



EUROPEAN BIOSOLIDS & BIORESOURCES

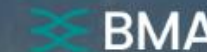
CONFERENCE & EXHIBITION

19 - 20 Nov 2024 Manchester, UK | Online

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FINAL TIMETABLE

TUESDAY 19 TH NOVEMBER			
CONFERENCE OPENING & PLENARY KEYNOTE Chair: Matthew Smyth, Director, Aqua Environment Solutions Ltd			
09:30 – 10:00	Environment Agency and the use of sludge Mat Davis, Technical Advisor - Soil Protection, Environment Agency		
	ROOM 1	ROOM 2	ROOM 3
	THERMAL & BIOLOGICAL HYDROLYSIS Chair: Alison Fergusson, Director, Power & Utilities, Advisory, KPMG	PROCESS EMISSIONS & THE JOURNEY TO NET ZERO Chair: Paul Lavender, Director Water Utilities (UK), Royal HaskoningDHV	LANDBANK CHALLENGES Chair: Dr David Tompkins, Associate Director, WSP
10:05 – 10:30	Road to net zero – intermediate thermal hydrolysis in large WWTP Rus, E. ¹ , Ringoot, D. ² and Kosciukiewicz, J. ³ , ¹ Cambi Group, UK, ² Cambi Group, Denmark, ³ Cambi Group, Poland	The fully sustainable biogas, graphene & hydrogen loop Hill, S. ¹ , Clarke, R. ¹ , Lloyd, M. ² Cross, J. ² , and Mansell, L. ¹ , ¹ United Utilities, UK, ² Levidian, UK	Eco-toxicological and climate change effects of sludge thermal treatments: Pathways towards zero pollution and negative emissions Svennevik, O.K. ¹ , Jahre Nilsen, L.P. ¹ , Cherubini, F. ² , Morales, M. ² , Arp, H.P. ³ , Castro, G. ^{4,2} , Asimakopoulos, A. ² , Sørmo, E. ³ and Peters, G. ⁵ , ¹ VOW ASA, Norway, ² Norwegian University of Science and Technology, Norway, ³ Norwegian Geotechnical Institute, Norway, ⁴ University of Santiago de Compostela, Spain, ⁵ Chalmers University of Technology, Sweden

10:30 – 10:55	Operational experience and performance evaluation of changing thermal hydrolysis pressure from 6 barg (165oC) to 2.6 barg (145oC) at a full scale advanced anaerobic digestion facility Devlin, D., Dwr Cymru Welsh Water, UK	Potential of vacuum degassing at Thames Water - impact on dewatering and methane emissions from THP-treated sludge Fountain, P. ¹ , Gejam, E. ¹ , Dittmann, M. ² , Knörle, U. ² , Hopkins, A-M. ³ and Willoughby, N. ³ , ¹ Thames Water, UK, ² ELIQUO TECHNOLOGIES, Germany, ³ ELIQUO HYDROK, UK	Agricultural use of biosolids: Farmer perspectives and evidence of environmental risks Cloy, J. ¹ , Kitching, N. ¹ and Hough, R. ² , ¹ Fidra, UK, ² The James Hutton Institute, UK
10:55 – 11.20	Experiences of recommissioning acid phase digestion at Claymills STF Went, C., Challis, L. and Bancroft, A., Severn Trent Water, UK	Do methane losses from anaerobic digestion compromise sustainability of renewable energy generation? Bajon Fernandez, Y., Michalakakis, C. ² and Bateman, C. ² , ¹ Cranfield University, UK, ² Department of Energy Security and Net Zero – DESNZ, UK	Comparing the carbon footprint of pyrolysis for PFAS removal to land application of biosolids cake Barber, B., Cambi Inc., USA
11:20 – 11:50	Morning break and exhibition		
	ROOM 1	ROOM 2	ROOM 3
	THERMAL & BIOLOGICAL HYDROLYSIS Chair: Alison Fergusson, Director, Power & Utilities, Advisory, KPMG	PROCESS EMISSIONS & THE JOURNEY TO NET ZERO Chair: Sarah-Jane Westlake, Associate Director, Bioresources, AtkinsRéalis	LANDBANK CHALLENGES Chair: Dr David Tompkins, Associate Director, WSP
11:50 – 12:15	Full scale application of thermal hydrolysis with lower thermophilic anaerobic co-digestion yields higher throughput at Tarnow Waterworks, Poland Mukawa, J. ¹ , Sahu, A.J. ² , Ringoot, D. ² , Niedzielska, A. ² , Somodea, A. ² and Finstad, T. ² , ¹ Operations, Tarnow Waterworks, Poland, ² Cambi Group AS, Norway	Residual biogas - what does good look like? Bungay, S. ¹ , Fountain, P. ² , Smyth, M. ³ , Mann, J. ¹ , ¹ AD Ingenuity LLP, UK, ² Thames Water, UK, ³ Aqua Environment Solutions Ltd, UK	Is land application of biosolids a significant source of human PFAS exposure? Pepper, I., Prasek, S.M. and Brusseau, M.L., University of Arizona, USA
12:15 – 12:40	Optimising the heat balance of HELEA® for CHP and GtG installations to deliver the sustainable route to advanced digestion Oliver, B. ¹ , Jaques, A. ¹ , and Constable, K. ² , ¹ Royal HaskoningDHV, ² Anglian Water, UK	Quantified through bioresources process simulation – supporting low cost, low carbon futures Lake, A. ¹ , Kraakman, B. ¹ , Bungay S. ² , Alexander, Z. ¹ , ¹ Jacobs, UK, ² ADIngenuity, UK	Biosolids planning for an uncertain future – how regulatory drivers and technology developments are influencing long-term infrastructure decisions Auerbach, E. ¹ , Kikale, P. ¹ , and McClure, A. ² , ¹ Arcadis, UK, ² City of Toledo, USA
12:40 – 13:05	Partial THP with sequential AD - addressing IED Rus, E. ¹ , Fountain, P. ² , Shana, A. ¹ and Panter, K. ³ , ¹ Cambi Group, UK, ² Thames Water, UK, ³ Freelance, UK	Best available techniques for minimizing leaks and compliance with the Industrial Emissions Directive Cox, E., Assentech Sales Ltd, UK	Risky? Really? Tompkins, D., WSP, UK Open floor discussion: relative vs absolute risk, issues of evidence and governance.
13:05 – 14:00	Lunch and exhibition		

	ADVANCED THERMAL CONVERSION PROCESSES Chair: Richard Kershaw, Wastewater R&D Innovation Programme Manager, Yorkshire Water	PROCESS EMISSIONS & THE JOURNEY TO NET ZERO Chair: Sarah-Jane Westlake, Associate Director, Bioresources, AtkinsRéalis	A CONVERSATION ON THE VIABILITY OF SUSTAINING RECOVERY OF BIOSOLIDS TO AGRICULTURE Matt Stewart, Associate Director, AtkinsRéalis
14:00 – 14:25	FIREFLY - sewage sludge to sustainable aviation fuel Askey-Wood, J. ¹ , Lima, S. ¹ , Douthwaite, M. ¹ , Black, S. ² and Inman, D. ² , ¹ Firefly Green Fuels, UK, ² Anglian Water, UK	Quantum gas lidar for methane emission measurement from biogas assets Harrison, A. ¹ , Srinamasivayam, B. ¹ , Van Pelt, A. ² , Lindsay, G. ² , Went, C. ¹ , Megal, L. ¹ , Challis, L. ¹ and Singh, E. ¹ , ¹ Severn Trent Water, UK, ² QLM Technology Ltd, UK	Panel: <ul style="list-style-type: none"> • Mat Davis, Senior Advisor: Soil Protection and Materials to Land, Environment Agency • Richard Brindle, Bioresources Strategy Manager, United Utilities • Chris Peot – Director of Resource Recovery, DC Water, USA • Jason Mingo, Water Sustainability and Strategy, Water Services Association of Australia (WSAA) • Diane Mitchell, Chief Environment Adviser, NFU
14:25 – 14:50	Latest news from AquaGreen on biosolids drying and pyrolysis projects in Denmark Wieth, C., AquaGreen ApS, Denmark	Process safety and the added benefits of loss prevention in the control of greenhouse gas emissions Jeavons, J., Stantec, UK	
14:50 – 15:15	Exploring the unique attributes of hydrothermal oxidation as a compelling bioresource processing technology Gapes, D. ¹ , Jefferson, B. ² , Lei, R. ¹ and Stuthridge, T. ¹ , ¹ Cetogenix Ltd, New Zealand, ² Cranfield University, UK	Scottish Water digitally-enabled journey to net zero Giacalone, S. ¹ , Reid, G. ² and Cartmell, E. ² , ¹ Business Modelling Applications, UK, ² Scottish Water, UK	
15:15 – 15:45	Afternoon break and exhibition		
	ROOM 1	ROOM 2	ROOM 3
	ADVANCED THERMAL CONVERSION PROCESSES Chair: Richard Kershaw, Wastewater R&D Innovation Programme Manager, Yorkshire Water	A CONVERSATION ABOUT RESIDUAL EMISSIONS Chair : Matthew Smyth, Director, Aqua Environment Solutions	ADVANCING ANAEROBIC DIGESTION Chair: Dr. Lindsey Gove, Bioresources Scientist Anglian Water
15:45 – 16:10	Biosolids Carbonisation: Key design parameters and relationship with plant operation Al-Saleem, M., Stantec, UK	Panel: <ul style="list-style-type: none"> • Clive Humphreys, Senior Advisor, Environment Agency • Yadira Bajon-Fernandez, Senior Lecturer in Bioresources Science and Engineering, Cranfield University • Paul Fountain, Senior Consultant Biosolids, Thames Water • Steve Bungay, Senior Partner, AD Ingenuity LLP 	Assessing the effect of thermal drying on AAD energy balances Merry, J., Stantec, UK
16:10 – 16:35	Evaluation of sewage sludge for processing in autothermal pyrolysis Pedros, P. ¹ , Daugaard, T. ² and Brown, R. ² , ¹ Mott MacDonald, USA, ² Iowa State University, USA		Ephyra® plug-flow digestion – latest design developments and update on UK projects Kabir, M., Royal HaskoningDHV, UK
16:35 – 17:00	Assessing ATC technologies: Effectiveness in Removing Microplastics and Persistent Substances. UKWIR CIP4 Microplastics & ATC Project Riches, S., Lancaster, R., Wilson, R. and Luqmani, B., AtkinsRéalis, UK		Maximising value from biogas with biogas operational services Meijers, C. DMT Environmental Technology, The Netherlands
17:00 – 17:45	Networking drinks reception – exhibition hall		

WEDNESDAY 20TH NOVEMBER

	ROOM 1	ROOM 2	ROOM 3
	ADVANCED THERMAL CONVERSION PROCESSES Chair: Dr David Inman, Innovation Project Manager, Anglian Water	CIRCULAR ECONOMY & THE ROLE FOR NUTRIENT RECOVERY Chair: Stefano Giacalone, Head of Wastewater and Resource Recovery, Business Modelling Applications	ADVANCING ANAEROBIC DIGESTION Chair: Ester Rus, BD Manager UK & Ireland, CAMBI
09:00 – 09:25	Biochar production from screening waste Vaughan, D., Carbogenics Ltd, UK	Circular Economy? Show us the money Tompkins, D., WSP, UK	
09:25 – 09:50	Siloxanes in producer gas from pyrolysis of sewage sludge and a potential solution Pedros, P. ¹ , Knörle, U. ² and Kukreja, A. ³ , ¹ Mott MacDonald, USA, ² ELIQUO Technologies GmbH, Germany, ³ Durr Systems, Inc., USA	Scottish Water resource recovery factory Wilson, R. ¹ , Banfield, P. ¹ , Bullen, A. ¹ , Talboys, P. ¹ , Pari, G. ¹ , Kennedy, T. ² , Hemple, G. ² , Adams, G. ² and Halley, C. ² , ¹ AtkinsRéalis, UK, ² Scottish Water, UK	Introducing OpsMod: a powerful operations modelling app to optimise energy and carbon emissions for advanced anaerobic digestion sites at Northumbrian Water Laing, H. ¹ , Browne, A. ¹ , Willis, M. ² and O'Malley, C. ² , ¹ Northumbrian Water Ltd, UK, ² Newcastle University, UK
09:50 – 10:15	Biosolids valorisation technology for closed-loop resource recovery Meyer, J., Onunda Ltd, UK	Addressing existing bioresources challenges while enabling the Circular Economy Kraakman, B., Gonzalez, C., Alexander, Z., and Lake, A., Jacobs, UK	Enhancing anaerobic digesters efficiency through thermal pre-treatment: impacts on sludge composition and trace element bioavailability in full-scale sites Nasar, N. ¹ , Pizzagali, G. ² , Coulton, F. ¹ and Bajon-Fernandez, Y. ¹ , ¹ Cranfield University, UK, ² Anglian Water, UK
10:15 – 10:40	Sewage sludge gasification, the Yorkshire Water ATC story Taylor, T., Yorkshire Water	Circularity of biosolids treatment pathways: a screening tool Samberger, C., Stantec, UK	Delivering the next generation of AD plants Le Roux, A., Stantec UK
10:40 – 11:10	Morning break and exhibition		
	ADVANCED THERMAL CONVERSION – EXPLORING £12 MILLION OF OFWAT INNOVATION PROJECTS Chair: Matthew Smyth, Director, Aqua Environment Solutions Ltd	CIRCULAR ECONOMY & THE ROLE FOR NUTRIENT RECOVERY Chair: Tamsyn Kennedy, Circular Economy Lead, Scottish Water	THICKENING, DEWATERING & LIQUOR TREATMENT Chair: Rowland Minall, Operations Director, Orège
11:10 – 11:35	Speakers/Panellists:	Biopolymers in the circular economy Clarke, R. ¹ , Shortland, G. ¹ and Lavender, P. ² , ¹ United Utilities, UK, ² Royal HaskoningDHV, UK	Anita™Mox: safe and robust sidestream treatment with low n2o emissions - full-scale experiences from conventional and advanced anaerobic digestion applications

	<ul style="list-style-type: none"> • Richard Kershaw, Wastewater R&D Innovation Programme Manager, Yorkshire Water • Peter Winter, Principal Research Engineer, Thames Water 		Falk Lingärde L. ¹ , Skonieczny T. ¹ , Morgan-Sagastume F. ¹ , Langdon M. ² , ¹ AnoxKaldnes, Sweden, ² Veolia Water Technologies, UK
11:35 – 12:00	<ul style="list-style-type: none"> • Dr Aderlanio Cardoso, Innovation Technical Expert, Severn Trent Water • Dr David Inman, Innovation Project Manager, Anglian Water 	The future of hydrogen production in the UK water sector Samberger, C. ¹ , Brown, D. ¹ , Le Roux, A. ¹ , Futter, M. ¹ , Anderson, H. ² , Cawthorne, L. ² , Andresen, J. ³ , ¹ Stantec UK, ² Ikigai, UK, Heriot Watt University, UK	ANAMMOX - 20 years' experience and latest developments Driessen, W. ¹ , Morales, J.A. ² , Verwij, D. ³ and Went, C. ⁴ , ¹ Paques Global bv, The Netherlands, ² Cadagua, Spain, ³ Paques Europe, The Netherlands, ⁴ Severn Trent Water, UK
12:00 – 12:25	View full details here	Unlocking mainstream treatment capacity in municipal wastewater by reducing side stream ammonia load with ammonia recovery technology Martin, I., Nijhuis Saur Industries	Fast biosolids dewaterability assessment for evaluation and optimization purposes Mischler, J-F. and Mutlu, Y., Bucher Unipektin AG, Switzerland
12:25 – 13:30	Lunch and exhibition		
PLENARY KEYNOTE & POSTER AWARD PRESENTATION Chair: Yadira Bajon-Fernandez, Senior Lecturer in Bioresources Science and Engineering, Cranfield University, and Policy Fellow with DESNZ			
13:30 – 14:00	A review of whether biochar is effective for improving agricultural soil in a UK context Dr Despina Berdini, Soil and Crop Research Scientist, ADAS		
	AMP8 & BEYOND Chair: Yadira Bajon-Fernandez, Senior Lecturer in Bioresources Science and Engineering, Cranfield University, and Policy Fellow with DESNZ	CIRCULAR ECONOMY & THE ROLE FOR NUTRIENT RECOVERY Chair: Tamsyn Kennedy, Circular Economy Lead, Scottish Water	THICKENING, DEWATERING & LIQUOR TREATMENT Chair: Rowland Minall, Operations Director, Orège
14:05 – 14:30	AMP 7 - How was it for you? Cherry, I., Severn Trent Water, UK	Aqua2®N – innovative technology to remove and recover nitrogen from wastewater Altenburg, S. and Cohen, Y., EasyMining Services Sweden AB	Enhanced sludge dewatering and thickening performance with new decanter technology for a sustainable future Novikov, G., Alfa Laval, Denmark
14:30 – 14.55	Building a resource recovery prioritisation tool for the UK and Ireland Talboys, P. ¹ , Stewart, M. ¹ , Bajon-Fernandez, Y. ² , Brown, E. ¹ , Lancaster, R. ¹ , Luqmani, B. ¹ , Menezes, H-K. ¹ , Piechoczek, E. ¹ , Shaffer, P. ³ , Soares, A. ² , Westlake, S-J. ¹ and Wilson, R. ¹ , ¹ AtkinsRéalis, UK, ² Cranfield University, UK, ³ CIWEM, UK	The use of biochar towards a circular economy- optimisation of chemically activated biochar for aqueous phosphate recovery McFadden, M. ¹ , Zhang, X. ¹ , Fletcher, A. ¹ , Davidson, C. ¹ and Kerr, S. ² , ¹ The University of Strathclyde, UK, ² Sustainable Thinking Scotland CIC, UK	Mitigating feedstock issues to optimise ad plant performance, reliability & biogas production Foster, D., Huber Technology, UK

CLOSING PLENARY TALK

Chair: Matthew Smyth, Director, Aqua Environment Solutions

15:00 – 15:15

What might we expect in the Final Determination?

Richard Brindle, Head of Bioresources Strategy, United Utilities

POSTERS

Development and traceability of biomass value chains for the conversion of waste into raw materials

Álvarez, M.R.¹, de Sousa, M.A.B.¹, Pavón, P.M.¹, Sobrado, R.V.¹, Nóvoa, V.N.¹, Costa, B.J.¹, Paz, D.M.¹, Villanueva-Rey, P.² and Monjardin, L.J.G.², ¹ANFACO-CECOPECA, Spain
²Galician Water Research Centre Foundation, Spain

IMPEL Sustainable Landspreading Project

Hutchinson, L., Environment Agency

Evaluating the suitability of biosolids-derived biochar in addressing nutrient requirements from arable land

Wellings, A., Cranfield University, UK

The use of biochar towards a circular economy- optimisation of chemically activated biochar for aqueous phosphate recovery

McFadden, M.¹, Zhang, X.¹, Fletcher, A.¹, Davidson, C.¹ and Kerr, S.², ¹The University of Strathclyde, UK, ²Sustainable Thinking Scotland CIC, UK

Using Quantum Gas Lidar for Continuous Methane Emissions Monitoring and Quantification in Water Sewage Treatment, Landfills and Biogas Plants

Lindsay, G. and Van Pelt, A., QLM Technology Ltd, UK

Feasibility of pyrolysis using different sludges

Xu, S.¹, Bajón Fernández, Y.¹, Winter, P. and Wagland, S.¹, ¹Cranfield University, UK, ²Thames Water

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