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Continuous Ground Gas Monitoring

Simon Talbot, Managing Director, Ground-Gas Solutions Ltd

14th May 2019

Birmingham and Midlands Institute

Refreshments at 6.00pm for a 6:30pm start

Many guidance documents have been published on the topics of ground-gas generation, migration and associated hazards since the Loscoe event of 1986. The public inquiry held into this event identified the source-pathway receptor model that is used today. It also identified migration drivers, such as falling atmospheric pressure, as a fourth factor that affects ground-gas contamination.



Since 1986 there has been a steady evolution in monitoring equipment, techniques and the understanding of ground-gas behaviour. However, as shown by the 2013 Gorebridge incident ground-gas contamination events still occur with significant consequences. The Gorebridge incident resulted in 22 people attending A&E or their GP for serious health impacts associated with carbon dioxide poisoning. The remedial action involved the demolition of 64 properties.



In 2009 continuous ground-gas monitoring was an esoteric research technique. Today, it is widely adopted and has been used on thousands of sites in the UK and elsewhere.

This presentation evaluates over twelve years' worth of continuous ground-gas monitoring experience and considers how the technique has provided a greater understanding of ground-gas behaviour, hazards and appropriate protection for new developments. Specifically, the presentation covers the following elements:



- The ground-gas hazard
- Key properties of ground-gases
- Spot monitoring and continuous monitoring
- Additional lines of evidence and interpreting flow data
- Continuous monitoring for validation
- Gorebridge case study



About the Speaker: Simon is a founder and managing director of Ground-Gas Solutions Ltd (GGS). With over thirty years' experience as a professional geologist, Simon has devoted more than twenty years to ground-gas contamination issues and innovative environmental monitoring methodologies. Simon is a chartered engineer through the Institute of Materials, Minerals and Mining and is a Fellow of the Geological Society. In 2006 a successful collaboration with the University of Manchester led to the development of the continuous ground-gas monitoring and in 2009 Simon founded GGS. GGS is now the UK's leading consultancy specialising in continuous ground-gas monitoring and risk assessment. Simon regularly contributes to specialist training events and speaks at national and international conferences on ground-gas contamination issues. He is the author of a number of guidance documents and papers.

Forthcoming Talks: The WMRG is constantly on the lookout for fascinating talks. If you would like to present, or know someone who is willing, please contact the WMRG committee (details below) and we will try our very best to accommodate your requests.

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