

Hybrid Conference

27 - 28 October 2026

Water as a Critical Geological Resource

CONFERENCE PROGRAMME

The Geological Society

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AtkinsRéalis is a global engineering and project management consultancy with strong expertise in water, geology, and hydrogeology. The company delivers integrated solutions for groundwater assessment, aquifer characterisation, contaminant transport and engineering hydrogeology, supporting sustainable water resource management and regulatory compliance. Our teams apply advanced modelling, field investigation, and risk assessment techniques to address challenges such as water scarcity, pollution, and climate resilience. Working across infrastructure, energy, and environmental sectors, AtkinsRéalis helps clients optimise water systems, protect geological resources, and develop robust, science-led strategies that balance development needs with long-term environmental stewardship.

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- AtkinsReális led the multidisciplinary development of the UK's first major new surface water reservoir in over 30 years on behalf of Portsmouth Water, through to planning.
- Developed the outline design for the 8.7 billion litre reservoir and associated infrastructure.
- Managed and integrated outline design phase geotechnical, geological and hydrogeological investigations to inform design and construction.
- Engaged with regulators, statutory consultees and key stakeholders to support project development and consenting.
- Appointed as Design Guardian during detailed design and construction, providing independent design scope assurance and technical support to Portsmouth Water.
- Providing NEC4 Supervisor services during construction, overseeing quality compliance, testing, inspection and verification that the works meet the specified requirements.

Tuesday 27 October		
0915 - 0945	Registration opens, tea & coffee	
0945 - 0955	Welcome address	
Session one: Regulation, Risk & Protection		
0955 - 1045	**Keynote:** Water for the Future: securing a critical resource for people, nature, and growth	Leonore Frear, *Environment Agency*
1045 - 1110	Water Trading – can we make it work more effectively in the UK	Rachel Dewhurst, *Stantec*
1110 - 1135	Hydrogeological Risk Assessment for Sustainable Development of Conservation Zones	Soumya Batchali, *AtkinsRéalis (Virtual)*
1135 - 1145	Lightning talks	
1145 - 1210	Tea & coffee break	
1210 - 1235	Predicting groundwater contamination risk for a karstic quarry in the Edwards Aquifer Recharge Zone: a geospatial analysis of post-mining reclamation scenarios	Kaitlyn Tran, *Austin Community College (Virtual)*
1235 - 1300	Best Practices for the continuous Inspection, Testing and Monitoring of Groundwater Abstractions, to safeguard it as a Critical Resource	James Watson, *OGI Groundwater Specialists Ltd*
1300 - 1325	Problem to Resource: Smart Water Communities and the Role of Sports Turf in Delivering Water Resilience	Anthony Hanson, *Environmental Solutions International Ltd*
1325 - 1425	Lunch and posters	
1425 - 1510	**Panel Discussion: What can we do to successfully address the water conundrum facing our world?** Water is the elixir of life and is crucial for sustaining life, livelihoods, and nature on earth. It is a critical strategic asset needed for human civilisation to persist and thrive. We know that water sustains life, but it can also destroy lives and inflict irreversible damage on people and nature, if not carefully managed. It is vulnerable and prone to be abused by humans through excessive usage and polluting activities. Wars have been fought and are still being fought in some form over access to water. Water has, and is being used as a weapon of deprivation, subjugation, and underdevelopment. But there are emerging opportunities in science and technology that could be beneficial to how we manage water if we align water policy and regulation to take advantage of these new developments.	Chaired by: Michael Kehinde Holger Kessler, AtkinsRéalis Sofie de Volder, TRAQUA Rachel Dehurst, Stantec Alan MacDonald - BGS
1510 - 1535	Groundwater as critical resource during drought: examples from Africa and Asia	Alan MacDonald, *British Geological Survey*
1535 - 1600	The Water Risk Immune System: A Framework to Enable Proactive Water Management and Decision-Making	Matthew Damhuis, *Acqua Rinova Group (Pty) Ltd (Virtual)*
1600 - 1625	Tea & coffee break	
1625 - 1650	Management of basal aquifers on small volcanic islands: A case study of Graciosa Island	Francisco Cota Rodrigues, *CIBIO-Azores*
1650 - 1715	More water for everyone? Efficient irrigation and other myths explored	Mal Graham, *Mott MacDonald*
1715 - 1725	Summary of day one	
1725 - 1830	Drinks Reception	

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Wednesday 28 October		
0915 - 0945	Registration opens, tea & coffee	
0945 - 0955	Welcome address	
Session two: Tools and data-driven approaches		
0955 - 1045	**Keynote:** The Evidence Beneath Our Feet: Turning Data into Action for Water, Nature and Society	Ellie Powers, *Affinity Water*
1045 - 1110	The benefits of a hybrid machine learning and physical model approach to predicting groundwater flows in Chalk catchments in England and infiltration to sewers	Mark Fermor, *GeoSmart*
1110 - 1135	Rinova Nexus AI: An Agentic Intelligence Platform for Mine Water Data, Compliance and Decision Support	Matthew Damhuis, *Acqua Rinova Group (Pty) Ltd (Virtual)*
1135 - 1200	Tea & coffee break	
1200 - 1225	A National Groundwater Nitrogen Inventory for England: data driven tools to inform risk based regulation and groundwater protection	Craig Speed, *Environment Agency* & *Gareth Usher, SLR Consulting*
1225 - 1250	Geochemical Characterization of Ore and Waste Materials at Cu-Mo Porphyry Deposit: Implications for Acid Rock Drainage and Metal Leaching Management, Peru	Albert Murillo, *Colegio de Ingenieros del Peru (virtual)*
1250 - 1255	Virtual Poster Presentations	
1255 - 1355	Lunch and posters	
Session three: Water as a commodity, resource, or tool		
1355 - 1420	Navigating the Regulatory Landscape: Environmental Permitting for Groundwater Dewatering Operations Across the United Kingdom	Ashleigh Vause, *OGI Groundwater Specialists*
1420 - 1445	Geological Interpretation to Resource Assurance: Evidence-Based Management of aVulnerable Chalk Supply	Carl Gilbert, *Tetra Tech* & Simon Deacon, *Portsmouth Water*
1445 - 1510	Mineral, Spring or Table? The Hidden Story Behind Your Bottle of Water	Shona Symon & Jenny Harrison, *Envireau Ltd*
1510 - 1535	Tea & coffee break	
1535 - 1600	Adsorptive Removal of Zn(II) Ions from Polluted Water Using an Eco-friendly Biomodified Cordierite/ZrO_2 Ceramic Microfiltration Membrane	Fatima Jmaito, *Ibnou Zohr University (virtual)*
1600 - 1625	Tracer testing and residence times for better resource management: two case studies in Geothermal Energy and Aquifer Storage and Recovery.	Sofie de Volder, *TRAQUA S.A.*
1625 - 1650	The Future of Water	Michael Kehinde, *Environment Agency* & James Dodds
1650 - 1710	Wrap up, publishing opportunities and closing remarks	

Poster Title	Author(s)
Can the application of remote sensing improve bathing water quality assessments?	Kiera McMahon, *University of Surrey*
Analysis of the surface water balance of the Chancay–Huaral basin using the SWAT model	Jhon Sotil Huamani Sanchez & Estefany Nycol Pasquel Rojas Pasquel, *Universidad Peruana de Ciencias Aplicadas*
Pesticide risk in groundwater	Aimee Fraser, *WSP*

Convenors:

- **Dr Michael Kehinde MBE CGeol** - Environment Agency
- **Phil Merrin** - Severn Trent Water
- **Rhiannon Marchi-Smith** - RMS Groundwater Strategies Ltd
- **Anna Besien** - Environment Agency

THANK YOU

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