

# EUROPEAN WASTEWATER MANAGEMENT CONFERENCE & EXHIBITION

2 - 3 July Manchester | Online

Event Sponsors



## DAY 1 – TUESDAY 2<sup>nd</sup> JULY

### ROOM 1

#### CONFERENCE OPENING & PLENARY KEYNOTE

09:30 – 09:55

**Conference opening & welcome:** Matthew Smyth, Director, Aqua Environment Solutions Ltd UK & Amber Bullen, Technical Director – Wastewater Services Line, AtkinsRéalis, UK  
**KEYNOTE: Testing the waters: Priorities for mitigating health risks from wastewater pollution**  
 Professor David Butler, Co-Director, Centre for Water Systems, University of Exeter

### ROOM 1

#### PROCESS EMISSIONS

10:00 – 10:25

**Data driven, climate smart water futures – harnessing data for good**  
 Lake, A.<sup>1</sup> and van Voorthuizen, E.<sup>2</sup>, <sup>1</sup>Jacobs, UK, <sup>2</sup>Royal HaskoningDHV, Netherlands

### ROOM 2

#### NUTRIENT REMOVAL & RECOVERY

**High efficiency batch RO for N & P removal**  
 Bateman, G.<sup>1</sup>, Hazard, B.<sup>2</sup>, Naughton, T.<sup>3</sup> and Burlace, L.<sup>3</sup>,  
<sup>1</sup>Trant Engineering Ltd, UK, <sup>2</sup>Te-Tech Process Solutions Ltd, UK, <sup>3</sup>Salinity Solutions Ltd, UK

### ROOM 3

#### COMPLIANCE & PROCESS OPTIMISATION

10:25 -10:50

**Hydro Nation Chair Research and Innovation Programme: enabling the water sector transition beyond net zero by 2040**  
 Escudero, A., Glasgow Caledonian University, UK

**Alternative approaches to phosphorus removal**  
 Grundy, C. and Clarke, R., United Utilities, UK

**Process optimisation and achieving compliance at least cost - a brave new approach to wastewater treatment for Northern Ireland Water**  
 Webster, E.<sup>1</sup> and Davison, P.<sup>2</sup>, <sup>1</sup>AtkinsRéalis, UK, <sup>2</sup>Northern Ireland Water, UK

	ROOM 1	ROOM 2	ROOM 3
	PROCESS EMISSIONS	NUTRIENT REMOVAL & RECOVERY	COMPLIANCE & PROCESS OPTIMISATION
10:50 – 11:15	<p><b>N2O: Should we measure or model and what are the influencing factors generating their emissions at a Wastewater Treatment Plant?</b></p> <p>Koodie, T.<sup>1</sup>, Audenaert, W.<sup>2</sup>, Vlasschaert, P.<sup>2</sup>, Cheshire, A.<sup>1</sup> and Bellandi, G.<sup>2</sup>, <sup>1</sup>Binnies, UK, <sup>2</sup>AM-Team, Belgium</p>	<p><b>Ammonia to energy: a key decarbonisation strategy for the water sector</b></p> <p>Powders, M.<sup>1</sup>, McAdam, E.<sup>1</sup>, Zhu, M.<sup>1</sup>, Inman, D.<sup>2</sup>, Brookes, A.<sup>2</sup>, Vale, P.<sup>3</sup>, Pickersgill, M.<sup>4</sup> and Jones, C.<sup>4</sup>, <sup>1</sup>Cranfield University, UK, <sup>2</sup>Anglian Water, UK, <sup>3</sup>Severn Trent Water, UK, <sup>4</sup>Northumbrian Water, UK</p>	<p><b>Exemplar WWPS - a game changer in wastewater pumping station management</b></p> <p>Wield, N.<sup>1</sup>, Rodger, C.<sup>1</sup>, Black, A.<sup>2</sup> and Reid, J.<sup>1</sup>, <sup>1</sup>Scottish Water, UK, <sup>2</sup>Xylem Water Solutions, UK</p>
11:15 – 11:45	<b>Break and exhibition</b>		
11:45 – 12:10	<p><b>Going low on N2O with multiple measurement methods</b></p> <p>Lake, A.<sup>1</sup>, Mansell, L.<sup>2</sup>, Kenyon, J.<sup>2</sup> and Jones, N.<sup>2</sup>, <sup>1</sup>Jacobs, UK, <sup>2</sup>United Utilities, UK</p>	<p><b>Reactive media filled constructed wetland solutions for phosphorus removal from wastewater</b></p> <p>Freeman, A.I.<sup>1</sup>, Troesch, S.<sup>4</sup>, Williams, P.<sup>1</sup>, McCarthy, N.<sup>1</sup>, Cooper, D. J.<sup>1</sup>, <sup>1</sup>ARM Group Ltd, UK, <sup>2</sup>South West Water, UK, <sup>3</sup>Galiford Try, UK, <sup>4</sup>Ecobird, France</p>	<p><b>Viable ways for reliable compliance by optimising tertiary wastewater treatment assets</b></p> <p>Wouters, J.W.<sup>1</sup>, Grundy, C.<sup>2</sup> and Narroway, Y.<sup>2</sup>, <sup>1</sup>Brightwork BV, Netherlands, <sup>2</sup>United Utilities, UK</p>
12:10 – 12:35	<p><b>Cracking the Code: AI-Powered N<sub>2</sub>O reduction in wastewater treatment</b></p> <p>McWeeney, B.<sup>1</sup>, Icke, O.<sup>2</sup> and Tiemessen, N.<sup>2</sup>, <sup>1</sup>Royal HaskoningDHV, UK, <sup>2</sup>Royal HaskoningDHV, Netherlands</p>	<p><b>The Cloth and the Catalyst – a new collaboration to deliver ultra-compact and energy efficient wastewater treatment</b></p> <p>Nair, A., Microvi Biotech, UK</p>	<p><b>Stable and controlled mainstream HRAS, partial nitrification AGS and anammox for a suitable effluent quality</b></p> <p>Baldi, M.<sup>1</sup>, Carbó, O.<sup>1,2</sup>, Teixidó, J.<sup>2</sup>, Campabadal, M.<sup>2</sup>, Canals, J.<sup>2</sup>, Ordóñez, A.<sup>2</sup>, Gutiérrez, B.<sup>2</sup>, Magrí, A.<sup>1</sup>, and Colprim, J.<sup>1</sup>, <sup>1</sup>LEQUIA. Institute of the Environment. Universitat de Girona, Spain, <sup>2</sup>GS Inima Environment, Spain</p>
12:35 – 13:00	<p><b>What have we learned so far from our wide-scale Nitrous oxide (N<sub>2</sub>O) emissions monitoring campaign?</b></p> <p>Dai, Z. and Srinamasivayam, B., Harrison, A. and Antoniadou, A., Severn Trent Water, UK</p>	<p><b>Oxidation ditch configuration for total nitrogen removal without carbon dosing</b></p> <p>Baloch, I., Tang, C. and Liang, S., Southern Water, UK</p>	<p><b>New process control opportunities within wastewater treatment through real-time nitrite and nitrate monitoring</b></p> <p>Murray, E.<sup>1</sup>, Lynch, C.<sup>1</sup> and Dai, Z.<sup>2</sup>, <sup>1</sup>Aquamonitrix Ltd, UK., <sup>2</sup>Severn Trent Water, UK</p>
13:00 – 14:00	<b>Lunch and exhibition</b>		
14:00 – 14:25	<p><b>N2O InSites – a collaborative approach to measurement (and mitigation) of N2O</b></p> <p>Lake, A.<sup>1</sup>, Kimble, A.<sup>2</sup>, O'Connor, J.<sup>3</sup>, Foster, R.<sup>3</sup> and Wilson, S.<sup>4</sup>, <sup>1</sup>Jacobs, UK, <sup>2</sup>Bi-Zen, UK, <sup>3</sup>South West Water, UK, <sup>4</sup>Newcastle University, UK</p>	<p><b>NTPlus - sustainably feeding and watering the world - and introducing PhosPlus, decoupling agriculture from fossil fuel byproducts</b></p> <p>Waite, M., Agua DB Ltd, UK</p>	<p><b>Hubgrade Performance delivering energy savings at WWTP</b></p> <p>Langdon, M. and Larsen, L. Veolia Water Technologies, UK</p>
14:25 – 14.50	<p><b>The generic solution elements for minimizing N<sub>2</sub>O production across different biotreatment technologies used in municipal wastewater treatment systems</b></p> <p>Palmer, S. and Jeavons, J., Stantec, UK</p>	<p><b>Nereda Low P Trials – Full-scale experience at Walsall Wood WwTW's</b></p> <p>Wohling, A.<sup>1</sup>, Townend, N.<sup>1</sup> and Paling, J.<sup>2</sup>, <sup>1</sup>Royal HaskoningDHV, UK, <sup>2</sup>Severn Trent Water, UK</p>	<p><b>Performance and operational experience of UK's first MBBR coupled with Multiflo clarification</b></p> <p>Sandalls, C. and Baloch, I., Southern Water, UK</p>

	ROOM 1	ROOM 2	ROOM 3	
	PROCESS EMISSIONS	NUTRIENT REMOVAL & RECOVERY	COMPLIANCE & PROCESS OPTIMISATION	
14:50 – 15:15	<b>BioWin and SUMO models as digital tools to predict and reduce nitrous oxide emissions from the activated sludge wastewater treatment</b> Nikolova-Kuscu, R. <sup>1</sup> , Fonseca, L. <sup>1</sup> , Bungay, S. <sup>2</sup> and Hume, D. <sup>3</sup> , <sup>1</sup> Mott MacDonald, UK, <sup>2</sup> AD Ingenuity, UK, <sup>3</sup> Mott MacDonald, New Zealand	<b>An innovation success story: chemical-free process of ammonia recovery from municipal wastewater</b> Malek, P. <sup>1</sup> , Tribe, H. <sup>2</sup> , Rawlinson, D. <sup>2</sup> and Moulden, M. <sup>3</sup> , <sup>1</sup> WSP, UK, <sup>2</sup> Northumbrian Water, UK, <sup>3</sup> Organics Group, UK	<b>MABR for enhanced nitrification at large wastewater treatment plants: drivers and design rationale</b> Guglielmi, G. <sup>1</sup> , Coutts, D. <sup>2</sup> , Di Pofi, M. <sup>1</sup> , Peeters, J. <sup>2</sup> , <sup>1</sup> Veolia Water Technologies and Solutions, Italy, <sup>2</sup> Veolia Water Technologies and Solutions, Canada	
15:15 – 15:45	<b>Break and exhibition</b>			
		SPILLS, CSOs & STORMWATER	TECHNOLOGY SHOWCASE	
15:45 – 16:10		<b>First UK trial of Mecana PCMF for primary treatment &amp; stormwater treatment</b> Cooper-Smith, G. <sup>1</sup> , Barran, A. <sup>2</sup> , Gillman, S. <sup>2</sup> , Headley, D. <sup>1</sup> , Fundneider, T. <sup>3</sup> and Kemp, J. <sup>3</sup> , <sup>1</sup> Eliquo Hydrok, UK, <sup>2</sup> Scottish Water, UK, <sup>3</sup> Mecana, Switzerland	15:45	<b>The next generation of MBBR media for wastewater treatment</b> Haylock, D. <sup>1</sup> , Green, S. <sup>2</sup> and Allen, D. <sup>3</sup> , <sup>1</sup> Warden Biomedica, UK, <sup>2</sup> SG Process, UK, <sup>3</sup> Waste Water Solutions (Europe) Limited, UK
	<b>PANEL DISCUSSION: Should the UK add nutrient recovery to the Urban Waste Water Treatment Directive?</b>		16:00	<b>Optimising wastewater assets: real-time data for sustainable design, performance and compliance</b> Kimble, A., BI-Zen Ltd, UK
16:10 – 16:35	<b>Chair: Dr. David Tompkins</b> , Associate Director, WSP  <b>Panel:</b> <ul style="list-style-type: none"> <li><b>Mark Craig</b>, Long Term Asset Strategy Lead, Chief Engineer - Asset Strategy and Performance, Severn Trent Water Ltd, UK</li> <li><b>Dr. Donna Rawlinson</b>, Commercial Manager, Northumbrian Water, UK</li> <li><b>Dr. Timothy Holloway</b>, Principal Research Scientist/Engineer (Wastewater Innovation), Thames Water, UK</li> </ul>	<b>An innovative storm screen enhancement solution trial with Samatrix &amp; Dŵr Cymru Welsh Water</b> Williams, F. <sup>1</sup> , Loyns, M. <sup>1</sup> and Munn, S. <sup>2</sup> , <sup>1</sup> Dŵr Cymru Welsh Water, UK, <sup>2</sup> Samatrix, UK	16:15	<b>Presenting Bloom: A SuDS opportunity mapper tailored to the wastewater industry</b> Senior, J. and Farahani, A., RPS (Tetra Tech), UK
16:35 – 17:00		<b>Designing a WwTW for 'Zero Spills'</b> Barlow, J. <sup>1</sup> , Wilson, L. <sup>1</sup> and Marsh, S. <sup>2</sup> , <sup>1</sup> Stantec, UK, <sup>2</sup> Yorkshire Water, UK	16:30	<b>See the signals - a route to using AI to spot leading indicators of environmental incidents</b> Leith, D., COMET, UK
17:00 – 17:25		<b>Inflow and Infiltration: Using AI to determine the root cause of spills</b> Ogden, J., StormHarvester, UK	16:45	<b>Pragmatism – it's what we need</b> Foster, D. <sup>1</sup> and Morris, M. <sup>2</sup> , <sup>1</sup> Huber Technology, UK, <sup>2</sup> SDS, UK
			17:00	<b>Drowning in Data – a smart, serviceable, scalable catchment solution for Section 82 Monitoring from Xylem</b> Chapman, J., Hanson, D., Lang, P. and Clarke, R., Xylem Water Solutions UK Ltd, UK
			17:15	<b>Practical examples of APC for process optimisation for compliance, and efficiency goals of today (energy) and tomorrow (N2O)</b> Bouchy, L. <sup>1</sup> , Turler, C. <sup>2</sup> and Dixon, A. <sup>2</sup> , <sup>1</sup> Creatch Solutions, Spain, <sup>2</sup> Dŵr Cymru Welsh Water, UK

NETWORKING AND SOCIAL ACTIVITIES	
17:25 – 18:15	Networking drinks reception in the exhibition hall
17:25 – 18:15	Process Emission networking event in the Mezzanine area
19:00	Conference Dinner – coach departs the Hilton Garden Inn

DAY 2 – WEDNESDAY 3 <sup>rd</sup> JULY			
	ROOM 1	ROOM 2	ROOM 3
		INNOVATION	NATURE BASED SOLUTIONS
09:00 – 09:25		<b>Decentralized Wastewater Treatment Systems (DEWATS) at Battery Park City, New York: A sustainable urban city model</b> Martin, I. <sup>1</sup> , Petrosino, R. <sup>2</sup> and Gallagher, Z. <sup>2</sup> , <sup>1</sup> Nijhuis Saur Industries, UK, <sup>2</sup> Natural Systems Utilities, USA	<b>Using an innovative Catchment Nutrient Balancing (CNB) approach to improve river water quality: A case study from a rural sub catchment in Cumbria, United Kingdom</b> Rajapaksha, N. <sup>1</sup> , Airton, J. <sup>1</sup> , Aboobakar, A. <sup>2</sup> , Chappell, N. <sup>3</sup> , Mindham, D. <sup>3</sup> and Dyer, A. <sup>2</sup> , <sup>1</sup> United Utilities, UK, <sup>2</sup> The Rivers Trust, UK, <sup>3</sup> Lancaster Environment Centre, UK
09:25 – 09:50	<b>PANEL DISCUSSION: Process Emissions: measurement, mitigation and holistic thinking</b>	<b>Water Industry Printfrastructure</b> Clarke, R. <sup>1</sup> and Wadley, N. <sup>2</sup> , <sup>1</sup> United Utilities, UK, <sup>2</sup> ChangeMaker3D, UK	<b>Methodology for efficient prioritisation of sites for suds implementation</b> Adamson, G., EnginSoft UK Ltd, UK
09:50 – 10:15	<b>Chair: Steve Bungay</b> , Senior Partner, AD Ingenuity LLP	<b>Natural Coagulant - A sustainable alternative to inorganic salts</b> Holland, A. <sup>1</sup> and Grundy, C. <sup>2</sup> , <sup>1</sup> Acorn Water Ltd, Ireland, <sup>2</sup> United Utilities, UK	<b>Nature Based Solutions: are they a suitable competitor with wastewater companies' grey infrastructure?</b> Dawe, E.-K., Parnell-Pope, L. and Patel, N., Aqua Consultants, UK,
10:15 – 10:40	<b>Panel:</b> <ul style="list-style-type: none"> <li>• <b>Kenneth McGibbon</b>, Technical Director, Mott MacDonald</li> <li>• <b>Amanda Lake</b>, Head of Carbon &amp; Circular Economy, Jacobs</li> <li>• <b>Ellen van Voorthuizen</b>, Senior Consultant Wastewater Technology, Royal HaskoningDHV</li> <li>• <b>Dr. Ziye Dai</b>, Innovation Technical Expert, Severn Trent Water</li> </ul>	<b>Putting MOB to the Test: How a sustainable crop intensifies treatment for Northumbrian Water STWs</b> White, R. <sup>1</sup> and Mullins, D. <sup>2</sup> , <sup>1</sup> Northumbrian Water, UK, <sup>2</sup> Nuvoda, USA	<b>UKWIR project GHG from nature based solutions</b> Gunnell, K. And Black, J., AtkinsRéalis, UK
10:40 – 11:10	<b>Break and exhibition</b>		

	ROOM 1	ROOM 2	ROOM 3
	MICROPOLLUTANTS & EMERGING CONTAMINANTS	CIRCULAR ECONOMY	TECHNOLOGY SHOWCASE
11:10 - 11:35	<b>Biologically enhanced granular activated carbon filtration</b> Wouters, J.W. <sup>1</sup> , Kramer, J.P. <sup>1</sup> and Dockx, L. <sup>2</sup> , <sup>1</sup> Brightwork BV, Netherlands, <sup>2</sup> Aquafin, Belgium		11:10 <b>Nitrogen recovery from digestate and polluted wastewater with advanced ammonium air stripping technologies</b> van den Broek, J. <sup>1</sup> , Buffinga, G. <sup>1</sup> , van den Eijnde, T. <sup>2</sup> and Martin, I. <sup>3</sup> , <sup>1</sup> Nijhuis-Byosis, Netherlands, <sup>2</sup> Nijhuis Saur Industries, Netherlands, <sup>3</sup> Nijhuis Saur Industries, UK
11:35 – 12:00	<b>Treating 1 billion litres of AFFF impacted water to less than 0.2ng/L for the sum of PFAS. A case study from Western Australia</b> Wilson, J. <sup>1</sup> and Farahani, A. <sup>1</sup> , <sup>1</sup> SciDev, UK <sup>2</sup> SciDev, Australia	<b>Scottish Water’s pathways to decarbonisation and delivery of their Circular Economy Approach</b> Bullen, A. <sup>1</sup> , Kennedy, T. <sup>2</sup> , Lee, S. <sup>2</sup> and Simpson, K. <sup>2</sup> , <sup>1</sup> AtkinsRéalis, UK, <sup>2</sup> Scottish Water, UK	11:25 <b>Using remote earth observation techniques to find sewer exfiltration</b> Rabinovitch, Y. and Boukai, A., ASTERRA, Israel
			11:40 <b>Ammonia based aeration control</b> Fosten, A., In-Situ, UK
			11:55 <b>Minimum P for minimum pounds</b> Biddle, J., Bluewater Bio, UK
12:00 – 12:25	<b>Removal of pharmaceuticals in water using low cost materials</b> Coleman, H., Arnscheidt, J., Tretsiakova-McNally, S. and Nesbitt, H., Ulster University, UK	<b>H2 - oh, that sounds like a lot of water...</b> Gardener, N. and Greenwell, J., Stantec, UK	12:10 <b>How the Sonoco® Electrocoagulation system overcomes the challenges presented by AMP8</b> Cooper-Smith, G. and Morgan, E., Power and Water, UK
12:25 – 12:50	<b>Aurea® Technology – sustainable micropollutant removal</b> Lavender, P. <sup>1</sup> and de Wilt, A. <sup>2</sup> , <sup>1</sup> Royal HaskoningDHV, UK, <sup>2</sup> Royal HaskoningDHV, Netherlands	<b>Biopolymers in the Circular Economy</b> Shortland, G. and Clarke, R. United Utilities, UK	12:25 <b>Nanobubble technology - breaking down FOG &amp; surfactants at primary treatment</b> Holland, A. <sup>1</sup> and Gendre, L. <sup>2</sup> , <sup>1</sup> Acorn Water Limited, Ireland, <sup>2</sup> Moleaar Inc., USA
			12:40 <b>Innovation - Exploring pressure and its positive impact on monitoring rising mains</b> Hendy, M., Badger Meter, UK
12:50 – 13:45	<b>Lunch and exhibition</b>		

ROOM 1			
PLENARY KEYNOTE & Students & Early Career Poster Award Presentation			
13:45 – 14:15	<b>Circular Economy: stick or twist?</b> Dr. David Tompkins, Associate Director, WSP		
	ROOM 1	ROOM 2	ROOM 3
	MICROPOLLUTANTS & EMERGING CONTAMINANTS	CIRCULAR ECONOMY	SPILLS, CSOs & STORMWATER
14:20 – 14:45	<b>Micropollutants treatment, the organic carbon challenge</b> Ruswa, E., Lake, A., Schimmoller, L., Greico, S., Manyumba, F., Jacobs, UK	<b>Our rich history in the circular economy and how do we realise now</b> Sunner, N., Stantec, UK	<b>Using process and network data alongside climate change forecasting to assess the climate resilience of Scottish Water's wastewater treatment asset base</b> Russell, E. <sup>1</sup> , Duck, C. <sup>2</sup> and Thomas, D. <sup>2</sup> , <sup>1</sup> Mott MacDonald, UK, <sup>2</sup> Scottish Water, UK
14:45 – 15:10	<b>Roturi®-based ozonation principle for the simultaneous reduction of ARG and trace substances</b> Pöschl, U., up2e!, Germany	<b>Cellulose recovery technology reduces the CO2 emissions of sewage treatment and recovers a valuable resource</b> Wessels, C. <sup>1</sup> and Martin, I. <sup>2</sup> , <sup>1</sup> CirTec BV, Netherlands, <sup>2</sup> Nijhuis Saur Industries, UK	<b>Ceramic membrane for storm water treatment; the US experience</b> Bigot, B. <sup>1</sup> , Khare, A. <sup>2</sup> and Snodgrass, M. <sup>2</sup> , <sup>1</sup> Enpure, UK, <sup>2</sup> Ovivo, USA
15:10 – 15:35	<b>Experiences with removal and destruction of PFAS from different water sources</b> Broeders, E. <sup>1</sup> , Dhawle, R. <sup>1</sup> , Zlatkovskiy, O. <sup>1</sup> and Martin, I. <sup>2</sup> , <sup>1</sup> Nijhuis Saur Industries, Netherlands, <sup>2</sup> Nijhuis Saur Industries, UK	<b>The future of hydrogen production in the UK water sector</b> Samberger, C. <sup>1</sup> , Anderson, H. <sup>2</sup> , Andresen, J. <sup>3</sup> , Brow, D. <sup>1</sup> , Cawthorne, L. <sup>2</sup> , Futter, M. <sup>1</sup> and Le Roux, A., <sup>1</sup> Stantec, UK, <sup>2</sup> Ikigai, UK, <sup>3</sup> Heriot Watt University, UK	<b>Investigating in silico the impact of storm returns to wastewater treatment performance</b> Petropoulos, E. <sup>1</sup> , McLachlan, I. <sup>1</sup> and Woodhouse, R. <sup>2</sup> , <sup>1</sup> Stantec, UK, <sup>2</sup> Northumbrian Water, UK
15:35 – 15:45	<b>Grab and go drinks</b>		

## POSTERS

### A low-temperature ammonia electrolyser for wastewater treatment and hydrogen production

Latvyte, E.<sup>1</sup>, Zhu, X.<sup>1</sup>, Wu, L.<sup>1</sup>, Lan, R.<sup>1</sup>, Vale, P.<sup>2</sup> and Graves, J.<sup>1</sup>, <sup>1</sup>Institute of Clean Growth and Future Mobility, Coventry University, UK, <sup>2</sup>Severn Trent Water, UK

### Low-cost material for the adsorption of antibiotics

Onyekachukwu, E., Nesbitt, H., Tretsiakova-McNally, S. and Coleman, H., Ulster University, UK

### Trash to treasure: harnessing the power of agricultural wastes for generating cleaner water

Abudu, L.<sup>1</sup>, Coleman, H.<sup>1</sup>, Oluseyi, T.<sup>2</sup>, Tretsiakova-McNally, S.<sup>1</sup>, Adeyemi, D.<sup>2</sup>, Adams, L.<sup>2</sup>, Arnscheidt, J.<sup>1</sup>, O'Hagan, B.<sup>1</sup> and Bhosale, R.<sup>1</sup>, <sup>1</sup>Ulster University, UK, <sup>2</sup>University of Lagos, Nigeria

## POSTERS

### **From wastewater to climate impact: CREW's CO2 removal approach**

Katchinoff, J.<sup>1</sup>, Vu, K.<sup>1</sup>, D'Ascanio, R.<sup>1</sup> and Planavsky, N.<sup>2</sup>, <sup>1</sup>CREW Carbon, USA <sup>2</sup>Yale University, USA

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### **Fixing nitrogen and the urban water cycle**

Allan, C., University of Strathclyde, UK

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### **Ammonia to energy: a key decarbonisation strategy for the water sector**

Powders, M.<sup>1</sup>, McAdam, E.<sup>1</sup>, Zhu, M.<sup>1</sup>, Inman, D.<sup>2</sup>, Brookes, A.<sup>2</sup>, Vale, P.<sup>3</sup>, Pickersgill, M.<sup>4</sup> and Jones, C.<sup>4</sup>, <sup>1</sup>Cranfield University, UK, <sup>2</sup>Anglian Water, UK, <sup>3</sup>Severn Trent Water, UK, <sup>4</sup>Northumbrian Water, UK

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### **Natural Coagulant - A sustainable alternative to inorganic salts**

Holland, A.<sup>1</sup> and Grundy, C.<sup>2</sup>, <sup>1</sup>Acorn Water Ltd, Ireland, <sup>2</sup>United Utilities, UK

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### **Ammonia based aeration control**

Fosten, A., In-Situ, UK

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### **Using process and network data alongside climate change forecasting to assess the climate resilience of Scottish Water's wastewater treatment asset base**

Russell, E.<sup>1</sup>, Duck, C.<sup>2</sup> and Thomas, D.<sup>2</sup>, <sup>1</sup>Mott MacDonald, UK, <sup>2</sup>Scottish Water, UK

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### **CREW Carbon - Removing CO2 & Greenhouse Gases from wastewater**

Holland, A.<sup>1</sup> and Katchinoff, J.<sup>2</sup>, <sup>1</sup>Acorn Water Ltd, Ireland, <sup>2</sup>CREW Carbon, USA

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### **Decision support tool for the mitigation of nitrous oxide emissions**

Gray, M., Hach, UK

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### **Drowning in Data – a smart, serviceable, scalable catchment solution for Section 82 Monitoring from Xylem**

Chapman, J., Hanson, D., Lang, P. and Clarke, R., Xylem Water Solutions UK Ltd, UK

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