

# Groundwater

## Managing our Hidden Asset



13 – 14 September 2016, University of Birmingham, UK

A two-day conference to celebrate the International Association of Hydrogeologists 60<sup>th</sup> anniversary and the Geological Society Year of Water. The conference incorporates the **Ineson Lecture** and re-launch of **Groundwater our Hidden Asset** supported by the Groundwater Forum.

Confirmed conference speakers and titles below with 30 confirmed posters:

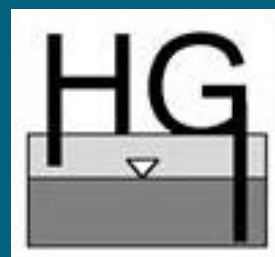
**Tuesday 13-Sep-2016**

**Registration 9:00 am to 10:00 am**

**Speaker Affiliation Title**

**AM: Session 1 Groundwater and energy**

Alistair Wyness	IPIECA	2030 Water Visioning for the Oil and Gas Sector
TBC	Advisian	Water challenges in hydrocarbon exploration and production : recognising and integrating the full value of water management
Simon Mathias	University of Durham	Impact of maximum allowable cost on CO2 storage capacity in saline formations
Mark Lee	Atkins	Groundwater considerations for new energy generation infrastructure
John Black	In Site Hydro	A new approach to understanding and characterizing groundwater flow in low permeability fractured crystalline rocks
Lindsay McMillan	University of Birmingham	Inverse modelling to understand contaminant transport experiments in a highly heterogeneous shear zone at the Grimsel Test Site in Switzerland
Rachel Bell	BGS	Shale gas groundwater baseline investigations in north west England
Catherine Isherwood	RSKW	Development of a screening method to assess potential impacts on groundwater resources from shale gas developments



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*Tim Besien*

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**Venue**

Bramall Music Building auditorium  
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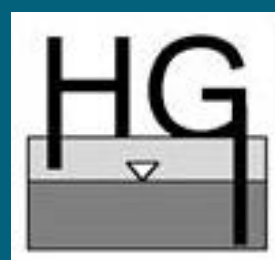
Tuesday 13-Sep-2016

<u>Speaker</u>	<u>Affiliation</u>	<u>Title</u>
<b>PM: Session 2 Groundwater resources</b>		
David Secombe	Environment Agency	Groundwater Resources and the Water Framework Directive
Will Rust	Cranfield University / Atkins	Multi-scale climate control on groundwater risk: A Synthesis
John Bloomfield	BGS	Is there any evidence for changes in the nature of groundwater drought in the UK since 1890?
Simon Cook	Southern Water	Modelling Groundwater Source Deployable Outputs in Severe Droughts
Kirsty Upton	BGS	Multi-scale modelling of boreholes yields for Deployable Output assessment in Chalk aquifers
Mike Jones	Thames Water	What's in store for managed aquifer recharge?
Donal Neville	GWP	Semi-arid Groundwater Resources, Goldfields, Western Australia – Valuing the Potential Yield of Metasedimentary Fractured Rock Aquifers
Griet Heuvelmans	Flanders Environment Agency	A method for quantitative status assessment of confined groundwater bodies

Re- launch of the revised edition of “**Groundwater our hidden asset**”

**Whitaker Medal** presentation to Professor John Tellam

Followed by a **Drinks Reception** with poster presentation and **Evening Dinner** supported by our sponsors *rshydro* and *Van Walt*



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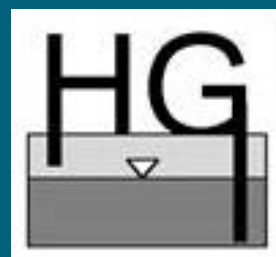


Wednesday 14-Sep-2016 Registration 9:00 am to 9:30 am

**Speaker**      **Affiliation**      **Title**

**AM: Groundwater and ecosystem services**

Tim Johns	Environment Agency	Integrating geology and groundwater ecology: an overview of UK studies
Anne Robertson	University of Roehampton	Stygobite grazing on groundwater biofilms
Alex Gallagher	Wardell Armstrong	Geological controls on alkaline fen habitats – insights from quarrying in the Peak District
Debbie White	BGS	Hydrogeochemical investigations of an acidic coastal dune system, Winterton-on-Sea, Norfolk
Angela Haslam	Environment Agency	Quantifying combined atmospheric and groundwater nutrient deposition pressures at groundwater dependent terrestrial ecosystems
Arnaud Duranel	University of St Etienne	Integrated hydrological modelling of a groundwater-dependent valley mire in central France
Mike Streetly	ESI	Combining observed relationships between abstraction and aquatic ecology with groundwater models to assess the effectiveness of water resource management options



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**2016 Ineson Lecture Future challenges in groundwater management: What can we learn from the past?** by Prof. Georg Teutsch, Scientific Managing Director of the Helmholtz Centre for Environmental Research UFZ, Leipzig

Professor Georg Teutsch holds a M.Sc. degree from the

University of Birmingham (1980) and a PhD from the University of Tübingen (Germany). He has been a Professor of Geohydrology at the University of Stuttgart and has held a Chair in Hydrogeology at the University of Tübingen since 1993. His 35 years professional experience in academia and practice cover many fields from water resources assessment and water planning in a variety of environments, including semi-arid and arid regions, to groundwater quality and contaminant remediation using innovative technologies.

Georg Teutsch has always been interested in the quantitative aspects of hydrogeology and has continuously promoted model-based integrated studies using a combination of hydrogeological, geophysical, geochemical and economical methodology. In 2004, he was appointed to the position of Scientific Managing Director of the German National Environmental Research Centre (UFZ) with the headquarter in Leipzig.

Since 2015 he chairs the Partnership for European Environment Research (PEER), a network of the largest Environmental Research National Labs in Europe with more than 3000 scientists. He is a key advisor for the Water Research Programs at national, European and international level.

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Wednesday 14-Sep-2016

Speaker	Affiliation	Title
<b>PM: Groundwater quality</b>		
John Tellam	University of Birmingham	An overview of the implications of some recent study findings relating to sorbing groundwater solute transport in English Triassic Sandstone
Elisa Clagnan	Teagasc, Environmental Research Centre, Ireland	Nitrogen-loss, source, transformation and attenuation in groundwater within an intensive dairy farm in SE Ireland
Katya Manamsa	BGS / Environment Agency	Temporal variability of Micro-organic contaminants in lowland chalk catchment
Richard Carter	Richard Carter & Associates	Water security for the poor in Africa: the UP-Gro research programme
Tim Besien	Environment Agency	Delivering the groundwater quality objectives of the Water Framework Directive in England
Michael Rhodes	Mott Macdonald	Groundwater protection and monitoring for large infrastructure development in multiple aquifers in London: The Lee Tunnel
James Watson	Environment Agency	Cost-benefit assessment for remediating a large-scale chlorinated solvent
Rob Ward	BGS	The importance of establishing a baseline for groundwater quality in connection with shale gas: Vale of Pickering, UK

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[http://shop.bham.ac.uk/browse/extra\\_info.asp?compid=1&modid=2&deptid=28&catid=64&prodid=1261](http://shop.bham.ac.uk/browse/extra_info.asp?compid=1&modid=2&deptid=28&catid=64&prodid=1261)

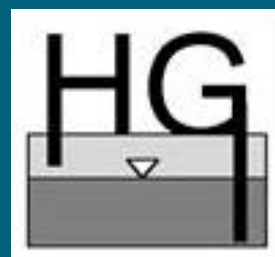
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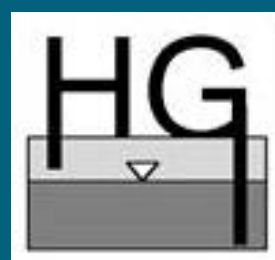


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### Confirmed poster titles:

<u>Author</u>	<u>Affiliation</u>	<u>Title</u>
Sarah Alexander	University of St Andrews	Use of modelling to investigate geothermal potential in Fife, Scotland
Johanna Scheidegger	BGS	Paleo- permafrost and groundwater systems in the UK over the past 1 Million years
Ilias Karapanos	Affinity Water	Abstraction and Recharge mechanisms in karstic chalk groundwater catchments - A case study in Hertfordshire
Ben Harvey	University of Birmingham	Modelling colloid facilitated radionuclide transport in a shear zone in fractured granodiorite at Grimsel Test Site, Switzerland
Andrew McKenzie	BGS	The KINDRA database of Groundwater Research
Geraint Burrows	Groundwater Relief	The Pocket Dipper – changing the way groundwater is monitored
Lee Knight	University of Newcastle	The Aquatic Invertebrate Fauna of the Ogof Draenen Cave System in South Wales
Jim Entwistle	University of Newcastle	Biologically mediated abiotic degradation of chlorinated solvents using Fe-bearing clay minerals
Kath Rothwell	University of Newcastle	Organic contaminant reduction at the clay mineral -groundwater interface
Steve Howe	Southeast Water	Groundwater Catchment Investigation & Management – A Water Company Initiative
Giles Bryan	Environment Agency	Reducing nitrate and phosphorus loading across Wessex to deliver WFD Objectives. A Case study of Poole Harbour and Hampshire Avon
Mark Cuthbert	University of Birmingham	The influence of dispersion at a steady saline-freshwater interface on contaminated coastal groundwater discharge



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POSTERS

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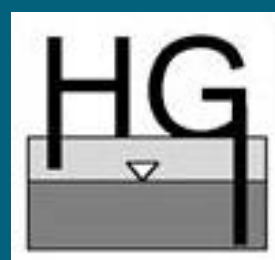
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Alison Carruthers	Mott Macdonald	Understand your contamination, build a good conceptual model, minimize the risk of getting it wrong
Vivien Dent	RSK	Controlled waters detailed quantitative risk assessment, sustainability assessment and cost benefit analysis: former oil storage terminal, UK
Christopher Barry	University of Birmingham	Pragmatic model representation of DNAPL source zones in risk assessment models
Neil Suttie	University of Birmingham	Monitoring and interpreting the migration of manufactured nanoparticles in porous media using magnetic susceptibility measurements
James Watson	Environment Agency	Investigating cost beneficial catchment management actions to address elevated nitrate concentrations in chalk public water supplies in South Cambridgeshire
Timothy Batty	University of Birmingham	Examining the Use of the Partition Coefficient in Quantifying Sorption of Heavy Metals in Permo-Triassic Sandstone Aquifers
Mahmoud Jaweesh	University of Birmingham	Searching for Geochemical Property / Lithofacies Correlations in a Redbed Continental Sandstone
Laura Edwards	Environment Agency	Innovative use of LCMS scan technology in the Environment Agency's Groundwater Quality Monitoring Network
Emily Crane	BGS	A national-scale assessment of micro-organic contaminants in groundwater of England and Wales
Simiao SUN	University of Birmingham	Where is the LNAPL mass? Laboratory study on LNAPL dynamics in porous medium under cyclic water table fluctuations
James Watson	Environment Agency	Investigating cost beneficial catchment management actions to address elevated nitrate concentrations in chalk public water supplies in South Cambridgeshire

POSTERS



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Lindsay McMillan	University of Birmingham	Insights from proximal multilevel sampler transects on monitoring well sample origins in a DNAPL source zone
Juan Mujica	University of Sheffield	Microbial dynamics and biofilm development in contaminated aquifers
Omar Al Azzo	University of Birmingham	The Reductive Dissolution of Haematite from English Triassic Sandstone Samples
Naomi Mawby	University of Birmingham	Characterisation of a Tritium Plume at the Beach Seepage Receptor near a legacy UK nuclear site
Helen McKenzie	Sellafield Ltd	Assessment of Nitrogen Species in Groundwater at Sellafield Site as an Indicator of Plume Characteristics
Vivien Dent	RSK	Site assessment and controlled waters detailed quantitative risk assessment: former electroplating works, UK

### International Association of Hydrogeologists John Day award winner

David Walker	University of Newcastle	The vulnerability of the shallow groundwater resource in Molototsi catchment, Limpopo Province, South Africa
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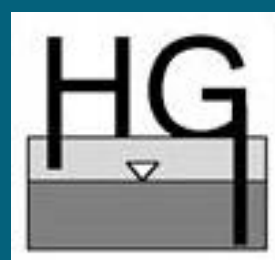
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