# ORGANISED BY AquaEnviro

## 9th EUROPEAN WASTE WATER MANAGEMEN **CONFERENCE & EXHIBITION**

12<sup>th</sup> - 13<sup>th</sup> October 2015, Manchester Town Hall, Manchester, UK

## **TECHNICAL SESSIONS**

- Priority Chemicals
- Phosphorus Removal
- Data Collection and Plant Control
- Odour Problems
- Attached Growth Processes
- Performance and Energy Efficiency
- Solids Removal Systems
- Inlet Works and Primary Treatment Options
- Innovative Solutions

### PANEL DEBATE

What is the potential scope for real-time control in the UK water industry?

## WORKSHOP

Training Needs of the Water Industry

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## Monday 12<sup>th</sup> October 2015

#### **Priority Chemicals**

#### Chemicals investigation programme 2 Cooper-Smith, G., United Utilities, UK

NOM and endocrine disrupting compounds removal by powdered activated carbon and sand ballasted clarification Cooper, P., Veolia Water Technologies, UK

**Micropollutants in the aquatic environment and their removal in wastewater treatment works** Antakyali, D.<sup>1</sup>, Morgenschweis, C.<sup>2</sup>, de Kort, T.<sup>2</sup> and Herbst, H., <sup>1</sup>Grontmij GmbH Germany, <sup>2</sup>Grontmij, Netherlands

Performances of the Continuous Flow Integrative Sampler (CFIS) for the monitoring of hormones and pharmaceuticals in hospital wastewaters Assoumani, A., Pedraza Berenguer, R., Gómez López, M., San Juan Tortosa, L., Tortajada Santonja, R. and Llorca Pórcel, J., LABAQUA S.A., Spain

Electro-generating chemicals in-situ Morgan, P., Power and Water, UK

#### **Phosphorus Removal**

National low P trials Cooper-Smith, G., United Utilities, UK

Advanced phosphorus removal: how low can we go? Healey, K., Veolia Water Technologies, UK

Initial design experiences of meeting low phosphorus standards Sunner, N.<sup>1</sup>, Mills, N.<sup>2</sup>, Germain-Cripps, E.<sup>2</sup>, <sup>1</sup>eight2o, <sup>2</sup>Thames Water Utilities Ltd, UK

Phosphate removal – a summary of the 5 years operation of the CoMag phosphate removal plant at Billerica, Massachusetts, USA Kalmes, J., Billerica Wastewater Treatment Plant, USA

Real-time control for phosphorus removal – a holistic approach Stenning, M., Nikolova-Kuscu, R., Thomas, P. and Germain-Cripps, E., Thames Water Utilities Ltd, UK

**Full-scale reed beds with different steel slag fractions and apatite for phosphorus removal** Fonseca, N.<sup>1,2</sup>, Cripps-Germain, E.<sup>2</sup>, Pearce, P.<sup>2</sup>, Dotro, G.<sup>1</sup>, Jefferson, B<sup>1</sup>., <sup>1</sup>Cranfield University, <sup>2</sup>Thames Water Utilities Ltd, UK

**Development of a cost-effective autonomous sensor for nutrient monitoring in wastewater** McCaul, M., Fay, C., McNamara, E. and Diamond, D., Dublin City University, Ireland

Mine water derived iron as a national opportunity for phosphate removal Moorhouse, A. and Watson, I., The Coal Authority, UK

#### **Data Collection and Plant Control**

What data should be carefully and intensively monitored to accurately model wastewater treatment works for active control? Ashagre, B.<sup>1</sup>, Fu, G.<sup>1</sup>, Davidson, K.<sup>2</sup>, Butler, D.<sup>1</sup>, <sup>1</sup>University of Exeter, <sup>2</sup>Scottish Water, UK

Independent review of granular AD treatment for high strength textile waste; laboratory trials through to pilot plant operation Davies, S.and Hallas, R., Aqua Enviro Limited, UK

**Reduce capital investments and operating costs with plant wide control** Sørud, M. and Ønnerth, T., Krüger A/S, Denmark

BIOTRANSFOROMICS: Bioanalysis to engineer understanding in wastewater treatment Parthasarathy, S., Jenidi, Y., Mycroft, H.,Ortori, C., Barrett, D. and Gomes, R.L., University of Nottingham, UK

**Over compliance through real time control. Sewerflex – sewer network optimisation** Sørud, M., Sander Poulsen, T. and Grum, M., Krüger A/S, Denmark

#### **Operator 2.0: Event Horizon Diagnostics**

Mazier, S., McEwan, M. and O'Brien, M., Perceptive Engineering Ltd, UK

Big data vs smart lean data in the water industry Back, B.M., Radio Data Networks Limited, UK

**Data smart – operational efficiency solution** Nair, A. and Gunaratnam, M., MWH Global, UK

Microscopy and filament identification as a tool for troubleshooting biological treatment processes Morley, E., Aqua Enviro Limited, UK

**Risk based anaylsis of wastewater treatment process** Black, J.<sup>1</sup>, Robinson, C.<sup>2</sup> and Duffy, P.<sup>2</sup>, <sup>1</sup>United Utilities, <sup>2</sup>MMI Engineering, UK

### Attributes of a new VOC in water sensor

Dean, F.W.H., Stockdale, M. And Witty, A., Ion Science Ltd, UK

#### **Odour Problems**

NOSE® Odour Monitoring Platform : a case study Bouchy, L.<sup>1</sup> and Kelly, R.<sup>2</sup>, <sup>1</sup>Aqualogy, <sup>2</sup>Suez Environment, UK

#### **Drinks Reception**

The Great Hall, Manchester Town Hall

# EXXXA Conference Programme

## Tuesday 13<sup>th</sup> October 2015

#### **Attached Growth Processes**

#### Effect of syphon-dosing on trickling filter performance Sindall, R., Pearce, P. and Javis, S., Thames Water Utilities, UK

#### Roughing filters for enhanced ammonia removal

Sindall, R., Germain-Cripps, E. and Pearce, P., Thames Water Utilities, UK

**Operational cost savings in SAFs and MBBRs through selective plastic carrier use** Dias, J.<sup>1</sup> Soaresa, A.<sup>1</sup>, Judda, S.<sup>1</sup>, Bellingham, M.<sup>2</sup>, Hassan, J.<sup>2</sup> and Barrett, M.<sup>2</sup>, <sup>1</sup>Cranfield University, <sup>2</sup>Warden Biomedia, UK

#### **Internal hydrodynamics of SAF reactors with varied media fill ratios** Holloway, T., WPL Limited, UK

Holloway, I., WPL LITTIEA, UK

#### Performance and Energy Efficiency

**Optimising ASP performance and energy efficiency using real time control - active swing zones** Ainsworth, S., Hach-Lange, UK

#### **Optimising performance, improving energy efficiency and reducing costs in wastewater pumping applications** Fitzpatrick, G., Xylem, UK

Floating aeration systems – energy efficient and versatile Nikolova-Kusco, R., Germain-Cripps, E. and Pearce, P., Thames Water Utilities, UK

Advanced aeration control in sewage treatment works Ripoll, F.<sup>1</sup> and Massagué, A.<sup>2</sup>, <sup>1</sup>Sistlech, <sup>2</sup>Aqualogy, UK

#### Smart income from 'smart devices' with dynamic demand

Richards, G., Open Energi Ltd, UK

**Recent technology advances and energy consumption of ZeeWeed membrane bioreactors** Monti, A., GE Power and Water, UK

#### **Solids Removal Systems**

**Time for some agile thinking** Bullen, C., Siltbuster Process Solutions, UK

**Storm water discharges – dedicated treatment by sand ballasted clarification** Cooper, P., Veolia Water Technologies, UK

FilterClear – advanced tertiary solids removal technology

Huo, C., Harnett, R. and Biddle, J., Bluewater Bio Ltd, UK

Using the modelling toolkit to better understand FST behaviour - storm events Grand, A.<sup>1</sup>, Jarvis, S.<sup>2</sup>, Egarr, D.<sup>1</sup> and Burt, D.<sup>1</sup>, <sup>1</sup>MMI Engineering, <sup>2</sup>Thames Water Utilities, UK

#### **Inlet Works and Primary Treatment Options**

#### Advanced primary treatment with microbubble DAF Sindall, R., Pearce, P. and Germain-Cripps, E., Thames Water Utilities, UK

#### Primary settlement tanks: auto-desludging optimisation

Sindall, R. and Nikolova-Kusco, R., Thames Water Utilities, UK

#### Screen every drop!

Mannion, R., Evergreen Engineering Ltd, Ireland

#### **Problems with stormwater discharges** Back B., Radio Data Networks, UK

#### Inlet works – is utopia possible?

Foster, D., Huber Technology, UK

EXXXA Conference Programme

## Tuesday 13<sup>th</sup> October 2015 continued

#### **Innovative Solutions**

Application of bacteriophage for control of foaming in wastewater treatment Krysiak-Baltyn, K., Burger, W., Martin, G., Stickland, A., Scales, P. and Gras, S., The University of Melbourne, Australia

**Organic coagulants for increased biogas production and reduced energy consumption at WWTPs** Szatkowska, B.<sup>1</sup>, Jaroszynski, L.<sup>2</sup>, Paulsrud B.<sup>1</sup>, Budych-Gorzna, M.<sup>3</sup>, Szczepecki K.<sup>3</sup> and Jaroszynski, T.<sup>2</sup>, <sup>1</sup>Aquateam-COWI, <sup>2</sup>Poznan University of Technology, <sup>3</sup>AQUANET, Poland

**Cost-effective retrofitting of existing sewage ponds – a case study for rural areas** Pfeiffer, F.<sup>1</sup> and Massagué, A.<sup>2</sup>, <sup>1</sup>Systems S&P, <sup>2</sup>Aqualogy, UK

Lysotherm®: an innovative approach to thermal sludge hydrolysis Geraats, B., Eliquo Water & Energy B.V., Netherlands

**Enzyme focused process engineering: bioactive chemical removal in wastewater** Still, K., Jenidi, Y., Pordea, A., Hall, S. and Gomes, R.L., University of Nottingham, UK

The challenges and opportunities of innovative permitting

Bagnall, J.P., Thomas, H. and Daldorph, P., Atkins, UK

Use of biofilm to seed the new activated sludge process at Liverpool WWTW

Black, J. and Molloy, R., United Utilities, UK

#### Grey water treatment using Arvia process

Oki, R.<sup>1</sup>, Brown, N.W.<sup>2</sup>, de las Heras, N.<sup>2</sup> and Ford, R.<sup>1</sup>, <sup>1</sup>University of Salford, <sup>2</sup>Arvia Technology Ltd, UK

#### Panel Debate - What is the potential scope for real-time control in the UK water industry?

In recent years, although not yet commonplace, advanced process control has become more prevalent in the UK wastewater industry. Most solutions tend to consist of a standardised approach with a significant element of customisation, which is usually site dependent. This forum is designed to ascertain at what point we are in the journey and what more we need to do to progress to a point where advanced control is business as usual and also where it is and is not appropriate. Most of the current focus is on site based process solutions but it is also important that we touch on the huge potential that exists in smarter control of our wastewater networks and identify the development steps that we need to take to ensure we achieve our ambitions.

#### Panel Chair:

Andy Thornton, Hach Lange

#### Panel:

Simon Mazier, Perceptive Engineering Oliver Grievson, Anglian Water John Cannon, Southern Water Ajay Nair, MWH Anthony Kyriacou, Severn Trent Water Ferran Ripolli, Sislitech Aqualogy

#### Workshop - Training Needs of the Water Industry

The water industry is currently facing the challenge of increased targets, as well as a potential shortage in skills and experience. This workshop will discuss how training can help companies to meet these demands. Further details to follow.

## AquaEnviro

This conference is organised by Aqua Enviro, a leading, specialist environmental consultancy, conference organiser and training provider in the water, wastewater, bio-resources and organic waste sectors.

We are able to offer wide-ranging expertise, from pilot plant design, build and operation for established and novel technologies, for both aerobic and anaerobic treatment processes; through to designing, commissioning and operating full scale treatment plants. Aqua Enviro has its own laboratory and can develop solutions for complex issues, we also offer independent testing services.

Working with our technical specialists the events team develop training courses and conferences for the water, wastewater and organic waste industry which are regarded as benchmark events.

Whatever your environmental issue or requirement, we can help you and your business. To find out more visit www.aquaenviro.co.uk





## 9<sup>th</sup> European Waste Water Management Conference & Exhibition

12<sup>th</sup> – 13<sup>th</sup> October 2015, Manchester Town Hall, Manchester, UK

## **Conference Overview**

The advantage of annual events around a focused subject area such as the European Waste Water Management (EWWM) Conference is that it provides a historical record of changes taking place in the industry. Regular attendees and those who follow its proceedings, not only gain an awareness of the current state of the industry, but also become adept at spotting trends and predicting the direction the industry might be moving in the future.

Over the duration of the EWWM conference one clear trend that has emerged is the move away from the construction of new plant (and also to a large extent innovations in new treatment technologies) towards the optimization of existing assets. A large number of opportunities are now available to achieve this from Big Data through to Real Time Control (RTC) and a broad cross-section of these techniques will be discussed during this event. Of course when legislation changes there is still the demand for new technologies and at present the industry is grappling with the challenge of meeting tighter phosphorus consents across the whole spectrum of population equivalents; a particular challenge at smaller sites. However this also comes with opportunities and with the increasing focus on the potential (and need) to achieve P recovery from wastewater, the industry now recognizes that much of the UK's present fertilizer P requirements could be met through effective P recovery from effluent, whilst at the same time minimising the aquatic impacts of P discharge. We now await the arrival of processes that can achieve this economically and over the course of this conference the latest development in this area will be considered. Alongside this is the additional requirement to reduce the discharge of priority chemicals, almost certainly a key area for new technologies.

If you have an interest in wastewater you will most definitely find something of value at this event. It provides the opportunity to learn, reflect and meet new and old colleagues, and all of it delivered amidst Victorian splendour at its best.

**Nigel Horan, Conference Director** 

## **The Venue**

Manchester Town Hall

Albert Square, Manchester, UK

The Town Hall was designed by Alfred Waterhouse, and is regarded as one of the finest examples of neogothic architecture in the United Kingdom.

The exhibition will be held in the Great Hall which is decorated with celebrated murals by Ford Maddox Brown illustrating the history of the city. The conferences sessions will take place in the impressive staterooms.

## **Drinks Reception**

#### Monday 12<sup>th</sup> October The Great Hall, Manchester Town Hall

The drinks reception will be held after the conference sessions in the Great Hall and will provide delegates and exhibitors an opportunity to network in a relaxed and informal environment.

> www.ewwmconference.com www.aquaenviro.co.uk twitter.com/aquaenviro

> > #EWWMConference





# EWWM



## Booking

You can register online or download a printable booking form @ www.aquaenviro.co.uk

Conference Fees	Both Days	Day Rate
FULL DELEGATE	£395	£295
AUTHOR	£320	£200
STUDENTS/ACADEMICS AND CHARITIES	£190	£100

Please note the above rates are exclusive of VAT.

Please direct any registration queries to Clare Hunter: e. clarehunter@aquaenviro.co.uk, t. +44 (0)1924 257891

## **Sponsorship & Exhibition**

The EWWM Conference provides a fantastic opportunity to increase your company's profile and gain brand awareness through sponsorship & exhibiting.

If your organisation works within the wastewater industry this event is not to be missed. There are various sponsorship packages and advertising opportunities available starting from just £150 – please visit **www.ewwmconference.com** for full details.

The cost of a 3m x 2m exhibition space is only  $\pounds 650$  (+VAT) booked and paid by the 31st July, after this date the price increases to  $\pounds 750$  (+VAT). Exhibitors also receive 20% off the delegate rates.

Visit **www.ewwmconference.com** to download an exhibition booking form or email **sarahbrown@aquaenviro.co.uk** for further details.



## **Dates For Your Diary**

Thermal Processes for Resource Recovery from Waste 10<sup>th</sup> September 2015, Wakefield

20<sup>th</sup> European Biosolids & Organic Resources Conference, Seminar and Exhibition

9<sup>th</sup> - 11<sup>th</sup> November, Manchester Town Hall

Innovations in Wastewater Treatment 21st - 23rd March 2016, Leeds

11<sup>th</sup> IWA Specialist Group Conference on Pond Technology for Wastewater Treatment 21<sup>st</sup> - 23<sup>rd</sup> March 2016, Leeds

Advances in Thickening and Dewatering Technologies to Reduce Polymer Consumption Early 2016, Leeds

FOG – Means and Opportunities Early 2016, Wakefield

For full details please visit www.aquaenviro.co.uk or contact Sarah Brown: sarahbrown@aquaenviro.co.uk Tel. +44 (0) 1924 257891



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