



Water Special Interest Group

Future Water Treatment Conference

2nd to 3rd September 2025

University of Bath, Chancellor's Building

In partnership with:



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2nd September 2025

09:00 – 10:00 Registration

Level 2 Foyer

10:00 – 10:15 Opening Session CB2.6

Welcome presentation from Jon Chouler, Conference committee chair

10:15 – 11:00 Keynote Presentation CB2.6

Water Security: a foundation for health, wellbeing and prosperity

Professor Jan Hofman, Professor of Water Science and Engineering, Director of the Water Innovation and Research Centre, University of Bath

11:00 – 12:30 Parallel Sessions

1. Technological Advances in Potable Water Treatment CB2.6

Back to Ceramics – David Metcalfe, Drinking Water Practice Leader, Ramboll

The Next Generation of Ceramic Membrane – Barnaby Brampton, Senior Process Engineer, Nanostone

New Technologies to Manage Old and New Water Quality

Challenges – Peter Coutts, Senior Associate Process Engineer, Mott Macdonald

2. Water Reuse CB3.1

The Grand Union Canal Transfer Project - Bill Hinchliffe, Engineering Technical Lead, Hannah Bingham, Environmental Technical Lead & Tom O'Shea, Treatment Process Engineering Manager Severn Trent

Water safety planning on effluent reuse project, managing risk - a case study - Mandy Lester, Associate Process Engineer, AtkinsRéalis

Potable Water Recycling: A Social View – Dr Heather Smith, Cranfield University

12:30 – 13:30 Lunch



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13:30 – 15:00 Parallel Sessions

1. **PFAS Treatment and Destruction Technologies** CB2.6

Cutting-Edge Ion Exchange Technologies in Potable Water Treatment: Addressing Nitrate, Chromium, and PFAS Contaminants – Chris Bell, Product Manager, Ovivo

PFAS Group Chemicals – Search, Capture & Destroy. Puragen's award-winning technology for the abatement of PFAS using surface modified activated carbons and advanced thermal reactivation. – David Reay, Head of Strategic Partnerships, Puragen

Proven and Practical PFAS Treatment with Ion Exchange Resin - Learnings from the US – David Hayhurst, Purolite

2. **Digitalisation** CB3.1

Data enabled asset management and optimisation - Stuart Barefield, Head of Technical Development, Galliford Try

Digital Twin at Beckton Sewage Treatment Works – Glenda Pereira Romero, Principal Process Engineer, AtkinsRéalis

Advances in 3D CFD simulation for water industry applications – Sabrina Hafid, Application Engineer, Ansys

15:30 – 17:00 Parallel Sessions

1. **Nature-based Solutions** CB2.6

Building Homes vs Protecting Habitats: The Nutrient Neutrality Challenge – Ben Hazard, Principal Process Engineer, Stantec

Floating Wetlands – Galen Fulford, Managing Director, Biomatrix Water

Nature-Based solutions - Breaking through Barriers – Ralitza Nikolova-Kuscu, Senior Associate in Process Engineering, Mott MacDonald

2. **Chemical Engineering and Environmental Solutions** CB3.1

Rethinking Future Water Infrastructure: The Case for Biotic Engineering in a Risk-Averse Culture – Andy Loudon, Design Manager, RSE

Smarter Coagulant Selection; Getting the most out of digested sewage sludge – Nick Sutherland, Technical Manager Water Treatment Chemicals, ICL Group

Tackling Lead – Matt Jones, Public Health Manager, Wessex Water

15:00 – 15:30 Poster Session & Refreshments

18:30 – 23:00 Conference Dinner

Claverton Rooms, University of Bath campus.

Please arrive from 18:30 onwards for drinks and refreshments. Dinner will be served from 19:15.



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3rd September 2025

9:00 – 10:00 Keynote Presentation *Room CB2.6*

The Climate challenge in our water sector – a systems problem in need of urgent solutions. Are we, the engineers, ready to challenge our sector to plan and deliver practical solutions?

Maria Manidaki, Director – Climate Change and Sustainability, Mott Macdonald

10:00 – 10:30 Poster Session & Refreshments

10:30 – 12:00 Parallel Sessions

1. **Future Drinking Water Quality** *CB2.6*

Process improvement - future of water quality and treatment –
Bruce Jefferson, Professor of Water Engineering, Cranfield University

Managing drinking water quality in a changing world – Hugh Thomas, Technical Director, AtkinsRéalis

Big data vs better data (from satellites to sequencing) – Jay Bullen, Innovation Projects Manager, Anglian Water

2. **Wastewater Treatment Process Emissions** *CB3.1*

The Critical Path to Net Zero: A Chemical Engineering Perspective on Measuring and Mitigating Wastewater Treatment Process Emissions – Kenny McGibbon, Process Engineer, Mott Macdonald

Data driven decarbonisation - lessons from the front lines of process emissions monitoring - Bharani Sri, Process Emissions Monitoring Lead, Severn Trent

Anaerobic Digestion: Residual Biogas and Process Emissions – Steve Bungay, Senior Partner, AD Ingenuity LLP

12:00 – 13:00 Lunch



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13:00 – 14:00 Keynote Presentation *Room CB2.6*

Removing PFAS from drinking water: how forever are the forever chemicals?

Peter Jarvis, Professor of Water Science and Technology, Head of Centre:
Cranfield Water Science Institute, Cranfield University

14:00 – 14:15 Break

14:15 – 15:45 Parallel Sessions

1. **Challenges and Innovations in Water Treatment** *CB2.6*

Derisk and Accelerate: Breaking the Cycle of Trial, Trial and Trial Again - Jo Burgess, Trial Reservoir Director, Isle Utilities & Founding Director, Tech Ascend Foundation

Water treatment pre-mortem on the climate crisis - what will we say we should have done? – Steve Kennedy, Business Excellence & Innovation Director, MWH Treatment

Challenges to innovation in drinking water quality – Samantha Vince, Head of Supply Compliance & Steven Hurley, Head of Water Quality, Wessex Water

2. **Career Workshop: Pathways and Opportunities in the Water Sector** *CB3.1*

Join selected representatives from a range of career paths in the water sector for an exciting speed dating style session for a focussed and exciting Q&A session.

Open to all in any stage of their career!

15:45 – 16:15 Prize Giving & Closing *CB2.6*

Prize giving for poster and early career presentation contests. Followed by closing talk from Jon Chouler, Conference committee chair



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Early Career Flash Oral Presentations

Flash oral presentations will be delivered in sessions across the conference

Technological Advances in Potable Water Treatment		Water Reuse	
Innovative use of EBPR and HYBACS to Achieve Low Phosphorus Permit at Cross Hands WwTW	Matthew Tokaryk, Mott Macdonald	Mechanical Belt Treatment to increase wastewater treatment capacity and enhance water quality	Hamza Naeem, MottMacdonald
Dearne Reach Integrated Constructed Wetland	Amogh Kolvankar, MottMacdonald	Internet of Water; Multiparameter Water Quality Monitoring	Adrej Mosat, GOSPACE LABS
PFAS treatment and destruction technologies		Digitalisation	
Sustainable Copper Removal from Water Using Tea Leaves as a bio-adsorbent in Fixed-Bed Adsorption Systems: Modelling and Performance Evaluation	Belal El-Mashharawi, Mott Macdonald	Optimising Orthophosphate Dosing using data-driven approaches to address Plumbosolvency risks	Ganesh Anil, Bristol Water
Green Photocatalytic Systems for Water Purification: Synergistic and Self-Sustained Strategies Using Semiconductor and Conjugated Polymer Systems	Samuel Ashu Abey, University of Bath	Fouling detection with AI	Abdullah Albiladi, University of Manchester
Nature-based Solutions		Chemical Engineering and Environmental solutions	
Joining the dots: Catchment Level Approaches to Increase Nature-based Solution Adoption	Matthew Palmer, Severn Trent	Lead In Drinking Water: Factors Influencing Plumbosolvency In The Bristol Water Network	James Brammer, University of Bath
Biobullet dosing for the control of biofoulant, Zebra mussels.	Emmanuel Elegbede, Bristol Water	Mobile Organic Biofilm Process Intensification for Wastewater Treatment	Ethan Buldock, Mott Macdonald
Future Drinking Water Quality		Wastewater Treatment Process Emissions	
When the Sun Shines Too Much: Weather-Driven Algal Challenges at Purton WTW	Sedar Dogan, Bristol Water	The UK's First Large-Scale MABR Installation At Monkmoor STW	Emma Paterson-Stephens, Mott Macdonald
Drinking Water Quality Risk Assessments for UK Strategic Water Resources Options	Mark Poole, Mott Macdonald		



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Poster Presentations

Posters will be displayed in the Level 3 Foyer outside CB3.1

Composite Cellulose Aerogels For Oil And Water Treatment –

Nasser B.M.M.F. Ahmad, University of Newcastle

Ecological Functioning And Biodiversity Within Constructed Wetlands For Wastewater Reclamation - Madelyne McCarthy,

University of Bath

Dark Fibre 2 - Jaimison Milne, Severn Trent

Broadholme WRC, Meeting Growth, FFT Increase & Low Total P

Using Low Footprint Technologies - Duncan Paterson, Mott Macdonald

Portable PFAS Sensors: Hybrid Aptamer-Mips For Electrochemical Detection - Evan Johns, University of Bath

Ozone/GAC Pilot Plant For Taste And Odour Removal - Lewis Cameron, Mott Macdonald

Inherently Stable Two-Dimensional Siloxene Membranes For Molecular Separations - Dinesh Mahalingam, University of Bath



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