Invitation to Register

19th European Biosolids & Organic Resources Conference & Exhibition

17th – 19th November 2014, Manchester Town Hall, Manchester, UK

MONDAY 17th NOVEMBER
BBSRC funded Anaerobic Digestion Network Annual Workshop

TUESDAY 18th NOVEMBER
- Novel Feedstocks and Co-Digestates
- Experiences with Thermal Hydrolysis Treatment
- Best Uses of Energy
- Odour Control

WEDNESDAY 19th NOVEMBER
- Digester Performance
- Liquor Treatment
- Sludge Thickening & Dewatering
- Nutrition Recovery
- Sludge Stockpiling
- Digestate

“Absolutely superb”
CH2M HILL, USA

“Fantastic conference. High calibre people. Excellent staff support”
Bio-Organic Catalyst Inc

“The “cutting edge” conference for sludge treatment in Europe”
Cambi AS

www.european-biosolids.com
The Biosolids conference attracts the most authoritative global experts in the area of biosolids and organic resource handling, treatment and recycling. The programme covers both the latest innovations and updates of existing technologies. Presentations from respected industry experts and newcomers follow the development of technologies and legislation from inception to full-scale installations.

The conference regularly gathers over 200 delegates from all over the world, many of them return every year both for the technical presentations and fantastic networking opportunities.

In view of the many very positive comments we received about Manchester Town Hall, the venue we used last year, it was not a difficult decision to hold the event here again. We are all hopeful that after this year’s event, we get similar post-event feedback.

The trend we have seen over recent years towards better energy recovery through digestion, continues as the industry seeks to reduce its energy usage and associated GHG emissions. At the same time, the needs for treating the liquor that results from biosolids or digestate dewatering, become increasingly important, with a number of innovative alternatives available to achieve this, with and without nutrient recovery. As energy and nutrient recovery through digestion form a key part of the Circular Economy, which in turn is meant to fuel export driven innovative ideas that are the Green Economy, the government has funded a number of large research initiatives in this area. We are pleased to welcome one such initiative to this event, namely the BBSRC funded Anaerobic Digestion Network. The workings of this network and the funding and opportunities available for commercial and academic activities will be revealed over the two days in Manchester.

So we look forward to welcoming you to the North and hope you enjoy two days of debate, learning and socializing.

Nigel Horan, Conference Director

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 conference’s sessions will take place in the impressive state rooms.

Venue, travel and accommodation details will be sent out upon registration, alternatively you can view these on the conference website, www.european-biosolids.com

Conference Dinner at The Palace Hotel

Tuesday 18th November

The Conference Dinner will take place at the iconic Palace Hotel, a striking grade two listed four star hotel, based right in the heart of Manchester. It is located just across the road from Oxford Street train station and close to a world of attractions in this vibrant, bustling city.

A ticket for the evening is £60 (+VAT) per person which includes arrival drinks, a 3 course meal with coffee and ½ bottle of wine. Please add the dinner option to your basket upon registering at www.aquaenviro.co.uk

The Conference Dinner is a great opportunity to network with people in the industry in a relaxed atmosphere. Why not take a corporate table of 10 to entertain your guests? This is a perfect opportunity to entertain your most important clients.

Corporate tables are available at a cost of £600 (+VAT) for 10 people.

The event is always a sell out so we encourage you to book early to avoid disappointment. Email: franceswoodhead@aquaenviro.co.uk to reserve your table.

Sponsorship & Exhibition

This highly regarded annual conference offers a fantastic opportunity to increase your company profile and gain brand awareness through sponsorship. The options range from inserts in the delegate packs, through to sponsorship of the dinner or a specific technical session.

Alongside the conference is the extremely popular exhibition. Stand spaces are 3m x 2m and are on offer at £850 (+VAT) for two days (18th - 19th Nov). Current exhibitors include:

- Veolia Water Technologies
- Cambi
- MSE Hiller
- Paques
- GEA Mechanical Equipment UK Ltd
- Bucher Unipektin
- Huber
- Aqua Enviro
- Mono Pumps
- Sustec Consulting & Contracting BV

To reserve a space or discuss your sponsorship requirements in more detail please contact Frances – T. +44 (0) 1924 257891 or Email. franceswoodhead@aquaenviro.co.uk
The Network addresses scientific and technical challenges in the development of anaerobic biotechnology. It is underpinned by new tools and concepts. As well as enhancing the performance of anaerobic digestion (AD) as a second generation bioenergy process, these open up new areas of application in the creation of value-added bio-based products, widening the process scope to biorefinery. Bio-molecular tools open up the possibility of improved diagnostics and advanced online process control, topics of immediate interest to industry.

The Network engages academia, industry and government to help promote and disseminate AD research and practice, particularly in the creation of value-added bio-based products and bio-molecular tools which open up the possibility of improved diagnostics and advanced process control, topics of immediate interest to industry. Funding is available through Business Interaction Vouchers and Proof Concept grants. Membership of the group is free. Topics for discussion will be centred around recent research carried out by the Network’s Working groups:

1. Bio-molecular tools
2. The VFA Factory: extraction, downstream processing and conversion
3. Optimisation of anaerobic digestion processes
4. Feedstock enhancements, novel feedstocks and new markets
5. Process integration and modelling
6. Environmental interactions and societal challenges.

Conference delegates will be offered a discounted rate to attend the workshop.

**MONDAY 17th NOVEMBER**

**BBSRC FUNDED ANAEROBIC DIGESTION NETWORK ANNUAL WORKSHOP**

**TUESDAY 18th NOVEMBER**

**NOVEL FEEDSTOCKS AND CO-DIGESTATES**

- **Bio-Diesel Recovery from the Fat Oil of Leather and Slaughterhouse Solid Wastes and Its Exhaust Emission**
  - Shanmugam, P.1, Latha, S.2, Ashwini, S.2, Kanthasamy, P.1, Thambirani, E.4, Council of Scientific and Industrial Research, India, 2Anna University, India, 3SRM University, India
  - Biogas from pulp and paper mill sludge - an assessment of investment and technology requirement for an integrated production system
  - Hagelquist, A., COWI AB, Sweden
  - Resource recovery from pulp and paper mills by adaptation of their wastewater treatment to biogas production
  - Granström, K., Karlstad University, Sweden
  - Lochhead AD - Europe’s largest dry AD facility - A way to go for co-mingled municipal food and green waste?
  - Csepany, G., SLR Consulting Ltd
  - **Co-digestion at the Wuppverband WWTP’s**
    - Salomon, D.1 and Kolisch, G.2, Wuppverbandsgesellschaft für integrale Wasserwirtschaft mbH, Germany,
    - Wuppverband, Germany.
    - **Realising the biochemical potential of feedstocks in the circular economy**
    - Smyth, M., Aqua Envrilo Ltd
    - **New Plant to Provide “Green” Energy from Sewage Sludge for Thames Water at Oxford Humphries, T., and Sall, P., Veolia Water Technologies**
    - **Biogas plant Mosserud, Sweden – Successful implementation and Operation of Biogas Plant for Organic Household Waste, Manure and Grass Silage**
    - Kanders, L.1, Sthy, F.1, Enocksson, H.1, Purac AB, Biogasbolaget AB
    - **Is There a Free Lunch in Food Waste?**
    - Evans, T. TIM EVANS ENVIRONMENT

- **Supercritical CO2, Mediated Continuous Countercurrent Fractionation of Valuable Components from Citrus Processing Bi-products**
  - Yasumoto, S.1, Quitain, A.1, Sasaki, M.2, Iwai, H.1, Tanaka, M.3, Hoshino, M.3, Kumamoto University, Japan,
  - Institute of Pulsed Power Science, Kumamoto University, Japan,
  - Maruhoshi Vinegar and ASCII Co. Ltd., Japan
  - **Sub/Supercritical Hydrothermal Liquefaction of Asian Biomass for Energy Conversion**
    - Quitain, A., Herrn, C-Y.2, Yusup, S.3, Sasaki, M.3, Uemura, Y.1, Kumamoto University, Japan,
    - Universiti Teknologi Petronas, Malaysia,
    - Institute of Pulsed Power Science, Kumamoto University, Japan,
    - Centre for Biofuel and Biochemical Research, Universiti Teknologi Petronas, Malaysia

**BEST USES OF ENERGY**

- **Opportunities for using waste heat from processing organic residues**
  - McCendry, P. SLR Consulting
- **Best uses for the energy produced**
  - McCendry, P. SLR Consulting
- **Optimising Energy and Waste Heat Recovery without a Land Bank – New Water’s Approach**
  - Burrawes, P.1, Angoli, B.2, Bartell, B.2, Erschnig, M.2, Westcott, P.1, Desing, B.1, CHZM HILL, Canada, NEW Water, USA
  - **Implementation of a local heat grid at Buchenhofen WWTP**
    - Kolish, G.1, Hubus, I.1, Salomon, D.2, Wuppverbandsgesellschaft für integrale Wasserwirtschaft mbH, Germany,
    - Wuppverband, Germany.
    - **Biofuels from Digested Sewage Sludge: Pyrolytic Biofuel Production and Catalytic Upgrading Studies**
    - Arazo, R.O.1,2, Capareda, S.C.2 and De Luna, M.D.G.3, 1Misamis Oriental State College of Agriculture and Technology, 2Texas A&M University, 3University of the Philippines Diliman

- **Advanced Energy Recovery from Sewage Sludge**
  - Mills, N., Perrault, A., Pearce, P., Thames Water
  - **Application of Biotechnology for Reducing Biosolids Production In-situ with Carbon Cycle Analysis**
    - Whiteman, R.1 and Davies, I.2, ABS Inc, IRS, USA
**DIGESTER PERFORMANCE**

**EXPERIENCES WITH THERMAL HYDROLYSIS TREATMENT**

**Anaerobic Digestion, There is Still Room for Improvement**
Giacalone, S., Winter, P., Smith, S., Thames Water, UK

**A Novel Approach to Seeding and Ramping up from Conventional to THP Digestion – How fast is too fast?**
Molokwu, O., Pook, M., Macedo, F., Fountain, P., Reading University, Veolia Water Technologies

**Advanced Digestion at Beckton and Crossness: Innovative Design and Early Operational Experience**
Merry, J., and Fountain, P., Thames Water

**Second Generation THP – Intermediate THP**
Rus, E., Masse, A., Petruell, A., Mills, N., Thames Water

**Nye Mjøsanelget, Norway – Biogas Plant with THP for Organic Household Waste**
Kanders, L., Gaustad, H., Sargatski, W., Purac AB, Cambi AS

**Why Thermal Hydrolysis and Anaerobic Digestion is Rising to the Top in North America**
Williams, T., and Whitlock, D., CH2M HILL

**THP Organic Load ramping up strategy based on Oxford STW THP plant start-up experience**
Macedo, F., Fountain, P., Symonds, M., Clegg, S., Sluder, D., Thames Water, AECCOM, Kier Group

**Thermal Hydrolysis at Davyhulme WWTW – One Year On**
Edgington, R.M., Belshaw, D., Lancaster, R., Jolly, M., United Utilities, Black & Veatch

**Lessons learnt from the commissioning of the mesophilic digesters at Peacehaven new Sludge Treatment Works**
Kanders, L., Gaustad, H., Sargatski, W., Purac AB, Cambi AS

**Cambi SolidStream® High Dry Solids Technology – Report from first full-scale installation, Germany**
Koppmann, T., Nilsen, P.J., Solheim, O.E., Traa, L.P., Amperverband, Cambi Group

**Strategy Development of Sludge Treatment and Disposal in Beijing Based on Thermal Hydrolysis Advanced Digestion**

**Thermal Hydrolysis at Davyhulme WWTW – One Year On**
Edgington, R.M., Belshaw, D., Lancaster, R., Jolly, M., United Utilities, Black & Veatch

**ExelysTM Continuous Thermal Hydrolysis - Is A Containerised Concept Every Sites Solution?**
Gilbert, A., and Bigot, B., Veolia Water Technologies

**Full scale experiences with TurboTec continuous thermal hydrolysis at WWTP Venlo (NL) and Apeldoorn (NL)**
Van Dijk, L., Luning, L., de Man, A., Sustec Consulting Contracting bv, the Netherlands, Waterschapsbedrijf Limburg, the Netherlands

**DIGESTATE**

**Cost Benefit Analysis of Applying Digestate to Agricultural Land in Wales**
Ballinger, A., Smyth, M., Eunomia Research & Consulting, Aqua Enviro Ltd

**Making Best Use of Biosolids**
Taylor M.J., Withers P.J.A., Chambers B.J., ADAS Gleadthorpe

**Engineering Practice for Biosolids Treatment by the CTB Process in China**
Chen, J., Gao, D., Chen, T-B., Zheng, H-X., Li, X-Y., Che Beijing Green Tech Environmental Engineering Co Ltd

**ODOUR CONTROL**

**Odour generation and dust in belt drying of sewage sludge**
Heindl, A., HUBER SE, Germany

**Odour control – Developing new strategies**
Li, W., Hill, D., Roberts, C., Lee, C., Wilkes, M., Oodour Services International Limited, University of Wolverhampton

**Operational experiences at Southern Water during the implementation of an innovative approach to the utilisation of an existing sludge treatment technology - Low dose liming of digested liquid sludge**
McDonald, A-M., Arnold, S., Southern Water

**Bacterial changes during commissioning of digestion following thermal hydrolysis**
Macedo, F., Fountain, P., Pook, M., Mills, N., Neilson, P.J., Murthy, S., Panter, K., Thames Water Innovation, Cambi Norway, DCWater, USA, Ebcor Ltd

**Can you improve the future by simply understanding your business better?**
Roach, N., Business Modelling Associates

**Making Best Use of Biosolids**
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www.aquaenviro.co.uk
SLUDGE THICKENING AND DEWATERING

North Coast Scheme Sludge Dewatering - 7 Years On
Sims, J., Huber Technology

TerraNova® Ultra - Ultradewatering of sewage sludge with integrated nutrient recovery - boost the energy balance
Buterman, M., TerraNova Energy

High Performance sludge dewatering for drinking water plants with the Bucher Hydraulic Filter Press
Hippert, M. and Mischler, J-P., Bucher Unipetsk, Switzerland

Controlled Backmixing post gravity belt thickeners using Primary Sludge at Reading STW
Mase, A., Perrault, A., Fountain, P., Thames Water

Natural freezing-thawing to improve the dewaterability of pulp mill WAS and the anaerobic digestibility of the filtrate/pressate
Meyer, T., Allen, D.G., Tran, H., Edwards, E.A., University of Toronto, Canada

Practical techniques to assess the dewaterability of sludge and optimise performance and polymer dosing
Minall, R., Smyth, M., Horan, N.J., Aqua Enviro Ltd

Digestate Dewatering - Clearfleau and Huber Technology solution for Diageo
Clutten, T., Huber

SLUDGE STOCKPILING

Quality biosolids recycling, winter stockpiling without risking prosecution
Evans, T. TIM EVANS ENVIRONMENT

The icing on the cake – options for physical stabilisation of sludge stockpiles
Pook, M. and Grace, H., Thames Water

Mechanisms of spontaneous combustion of stockpiles of biosolids – Risk reduction and process optimisation
Aganetti, R., Thorpe, G., L., J-D., Victoria University, Australia

Potential of a modified storage environment contributing to E. coli regrowth prevention strategies
Fane, S.1, Tyrrel, S.1, Cartmell, E.1, Nocker, A.1, Wilson, A.1, Cranfield University, 1Severn Trent Water

LIQUOR TREATMENT

Full Scale Deammonification in the Mainstream & Sidestream
Wiltshire, P. and Wim De Mooij, H., Grontmij

ANITATM Mox: Experience from Start-up and Operation of Deammonification MBBR and perspective of a New Deammonification IFAS configuration
Nussbaum, B.1, Piveteau, S.1, Rosén, M.1, Christensen, M.1, Lemaire, R.2, Bigot, B.3, AnoxKaldnes AB, Sweden, Veolia Water Technical and Performances Department, France, Veolia Water Technologies, UK

Short Retention Time Anaerobic Digestion Processes for Industrial Wastewater Treatment – past, present and future
December 2014, Newcastle, UK

Phosphorus Removal from Catchments: Technology or Source Control?
Early 2015, venue TBC

Innovations in Wastewater Treatment 2nd – 4th September 2015, University of Leeds, UK

AQUA ENVIRO EVENTS DIARY

Constructing Wetlands for Water Management and Pollution Control - CWA Annual Conference 7th-8th October 2014, Manchester Town Hall, UK

8th European Waste Water Management Conference & Exhibition 7th – 8th October 2014, Manchester Town Hall, UK

Making Dewatering Work 23rd October 2014, Aqua Enviro Training Suite, Wakefield, UK

Full Scale Phosphorus Recovery in Severn Trent Water
Wild, R.1, Wickens, D.1, Bejar, P.2, Moxey, P.1, Severn Trent Water, 1NMC Nomenca

MINORGA® goes live! Preparing for Norway’s first biofertiliser product
Tornes, O. and Norgaard, E., IVAR IKS, Norway
## REGISTRATION FORM

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**PLEASE SELECT WHICH DAY YOU ARE ATTENDING:**

- TUES 18th
- WEDS 19th

### AD NETWORK WORKSHOP (17th NOVEMBER) CONFERENCE DELEGATES

- £75.00
- £15.00
- £90.00

### AD NETWORK WORKSHOP ONLY (17th NOVEMBER)

- £150.00
- £30.00
- £180.00

### CONFERENCE DINNER (18th NOVEMBER)

- £80.00
- £12.00
- £72.00

### PAYMENT IN ADVANCE

VAT invoice will be issued on receipt of registration.

**I ENCLOSE A PAYMENT BY CHEQUE OF:**

**PLEASE INVOICE THE FOLLOWING PERSON/ORGANISATION FOR THE SUM OF £**

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or e-mail to clarehunter@aquaenviro.co.uk  or fax to +44(0) 1924 257 455 or tel: +44(0) 1924 257 891

You can also register and pay online at www.aquaenviro.co.uk

For full details of the conference visit www.european-biosolids.com