yourself from day to day distractions and benefit from a series of focused presentations, designed to tackle key issues and impart practical advice and guidance.

Q&A panel discussions

In addition to expert-led presentations, there will also be a number of Q&A discussion sessions throughout the day, giving you the opportunity to address your specific questions and challenges and share your opinions with others.

Networking

Meet and mingle with senior professionals in your sector, and make the most of this invaluable networking and knowledge-sharing opportunity.

09.00 Registration and Refreshments

09.30 Opening Remarks from the Chair:

Hugh Mallett, *Technical Director, BuroHappold*

09.45 Time for a Brand New Way Forward for Gas Risk Assessment

It is 20 years since Wilson and Card was published in Ground Engineering. Remarkably it still underpins the Characteristic Situation approach in BS8485: 2015 + A1: 2019: 2019.

Geoff and Steve thought it was about time the agenda was moved on and reduced the inherent over conservatism and often unnecessary use of gas protection in the industry. They will present a new approach for ground gas risk assessment, based on worldwide experience and guidance

Goeffrey B. Card, *Director, GB Card & Partners* and Steve Wilson, *Technical Director, EPG*

10.20 Panel and Audience Participation Discussion

10.40 Proven Active Soil Gas Sampling Techniques for Efficient Site Characterization, Vapor Intrusion Investigation and Mitigation

Recent advancements in the vapor intrusion field have significantly streamlined and improved the assessment process. Through the use of these new advances, the environmental professional can complete a thorough and accurate assessment of sub-slab vapor conditions in less time and at a lower cost. Information generated by an accurate assessment can then be leveraged using GIS applications to increase the understanding of a VOC source's age and the potential release mechanism.

Field activities associated with the assessments, which are typically completed within a week or less, can result in datasets consisting of as many as 200 separate sub-slab soil gas locations. Screening data obtained using common hand-held instruments allows these assessments to proceed very efficiently and cost effectively. The results of the screening assessments help to focus subsequent investigations. Case studies will be presented demonstrating the proven active soil gas sampling techniques for Efficient Site Characterization, Vapor Intrusion Investigation and Mitigation.

We will discuss:

- Considerations
- Active vs Passive
- Proven Sampling Techniques / Case Studies
- Family of Products
- Uses

Laurie Chilcote, *Vice President, VaporPin*

11.10 Morning Refreshments and Networking

11.40 Receptor Monitoring and Risk Assessment for Ground-Gas

With the publication of CIRIA C735 there is a much greater focus on the quality of gas protection measure installation and its validation. Where doubts remain regarding the quality of the installed gas protection installation or where validation reports are missing, developers face the risk of having unsaleable properties as planning conditions cannot be discharged. The available options available are limited to:

- a) Demolition and rebuild
- b) Retrofit measures where possible
- c) Receptor Monitoring and Risk Assessment

This presentation will discuss the context of inadequate gas protection installation and the available techniques and best practice for receptor monitoring and risk assessment. Case studies will be referenced

throughout including, high resolution sub-floor void monitoring, internal monitoring and sampling and how these can be used to inform risk management decisions for both new build and existing properties. Examples of common problems and poor workmanship will be provided.

Simon Talbot, *Managing Director, GGS*

12.10 Machine learning applied to ground gas and data analytics

- Taking advantage of the ever-increasing amounts of continuous monitoring & environmental data and combining with machine learning based tools
- Rapid gathering, processing & analysis of ground gas data with minimal human interaction
- Understanding the exciting potential capabilities of AI within the brownfield sector

Maryam Hussain, *Head of Data Analytics, AmbiSense*

12.40 Networking Lunch

13.40 Welcome Back

Hugh Mallett, *Technical Director, BuroHappold*

13.50 Vapour intrusion, latest trends and practices

Vapour intrusion is a challenging and rapidly evolving area of land contamination assessment. This presentation aims to provide practitioners with increased confidence in vapour intrusion decision processes and will discuss topics including the following: VI-CSM and key sources of uncertainty; divergence in approach to the assessment of volatile petroleum hydrocarbons and chlorinated solvents; and latest trends in vapour intrusion pathway assessment.

Dr John Andrews, *Associate Technical Director, RSK Environment*

14.20 Ground Gas Protection Measures

Peter Atchinson, *Managing Director, PAgotechnical Ltd*

14.50 Afternoon Refreshments and Networking

Case studies - Ground gas investigation, risk assessment and remediation

CASE STUDIES

15.10 Removing the Risk - Boo Hole Landfill Site

Boo Hole, a former landfill, was determined as statutory contaminated land under Part 2A of the Environmental Protection Act 1990, made on the basis of the potential significant risk to human health associated with migration of hazardous ground gas towards residential properties located on the eastern and southern boundary of the site. The landfill was historically worked as a sand quarry from circa 1893 for approximately 60 years. The quarry commenced accepting landfill waste from approximately 1971 until the 1990s when the site was closed and landscaped.

Michael Moore P, *Environmental Health Senior Officer, Public Protection, Rochdale Metropolitan Borough*

CASE STUDIES

15:40 Remote Sites, Remote Monitoring and New Technology to Make Better Risk Management Decisions

The “norm” within our industry is changing. New technologies are emerging which will enable us to more cost effectively characterise sites and the risks associated with the contamination present. On remote sites, simple transport costs of getting to site can be timely, costly, unsustainable and also present unacceptable worker

health and safety risks. Our work looked at using remote telemetry and new monitoring techniques to better characterise the long term risks associated with contamination at a coastal site and, through the interpretation of this improved data set, develop a pragmatic and robust risk management solution for the site.

Tony Windsor, *Technical Director and Environmental Risk Management Specialist, Arcadis*

16:10 Case Study

16:40 Closing remarks from the Chair

Hugh Mallett, *Technical Director, BuroHappold*