

EUROPEAN WASTEWATER MANAGEMENT CONFERENCE & EXHIBITION

4 - 5 July 2023 | The Point at Emirates Old Trafford, Manchester | Online

Event Sponsors



Tuesday 4th July

CONFERENCE OPENING & KEYNOTE PLENARY

09:30 – 10:05

Conference Opening – Matthew Smyth, Technical Director Aqua Enviro

Keynote Speaker: This changes everything: the coming climate reckoning

Rupert Read, Associate Professor of Philosophy, University of East Anglia, UK

Chair: Amanda Lake, Head of Carbon & Circular Economy, Jacobs

Room 1

NET ZERO & PROCESS EMISSIONS

Chair: Ajay Nair, Global Director of Technical & Commercial Strategy, Microvimeo

Room 2

NUTRIENT REMOVAL & RECOVERY

Chair – Rowland Minall, Technical Specialist, Stantec

Room 3

COMPLIANCE & PROCESS OPTIMISATION

Chair: Mike Froom, Business Development Director, TE-TECH Process Solutions

10:10 – 10:35

Innovation in net zero carbon wastewater treatment and management
Piekarniak, L., Isle Utilities, UK

Update on nutrient recovery policies in Europe
Thornton, C. ESSP, France

WwTW design considerations for low flows – A climate change requirement
Pearce, P., Farmiloe Fisher Environment Ltd, UK

10:35 – 11:00

HUBER looks at solutions for reducing carbon in wastewater treatment
Foster, D., HUBER Technology, UK

The novel NaturP™ technology from Veolia for enhanced biological phosphorus removal (EBPR) in SBR MBBR
Langdon, M.¹, Nussbaum, B.² and Skonieczny, T.²,
¹Veolia Water Technology, UK, ²Veolia Anox Kaldnes, Sweden

Wentworth STW WINEP BOD Scheme - Extensive investigation leading to a smart solution with cost and environmental benefits
Genetello, E.¹, Jolly, M.² and Byrom, J.², ¹Stantec, UK, ²Yorkshire Water, UK

	Room 1	Room 2	Room 3
	NET ZERO & PROCESS EMISSIONS Chair: Steve Bungay, Technical Director, Mott MacDonald	NUTRIENT REMOVAL & RECOVERY Chair: Rowland Minall, Technical Specialist, Stantec	COMPLIANCE & PROCESS OPTIMISATION Chair: Mike Froom, Business Development Director, TE-TECH Process Solutions
11:00 – 11:25	Driving progress towards net zero carbon: The Trial Reservoir Burgess, J. and Clark, P., Isle Utilities, UK	Providing practicable and environment-friendly solutions for P-Removal at rural WwTW Wisdom, P. and Cooper-Smith, G., Power & Water, UK	Modular automation of ASP systems within existing PLC's for improved energy efficiency and wastewater treatment Hallett, O., Air Technology Ltd, UK
11:25 – 11:50	Break & Exhibition		
11:50 – 12:15	The NEXT-GENERATION of wastewater treatment; the first demonstration of mainstream anaerobic membrane bioreactor treatment in northern Europe: delivery, performance and behaviour insights Palmer, M. ¹ , Pitt, S. ¹ , Smith, R.M. ¹ , Vale, P. ¹ , Paissoni, E. ² and Soares, A. ² , ¹ Severn Trent Water, UK, ² Cranfield University, UK	Using CoMag in a Storm Water Application as part of a new 'State of the Art' wastewater treatment plant at Fredrikstad Radford, S. ¹ and Wessman, F. ² , ¹ Evoqua Water Technologies, UK, ² Enwa, Norway	Upgrading Belfast WwTW Sunner, N. ¹ , Black, A. ² , Robinson, D. ³ and Speers, D. ⁴ , ¹ Stantec, UK, ² Northern Ireland Water, UK, ³ MWH Treatment, UK, ⁴ McAdam Design, UK
12:15 – 12:40	Estimating the carbon footprint of wastewater treatment Black, J. ¹ , Thompson, A. ¹ and Vale, P. ² , ¹ Atkins, UK, ² Severn Trent Water, UK	Upscaling filtration to meet industry needs for AMP7 and beyond Biddle, J., Bluewater Bio, UK	Coupling MABR and continuous flow sludge densification to "super-intensify" existing activated sludge plants Guglielmi, G. ¹ , Coutts, D. ² , Astrand, N. ² , Donnaz, S. ² and Peeters, J. ² , ¹ Veolia Water Technologies & Solutions, Italy, ² Veolia Water Technologies & Solutions, Canada
12:40– 13:05	Ready to fly: innovative quantification of process emissions Jones, N. ¹ , Bragg, R. ¹ , Lederman, L. ² , Knusden, B. ² , Clarke, R. ³ and Lake, A. ³ , ¹ United Utilities, UK, ² Explicit, Denmark, ³ Jacobs, UK	Phosphorus recycling from wastewater - The funding measure RePhoR (Regional Phosphorus Recycling) of the German Federal Ministry of Education and Research (BMBF) Schüller, S., Pinnekamp, J., Bastian, D. and Ooms, K., Research Institute for Water Management and Climate Future, RWTH Aachen University (FiW e.V.), Germany	Application of air mixing to improve ferric dosing efficiency, meet new p consents and reduce operational costs Herron, D., Aqua Operations Ltd, UK
13:05 – 14:00	Lunch & Exhibition		

	Room 2	Room 2	Room 3
	NET ZERO & PROCESS EMISSIONS Chair: Steve Bungay, Technical Director, Mott MacDonald	MICROPOLLUTANTS & EMERGING CONTAMINANTS Chair: Dr. Amber Bullen, Technical Director – Wastewater, Atkins	FUTURE CHALLENGES Chair: Neil Townend, UK Sales Director Nereda, Royal HaskoningDHV
14:00 – 14:25	Mitigating the uncertainty in Net Zero investment decisions Giacalone, S. ¹ and Inman, D. ² , BMA, UK, Anglian Water, UK	Chemical Investigations Programme (CIP) responding to regulatory controls into trace contaminants Brammer, J., Atkins, UK	Integrating Nature-Based Solutions into catchment management: A prototype tool, stakeholder engagement and case study Juan-Garcia, P. ¹ ; Bagnall, J. ² ; Barden, R. ² ; Brown, E. ¹ ; Constantino, C. ¹ ; Daldorph, P. ¹ and Gasca-Tucker, D. ¹ , ¹ Atkins, ² Wessex Water, UK
14:25 – 14:50	An Advanced Filter Technology (AirAdvanced®-Actilayer) for N2O emission reduction Ziye, D. ¹ , Cope, E. ¹ , Vale, P. ¹ , Lewis, C. ² , Romand, C. ³ and Allegrini, E. ³ , ¹ Severn Trent Water, UK, ² SUEZ, UK, ³ SUEZ, France	The eXeno™ and eXenoO3™ technology range for sustainable biological removal of pharmaceuticals and micropollutants in tertiary biofilm MBBR based technology Langdon, M. ¹ , Nussbaum, B. ² and Skionieczny, T. ² , ¹ Veolia Water Technology, UK, ² Veolia Anox Kaldnes, Sweden	Happy Mondays or Rainy Days & Mondays? Possible future river water quality and implications for sewage treatment works Heaney, T. ¹ , Hankin, B. ² , Garratt, A. ² , Wang, C. ² and Simmons, P. ¹ , ¹ Environment Agency, UK, ² JBA Consulting, UK
14:50 – 15:15	UKWIR project Air Pollutant Emissions across wastewater operations Black, J., Bullen, A. and Wilson, R., Atkins, UK	MicroOxi, an efficient micropollutant removal toolbox of Nijhuis Saur Industries Bates, P. and Broeders, E., Nijhuis Saur Industries, UK	Our challenges AMP8 and beyond Sunner, N., Stantec, UK
15:15 – 15:40	The development and standardisation of water companies' approach to quantify GHG emissions Lewis, C., SUEZ, UK	Combining ozone with biofiltration for advanced wastewater treatment for micropollutant removal Wildgoose, D. ¹ and Hübner, U. ² , ¹ Xylem, UK, ² Xylem Services GmbH, Germany	Intensifying activated sludge using HYBACS Biddle, J., Bluewater Bio, UK
15:40 – 16:05	Break & Exhibition		

	Room 1	Room 2	Room 3
	<p>NET ZERO & PROCESS EMISSIONS Chair: Matthew Smyth, Technical Director, Aqua Enviro</p>	<p>MICROPOLLUTANTS & EMERGING CONTAMINANTS Chair: Dr. Amber Bullen, Technical Director – Wastewater, Atkins</p>	<p>COMPLIANCE & PROCESS OPTIMISATION Chair: TBC</p>
16:05 – 16:30	<p>Progress in process emissions: developing good practice in the UK and Irish Water Sector Lake, A.¹, Green, D.² and Horton, B.², ¹Jacobs, UK, ²UKWIR, UK</p>	<p>Removal of micropollutants in wastewater, combining treatment technologies Wouters, H.¹, Nonnekens, J.², Nijhuis, E.³ and Veenendaal, G.⁴, ¹Brightwork, ²Waterschap Vechtstromen, ³RWB Water, ⁴NieuWater, Netherlands</p>	<p>Challenging the need for new tertiary treatment for AMP7 phosphorus permit Sandalls, C.¹, Cameron, C.², Martin, A.¹ and Baloch, I.¹, ¹Southern Water, UK, ²University of Portsmouth, UK</p>
16:30 – 16:55	<p>Novel cold-anaerobic wastewater treatment of crude sewage- underpinning truly the wastewater treatment plants of the future Holohan, C.¹, Hughes, D.¹, Beegan, C.¹, O’Flaherty, V.², Whitcombe, J.³ and Williams, J.³, ¹NVP Energy, Ireland, ²University of Galway, Ireland, ³Dŵr Cymru Welsh Water, UK</p>	<p>Micropollutant removal using Mecana pile cloth media filtration – the success model for the past 10 years on mainland Europe Cooper-Smith, G.¹, Fundneider, T.², Kemp, J.², Schäfer, R.², Grabbe, U.², ¹Eliquo Hydrok, UK, ²Mecana Umwelttechnik GmbH, Switzerland</p>	<p>Nereda AGS operational optimisation experience; nitrogen, energy and effluent quality Lavender, P. and Townend, N., Royal HaskoningDHV, UK</p>
16:55 – 17:20	<p>Prediction of wastewater treatment greenhouse gas using a real-time model Bungay, S.¹, Whitmore, A.¹, Hume, D.², Dempsey, N.², Williamson, K.³, Brian, K.³, ¹Mott MacDonald UK, ²Mott MacDonald, New Zealand, ³Watercare Services, New Zealand</p>	<p>Superfine adsorbents and pile cloth media filtration for the removal of micropollutants Fundneider, T.¹, Kirchen, F.¹, Schäfer, R.¹, Grabbe, U.¹ and Lackner, S.², ¹Mecana Umwelttechnik GmbH, Switzerland, ²Technische Universität Darmstadt, Germany</p>	<p>An insight on achieving low phosphorus and low iron on a trickling filter works Pinheiro, M. and Lee, G., Southern Water, UK</p>

Wednesday 5 th July			
	Room 1	Room 2	Room 3
	CSOs & STORMWATER TREATMENT Chair: Julie Jeavons, Technical Director, Stantec	NUTRIENT REMOVAL & RECOVERY Chair: Dr. Tom Arnot, Water & Innovation Research Centre, University of Bath	INNOVATION Chair: Faye Ward, Research & Innovation Manager – Wastewater Assets, Dwr Cymru Welsh Water
08:45 – 09:10	Opportunities for stormwater treatment – design, construction and operational experiences of United Utilities’ first stormwater wetland at Southwaite WwTW Betts, J., United Utilities, UK		
09.10 – 09:35	Don't get caught with your pumps down - Using data analytics to improve pump reliability and performance Rolls, M., Specific Energy, UK	Performance and commissioning experience of new te-cyc™ plant at Hawkhurst South WwTW Hazard, B. ¹ and Baloch, I. ² , Te-Tech Process Solutions, UK, Southern Water, UK	Unlocking innovation McNeil, R. and Simcock, K., Scottish Water Horizons, UK
09:35 – 10:00	Effective measurement of CSOs & river health for the Environment Act 2021 Stevens, R., Proteus Instruments, UK	Meeting below 2 mg/L phosphorus in centrate line using bio-mineral formation technology Soares, A. ¹ , Colson, R. ¹ , Nair, A. ² and Stephenson, T. ¹ , ¹ Cranfield University, UK, ² Severn Trent Water, UK	Application of HRAS PRONOX technology and granular aerobic sludge formation for sustainable WWTPs Carbó, O. ^{1,2} , Teixidó, J. ¹ , Canals, J. ¹ , Ordóñez, A. ¹ , Magrí, A. ² , Baldi, M. ¹ , Gutiérrez, B. ¹ and Colprim, J. ² , ¹ GS Inima Environment, S.A., Spain, ² LEQUIA. Institute of the Environment, Universitat de Girona, Spain
10:00 – 10:25	Passive treatment of CSO's with NbS Naismith, D., Mott MacDonald, UK	Nature Based Solutions: Catchment management case study – Evenlode Stopps, J. ¹ , Gasca, D. ¹ , Soteriou, H. ² and Nelson, R. ² , ¹ Atkins, UK, ² Thames Water, UK	Synthesis of sustainable catalysts from waste materials Crockett, C. ^{1,2} , Moore, A. ² , Greenwell, C. ¹ and Taylor, R. ¹ , ¹ Durham University, UK, ² Northumbrian Water, UK
10:25 – 10:50	Reducing sewage spills by controlled holistic optimisation of sewage network systems Woodlands, N., Royal HaskoningDHV, UK		Whole(some) in one: The assessment and management of risks from re-use of treated sewage effluent, an approach developed for irrigation of a golf course in England Smith, S, Pinn, D., Dudley, J., Anwar, A.M., WRc Ltd, UK
10:50 – 11:20	Break & Exhibition		

	Room 1	Room 2	Room 3
	NET-ZERO & PROCESS EMISSIONS Chair: Amanda Lake, Head of Carbon & Circular Economy, Jacobs	THE DIGITAL ERA Chair: Dr Mikael Khan, General Manager, SUEZ/Aqua Enviro	INNOVATION Chair: Lisa Mansell, Chief Engineer (Innovation), United Utilities
11:20 – 11:45	Does the water industry have any chance of getting to net zero? Abelehkoob, D., Smith, C., Ward, D., and Horton, B., Stantec, UK	Exemplar WWTW Wield, N. ¹ , Brand, R. ¹ , Reid, C. ¹ and Radhakrishnan, A. ² , ¹ Scottish Water, UK, ² Cap Gemini, UK	Bioremediation of oil-rich wastewater, management of sewer FOG deposits with bioadditive products Jawiarczyk, N. ¹ , Jefferson, B. ² , Bajon Fernandez, Y. ² , Alibardi, L. ² and Mitchell, G. ³ , ¹ Isle Utilities, UK, ² Cranfield University, UK, ³ Severn Trent Water, UK
11:45 – 12:10	Quantifying, modelling and mitigating process emissions: Welsh Water's journey to net zero Williams, J., Gerardo, M. and Kerr, K.-A., Dŵr Cymru Welsh Water, UK	Automation – building a foundation and looking to the future Thornton, A. ¹ , Addison, R. ¹ , Flax, S. ² , ¹ Hach, UK, ² Hach, USA	Nanotechnology - The solution for sustainable wastewater treatment Holland, A., Acorn Water Ltd, Ireland
12:10 – 12:35	A systems analysis of N2O production risks in municipal wastewater treatment across all treatment technologies Palmer, S., Stantec, UK	Sewer pit monitoring and IoT at scale: A Sydney Water case study Trikoulis, S., Kallipr, Australia	Upgrading septic tanks with nature based flowsheets Dotro, G. ¹ , Jefferson, B. ¹ , Brown, G. ¹ and Kennedy, T. ² , ¹ Cranfield University, UK, ² Scottish Water, UK
12:35 – 13:00	Effect of chemical phosphorus removal on nitrous oxide emissions from trickling filter plants using advanced mathematical models Plano, S., WSP, UK	Reducing operational cost, carbon and sensor drift through digital innovation Whitmore, A. ¹ , Thomas, D.N. ¹ , Williamson, K. ² , Rule, G. ² , Joseph, T. ³ and Harwin, E. ¹ , ¹ Mott MacDonald, UK, ² Watercare Services Ltd, UK, ³ Mott MacDonald, New Zealand	Coupling advanced primary treatment and innovative biocatalysts for intensified nitrogen removal: a mid-flight update Nair, A. ¹ and Caliskaner, O. ² , ¹ Microvi, UK, ² Caliskaner Water Technologies, USA
13:00 – 14:00	Lunch & Exhibition		
	KEYNOTE PLENARY & POSTER AWARD Chair – Ana Soares, Professor of Biotechnology Engineering, Cranfield University		
14:00 – 14:40	The Ofwat Innovation Fund – 5 competitions, a lot of learning and more to come Marc Hannis, Principal, Innovation Fund, Ofwat		

	Room 1	Room 2	Room 3
	NET ZERO & PROCESS EMISSIONS Chair: Pete Vale, Carbon & Circular Economy Architect, Severn Trent Water	MICROPOLLUTANTS & EMERGING CONTAMINANTS Chair: Duncan Wildgoose, Head of Wastewater, Xylem UK	INNOVATION Chair: Lisa Mansell, Chief Engineer (Innovation), United Utilities
14:45 – 15:10	Understanding the N₂O emission pattern of plug-flow activated sludge system with the assistance of intensive real-time process monitoring Ziye, D., Cope, E., Srinamasivayam, B., Ejeman, V., Carliell-Marquet, C. and Vale, P., Severn Trent Water, UK	A systems analysis of micropollutant risks in municipal wastewater treatment in the context of the EU 2022 UWWTD update proposals Palmer, S., Stantec, UK	Transforming the energy balance of wastewater treatment – Anaerobic wastewater treatment Naylor, R. and Holloway, T., Thames Water, UK
15:10 – 15:35	Using advanced process control to mitigate wastewater N₂O emissions – A full scale trial Tiesmessen, N., Royal HaskoningDHV, Netherlands	Sorption of pharmaceuticals using Layered Double Hydroxides: Considering environmentally relevant conditions Johnston, A. ¹ , Lester, E. ^{1,2} , Williams, O. ¹ and Gomes, R.L. ¹ , ¹ University of Nottingham, UK, ² Promethean Particles Ltd, UK	Rapid MOBilization: Case Study on the accelerated adoption of the Mobile Organic Biofilm (MOB™) process intensification technology Johnson, T.D. ¹ , Johnson, B.R. ¹ , Calhoun, J. ² and Bragg, I. ³ , ¹ Jacobs, USA, ² Nuvodaus, USA, ³ Jacobs, UK
15:35 – 16:00			ANPHORA® technology: domestic wastewater anaerobic treatment based on the use of Purple Phototrophic Bacteria Zamora, P., Aqualia, Spain

POSTERS
Synthesis of sustainable catalysts from waste materials Crockett, C. ^{1,2} , Moore, A. ² , Greenwell, C. ¹ and Taylor, R. ¹ , ¹ Durham University, UK, ² Northumbrian Water, UK
Sorption of pharmaceuticals using Layered Double Hydroxides: Considering environmentally relevant conditions Johnston, A. ¹ , Lester, E. ^{1,2} , Williams, O. ¹ and Gomes, R.L. ¹ , ¹ University of Nottingham, UK, ² Promethean Particles Ltd, UK
Bioremediation of oil-rich wastewater, management of sewer FOG deposits with bioadditive products Jawiarczyk, N. ¹ , Jefferson, B. ² , Bajon Fernandez, Y. ² , Alibardi, L. ² and Mitchell, G. ³ , ¹ Isle Utilities, UK, ² Cranfield University, UK, ³ Severn Trent Water, UK

POSTERS
<p>Optimization of phosphorus removal from agro-wastewater by iron desalinization treatment residue (Fe-DTR) Ganem, H.E., MIGAL - Galilee Research Institute & Tel-Hai College, Israel</p>
<p>Decision-making with our eyes and ears open Bowman, B., Hunt, D.V.L. and Rogers, C.D.F., University of Birmingham, UK</p>
<p>Reducing operational cost, carbon and sensor drift through digital innovation Whitmore, A.¹, Williamson, K.², Rule, G.², Joseph, T.³ and Harwin, E.¹, ¹Mott MacDonald, UK, ²Watercare Services Ltd, New Zealand, ³Mott MacDonald, New Zealand</p>
<p>Circular economy transformation: duckweed cultivation on VSEP-filtered animal farm wastewater Kislioglu, M.S. and Jansen, M.A.K., University College Cork, Ireland</p>
<p>Recovery of nutritionally valuable bioproducts from the treatment of industrial wastewater using purple phototrophic bacteria Wada, O.¹, Vincent, A.², Mckay, G.¹ and Mackey, H.^{1,3}, ¹College of Science and Engineering, Hamad bin Khalifa University, Qatar, ²Biological Sciences Program, Carnegie Mellon University, Qatar, ³University of Canterbury, New Zealand</p>
<p>What is lurking in the water? Maher, M., University of Nottingham, UK</p>
<p>Application of chitosan-based materials in adsorption of contaminants from wastewater Tamang, M. and Paul, K.K., National Institute of Technology, India</p>
<p>Nanotechnology - The solution for sustainable wastewater treatment Holland, A., Acorn Water Ltd, Ireland</p>

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