



Land Condition Symposium 2019

Sponsored by



Pendulum Hotel, Manchester

27th March 2019



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About the IES



The Institution of Environmental Sciences is a membership organisation representing environmental professionals from across the full spectrum of environmental disciplines.

The IES is a membership organisation which represents and supports professionals in fields as diverse as land condition, air quality and marine science, wherever you find environmental work underpinned by science.

The Institution leads the debate, dissemination and promotion of environmental science, and champions an evidence-based approach to decision and policymaking, to stand up for science, scientists and the natural world.

The IES believes the application of scientific principles deepens our understanding of the natural environment and sustainable development.

Committed to excellence, the IES exists to serve its members and the public, constantly seeking innovation and distinction in the services it provides.

In upholding the standards and importance of the profession, we maintain a position not only to advocate for environmental science, but to act as a catalyst for improvement. We seek to identify an inspirational vision for the profession as a whole and the strategic direction to implement this.

Land Condition experts make up one of the largest specialisms within our membership. In 2017, we launched a new land condition community to coordinate our work in this area.



Professionalism



Sound Science



**Quality assurance
Responsibility**



**Equality
Equity**



Integrity

Symposium programme

09:30	Registration & Refreshments
09:50	Welcome from the Chair - Charlie Knox, Paragon Building Consultancy Limited
10:00	Geotechnical issues on brownfield sites: A case study - Katie Foster and Mark Hinsley, RSK
10:30	Collection of large datasets, CSM and the use of innovative techniques - Nik Dixon, Sweco
11:00	Brownfield Ground Risk Calculator: A new land redevelopment feasibility planning tool for evaluating sub-surface abnormality - Darren Beriro, British Geological Survey
11:30	Refreshments & Networking
12:00	Who's responsible for onsite waste? - Angus Evers, Shoosmiths LLP
12:30	Contaminated sediments and the policy gaps - Cecilia MacLeod, University of Greenwich
13:00	Lunch
13:50	Welcome back from the Chair – Charlie Knox, Paragon Building Consultancy Limited
14:00	Technical solutions for creating CSMs - Judith Nathaniel, Land Quality Management Ltd
14:30	In-situ thermal remediation in the UK and mainland Europe: State of practice and technology innovations - Quentin Hulm, Cornelsen
15:00	Remediation options for sites with restricted access or sensitive receptors and the use of injectable substrates - Jack Shore, Regensis
15:30	Refreshments & Networking
16:00	Emerging contaminants in the environment PFAS/PFOS - Dr Ian Ross, Arcadis
16:30	Historical VOC contamination: Testing and remediation options on 'built sites' - Sarah Mortimer, EPG
17:00	Symposium Close



Speakers

Symposium Chair



Charlie Knox
Director, Paragon Building Consultancy

Charlie Knox is a Chartered Environmentalist with the IES and is the Director of the Environmental & Sustainability department at Paragon Building Consultancy.

Paragon is a leading independent building and project consultancy, who provide advice during the transactional, development and management stages of building projects. Charlie delivers pragmatic advice on key issues relating to the natural and built environment to her clients. She plans and project manages tailored programmes of work to address risk, uncertainty, liability and legal obligations associated with contaminated land, her experience ranges from environmental due diligence to site remediation and verification in the UK and mainland Europe.



Katie Foster
Principal Geo-environmental Consultant, RSK

Katie is a Chartered Environmentalist and Specialist in Land Condition with almost 14 years' experience as an environmental consultant at RSK Environment Ltd. She has particular experience in contaminated land assessment, risk assessment, and the design and management of intrusive site investigations.

Katie has gained her experience in geo-environmental engineering both in the UK and abroad, including UAE, Iraq and Kazakhstan. Through her dedication to promote quality and competence in the industry, Katie has taken on the role of technical lead for site work fundamentals for RSK geosciences business.



Mark Hinsley
Associate Director, RSK

Mark joined RSK Environment Ltd in 2014, initially in Iraq, but subsequently in the UK, in a troubleshooting role assisting RSK northern teams with challenging infrastructure and remediation projects.

He has 28 years of experience in the contaminated land sector, within the UK, Republic of Ireland and Iraq, working for a variety of environmental consultancies, including the remediation of several landfills. He is RSK Geoscience Technical Lead for Earthworks.



Nik Dixon
Technical Director, Sweco

Nik is Technical Director at Sweco with 25 years of practical experience in the contaminated land industry. His current role as Technical Expert for Sweco UK's Contaminated Land business focuses on the selection and application of innovative and traditional remediation technologies, as well as the integration of risk assessment techniques. His role is to promote innovative, modern approaches incorporating the application of sustainability principles within the commercial environment of brownfield development.

A recent project has focused on developing accessible data collection and processing methods to enable engineers and scientists to work with data easily, whilst increasing the options for cross-referencing and presentation from diffuse sources.



Darren Beriro
Senior Geoscientist, British Geological Survey

Darren is a Senior Geoscientist at British Geological Survey. For the last five years his work has focused on improving the utility of geoscience in brownfield redevelopment projects. Darren's research interests are multi-criteria decision analysis using spatial data for landuse decision making, human exposure to soil contaminants and predictive modelling of geochemical data.

For 10 years prior, Darren worked for regional consulting firms providing advice on risk-based land management and environmental assessments for construction projects. Roles he held include Director and Principal Environmental Consultant.



Angus Evers
Partner, Shoosmiths LLP

Angus is the head of environmental law at national law firm Shoosmiths. He is an experienced environmental lawyer whose practice covers all aspects of environmental law from contaminated land to waste, climate change, renewables, nuisance, water pollution and asbestos. He also has expertise in related areas such as energy, health and safety, and planning.

Angus advises developers and operators of, and investors in, real estate, infrastructure, and other businesses on transactional, regulatory and contentious issues, regularly working alongside real estate, commercial, regulatory, corporate, projects and EU/competition teams.

Angus has led Shoosmiths' environmental law practice since 2016, having joined the firm from King & Wood Mallesons (formerly SJ Berwin). He is also one of the Convenors of the UK Environmental Law Association's Waste Working Party and a Fellow of the Royal Society of Arts.





Cecilia MacLeod
Programme Leader,
University of
Greenwich

Cecilia returned to academia in April 2018 after 15 years in environmental consulting. She has over 30 years of experience working in the contaminated land sector with significant experience assessing contaminated sediments and the bioavailability of contaminants.

Cecilia began her career at the USGS where she worked evaluating anthropogenic impacts on aquifers and in surface water systems. In the UK, while employed by Imperial College, Cecilia began working in river and estuarine environments, examining the treatment of contaminated sediments for potential re-use. This work continued at the University of Greenwich.

While at Arcadis, Dr MacLeod led a team to develop guidance on sediments for the Petroleum Institute and its members.

Cecilia was Chair of the CIRIA Steering committee for a research project leading to, CIRIA C781 Contaminated sediments: a guide for risk assessment and management.



Judith Nathaniel,
Principal Environmental
Scientist, Land Quality
Management Ltd

Judith is the Principal Environmental Scientist and Company Secretary at LQM. She trained as a geologist and has over 25 years of environmental consulting experience. She has worked in all aspects of contaminated land management including practical site investigation, data analysis, risk assessment, risk management selection and remediation.

She is particularly interested in data visualisation and analysis in order to better understand the risks at potentially contaminated sites.

She worked with Keynetix Ltd to develop the first UK conceptual site modelling software, KeyCSM. She has worked on multiple projects requiring analysis of environmental data using tools such as QGIS. Judith was project director on an Innovate UK project using geological and open datasets to assess renewable energy feasibility.

She is currently collaborating with BGS to add conceptual modelling capabilities to Groundhog.



Quentin Hulm
Managing Director,
Cornelsen

Quentin is a founder and Managing Director of Cornelsen Ltd. With over 30 years' experience, his early career included the US EPA Emergency Response Team and Handex of New Jersey. During this time, he began to specialise at an early stage in conceptual remediation system design and implementation, and project management of process-based remediation systems and sites.

Having returned to the UK to join Dames and Moore in 1991, he left after 5 years to join Ground Remediation Systems Ltd as their first employee. Quentin developed the business over a period of 8 years as General Manager before establishing Cornelsen Ltd in 2004.

Aside from the administration of the business, Quentin's primary role is to foster a platform for growth. This has included diversification into waste water and industrial water treatment and developing Cornelsen into the foremost provider of thermal remediation solutions in the UK. Quentin remains firmly involved in the technical direction of the business, its technologies and processes.



Jack Shore,
District Manager, UK and
Scandinavia, Regenesi

Jack is the District Manager for REGENESIS in the UK, Ireland and Nordic Countries. In this role, he provides clients with remedial solutions to groundwater impacted with a range of contaminants in a variety of geological settings.

Jack has twelve years of experience in the remediation industry, initially joining REGENESIS as a Remediation Engineer responsible for site management and injection work within Northern Europe. Prior to this, he gained experience as both a remediation contractor and environmental consultant, giving him a broad perspective of the contaminated land industry and the remediation requirements of his clients.



Ian Ross
Senior Technical
Director, Arcadis

Ian Ross, PhD, is a Senior Technical Director and Global, In Situ Remediation Technical Lead / Global PFAS Lead at Arcadis. At Arcadis, he has worked designing and implementing innovative chemical, physical and biological remediation technologies. He is currently focused on risk management and remediation of per- and polyfluoroalkyl substances (PFASs), with 14 years of experience working on PFASs projects.

Ian has experience with multiple physical, chemical and biological treatment technologies and has won several national and international remediation awards for designing their application. His focus for the last 4 years has been on PFASs. He was part of the team authoring and reviewing the CONCAWE PFAS guidance document and has published several articles on PFAS analysis, site investigation and remediation, including a recent book entitled "Emerging Contaminants Handbook".



Sarah Mortimer
Associate, EPG

Sarah is an Associate at the Environmental Protection Group Limited (EPG). She has over 19 years' experience in the investigation and assessment of contaminated sites, specialising in permanent gas and vapour intrusion risk assessment.

Sarah has a degree in Engineering Geology & Geotechnics and is a Chartered Geologist. She is an Accredited Risk Assessor with SoBRA for the assessment of permanent gas and vapour intrusion risks.

Sarah has been responsible for investigating and assessing some of the most challenging gassing sites in the UK and is one of the authors of CL:AIRE Research Bulletin 17, which underpins the assessment of gassing sites using TOC data.



Our exhibitors



FLI-QDS Remediation is a Specialist In-situ and Ex-situ Remediation Contractor focused on soil and groundwater remediation.

Our remediation solutions help manage legacy issues. Mitigating the risks posed by historic contamination and land use. We design, trial, and implement solutions to achieve your goals, based on each unique set of soil and groundwater contamination challenges.

Our highly experienced multidisciplinary team provides wide ranging capability, allowing us to apply the full range of in-situ and ex-situ methods, from straightforward excavation, segregation/ disposal, to high technology solutions using thermal techniques and chemical oxidants.

With a long and successful track record in soil and groundwater remediation, our combination of technical, chemical, hydrogeological and process engineering specialists enables us to deliver in-situ and ex-situ remediation packages for 'design and build' solutions; or supply of equipment/ plant for a client managed project.

With QDS at your side, you can be assured of a high-quality remediation service regardless of the scope or scale of your site.

www.fli-qds.co.uk



AmbiSense is a technology company operating in the environmental sector. We build real-time sensor platforms to generate unique insight about a multitude of industrial & environmental processes.

Our mission is to use technology to solve complex environmental problems. Our expertise includes instrumentation design, platform integration, data management, visualisation & analytics alongside our proprietary technology products such as GasfluX™, the world's first real-time continuous ground gas risk assessment & monitoring platform.

www.ambisense.co.uk



Environment and Agrifood

Our strengths range from environmental governance and risk, to food security. We work with global and domestic agriculture and food companies, environmental agencies, and governments to ensure that our research benefits all in society.

We combine our scientific expertise in the management of water, soil and biodiversity with world-class innovation in environmental engineering and business management. We are experts in environmental governance and sustainability, natural resource management, agriculture and land management, energy and the environment, environmental engineering for the treatment of water, wastes and contaminated soils and environmental health and food.

Our postgraduate Environment and Agrifood programmes, including MSc Land Restoration and Reclamation and MSc Environmental Engineering, give the leaders of the future the skills and vocational experience with industry they need to make a difference.

Our near-industrial scale research facilities are unparalleled. These are combined with continual and substantive investment in our students, staff and infrastructure.

www.cranfield.ac.uk/environmentandagrifood



Enviro-treat has successfully provided practical and cost-effective remediation solutions to enable development of Brownfield sites for over 20 years. Over this time, Enviro-treat has been engaged by a wide range of clients for the remediation of over 150 sites allowing for subsequent redevelopment and providing a range of single and mixed end uses including residential, commercial and retail. Enviro-treat has increased its offerings by the development of new technologies and delivery approaches to meet ever changing regulatory conditions, client and market requirements.

At the core of the Enviro-treat process is the E-Clay Technology which has been successfully applied in the treatment of contaminated groundwater through the design and installation of Permeable Reactive Barriers and soils through E-Cay Stabilisation. These treatment capabilities have been enhanced by incorporating fixed Soil Treatment Recycling capability as well as a range of other remediation techniques and enabling work packages.

www.enviro-treat.com



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E3P is a specialist, multi-disciplinary partnership, providing expert land development consultancy across three key technical areas; Environment, Engineering and Ecology.

We're different because we dig deeper. Whether it's going further to hire the very brightest minds or developing innovative, cost-effective, safe and sustainable solutions.

From innovating technology to inspiring clients, we've built our reputation on doing things differently.

Our fast-growing team provides the highest standards of scientific expertise with a down to earth approach. This helps sectors as diverse as property development, construction and demolition, investment and divestment, industrial, manufacturing, planning and energy, achieve their goals.

www.e3p.co.uk

REnvTech

FORGED IN THE FIELD, SET APART BY SKILL

Registered Environmental Technician denotes professional attainment for technicians within the environmental sector, spanning the breadth of academia, government, industry, consultancy and beyond.

Value to You	Value to Employers	Value to Society
Enhanced employability and greater career prospects	Opportunity to strengthen and support employee development	Maintain a highly skilled, trained and valued workforce
Recognition of technical expertise and experience	Raise professional recognition of your organisation	Ensure sustained technical innovation and prosperity
Professional status and use of the post-nominal REnvTech	Empower your employees and boost career satisfaction	Address the increasing demand for newly trained technicians
Access to an active network of environmental technicians, scientists and professionals	Lead the way in promoting growth and innovation within your sector	Uphold specialist expertise and knowledge pivotal to scientific and technological research

Applicants can hold any IES membership grade. Minimum requirements are two years' relevant professional experience and a Level 3 qualification.

More information www.the-ies.org/technician +44 (0)20 3862 7484

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