

16th European Biosolids & Organic Resources Conference & Exhibition

14-16th November 2011, The Royal Armouries, Leeds, UK

DAY 1 - Monday 14th November

Plenary Session

Where do we go from here? - Ofwat's response to the OFT market study on sewage sludge and organic waste treatment, recycling and disposal

Mark Wolsfold, Head of Asset Strategy, and Alison Fergusson, Senior Analyst, Ofwat, UK

Recovery of Energy and Resources from Organic Wastes

The waste management system on Langkawi Island, Malaysia – options for waste treatment

Mohd Razi, S., Stentiford, E. and Barton, J., University of Leeds, UK

Use of green and food derived composts to improve brownfield soils for the purpose of energy crop production

Litterick, A., Earthcare Technical Ltd, UK

'40,000 tonnes in', operational experience of food waste digestion

Harrison, D., Monsal, UK

A new source of biomass – extraction and use of biomass from waste

Mair, R., Graphite Resources Limited, UK

How the concept of co-digestion can be applied at a university campus canteen

Carvalho, L. and Duarte, E., Technical University of Lisbon, Portugal

Anaerobic digestion of a fish processing industry sludge

Carvalho, L.¹, Di Bernardino, S.² and Duarte, E.¹, ¹Technical University of Lisbon, ² LNEG - Laboratório Nacional de Energia e Geologia, Portugal

The role of on-site industrial digestion

Gueterbock, R., Clearfleau Limited, UK

Enhanced anaerobic co-digestion of agricultural biomass and biological sludge

Aylin Alagöz, B., Erdinçler, A., Yenigün, O., Boğaziçi University, Institute of Environmental Sciences, Turkey

Energy recovery from pulp and paper biotreatment residuals using anaerobic digestion

Elliott, A. and Mahmood, T., FPInnovations, Canada

Biosolids and Digestate Recycling Opportunities

Marketable sludge derivatives from sustainable processing of wastewater in a highly integrated treatment plant

Chaney, K.¹, Murray, C.¹, Smith, G.¹ and Le, M.S.², ¹Harper Adams University College, ²United Utilities Group PLC, UK

Maximising service and the value of biosolids

Hill, S., GENeco, UK

Bioassay of biosolids in an operational scale field trial

Evans, T.D.¹ and Smith, S.R.², ¹Tim Evans Environment, ²Imperial College London, UK

Are we underestimating biosolids crop available nitrogen supply?

Taylor, M.J.¹, Rollett, A.J.¹, Martindale, T.², and Chambers, B.J.¹, ¹ADAS Gleadthorpe, ²Severn Trent Water, UK

Recycled organic waste as nutrient source for short rotation cycle

Page, K., Cardiff University, UK

Optimising phosphorus supply from nutrient enriched sludge granules using diffuse gradient in thin films (DGT)

Sakrabani, R., Pawlett, M., Read, R. and Deeks, L., Cranfield University, UK

Removal of adenovirus in biosolids treatment

Vesuvanathan, S.¹, Chellappan, S.¹, Rouch, D.A.¹, Smith, S.R.² and Deighton, M.¹, ¹RMIT University, Australia, ²Imperial College London, UK

Biosolid pathogen issues: survival of prions and helminths

Pepper, I., Miles, S., Williams, D. and Gerba, C., The University of Arizona, USA

Growth potential: a new method for estimation of the risk of *E.coli* regrowth in digested sludge cake

Sprigings, A. and Le, M.S., United Utilities PLC, UK

The developing value of sewage sludge and how to exploit it

Nair, A. and Palmer, S.J., MWH (UK) Ltd, UK

Minimising waste: treatment and recycling of grit and screenings

Hill, S., GENeco, UK

HotRot commissions their first UK grit and screenings processing plant

Lloyd, J., HotRot Organic Solutions Limited, UK

Advanced Digestion

The HPH process – Anglian Water's new innovation for advanced digestion

Riches, S.¹, Brookes, A.¹, Oliver, B.² and Speakman, T.², ¹Anglian Water, ²Imtech, UK

In-series digestion – experimental studies

Edgington, R., Gray, B. and Hyde, S., United Utilities, UK

Advanced digestion in Anglian Water - summary of AMP 4 delivery experience and AMP 5 delivery plan

Riches, S.¹, Oliver, B.² and Nossiter, P.³, ¹Anglian Water, ²Imtech, ³Black & Veatch, UK

Application of an innovative process for improving mesophilic anaerobic digestion of sewage sludge

Shana, A.¹, Ouki, S.², Asaadi, M.³ and Pearce, P.¹, ¹Thames Water, ²University of Surrey, ³AD Technologies Ltd, UK

An update on Whitingham (Norwich) advanced digestion project

Panter, K.¹ and Green, P.², ¹Ebcor Ltd, ²Anglian Water Services, UK

Treatment of Return Liquors

Specialised return liquor treatment at Whitingham – UK's first full scale example of the SHARON process

Riches, S.¹ and Nossiter, P.², ¹Anglian Water, ²Black & Veatch, UK

Full-scale experiences with two novel energy - and cost effective biological n-removal processes for sidestream N-rich effluents

Lemaire, R.¹, Chauzy, J.¹, Christensson, M.² and Bigot, B.³, ¹Veolia Water, France, ²AnoxKaldnes AB, Sweden, ³Veolia Water Solutions & Technologies

Treatment of high-strength ammonia liquors using Amtreat process at Ashford STC, Southern

Bungay, S.^{1,2}, Collins, S.², Baldock, T.³, ¹Helix ECL, ²ACWA Services, ³Southern Water, UK

Nitrogen removal in anaerobic digestion liquors using the One-Step Anammox process

Driessen, W., Reitsma, G. and Hülsen, T., Paques bv, The Netherlands

Optimising the manufacture of Organo-Mineral Fertiliser

Martin, N. and Le, M.S., United Utilities Group PLC, UK

Digestate – plastics removal, volume reduction and water reuse

Clutten, T., Huber Technology, UK

DAY 2 - Tuesday 15th November

Process Design, Control & Optimisation

Biochemical pathways: the route to accelerating revenue generation from anaerobic digestion

Smyth, M.¹ and Horan, N.J.^{1,2}, ¹Aqua Enviro Limited, ²University of Leeds, UK

Precision and accuracy of methodologies for assessing batch anaerobic biodegradability

Esteves, S.R.R., Delvin, D., Dinsdale, R. and Guwy, A.J., Wales Centre of Excellence for Anaerobic Digestion, University of Glamorgan, UK

Optimisation and commercial aspects of real time control for waste water treatment

Thornton, A., Hach Lange Ltd, UK

The influence of heat balance on the economics of advanced anaerobic digestion processes

Mills, N.^{1,2}, Pearce, P.¹, Farrow, J.¹, Thorpe, R.¹ and Kirkby, N.², ¹Thames Water Utilities Limited, ²University of Surrey, UK

Lifting the lid on process optimisation for anaerobic digestion

Reed, J.P., Devlin, D., Esteves, S.R.R., Dinsdale, R. and Guwy, A.J., University of Glamorgan, UK

Influence of premixing on the rheological properties and drying characteristics of municipal sewage sludge

Charlou, C., Sauceau, M. and Arlabosse, P., University of Toulouse, France

Best practice design for challenging digester mixing applications

Capon, N., Monsal, UK

Enhancement of anaerobic digestion of sewage sludge and sanitisation of digestate by pressurised carbon dioxide pretreatment

Mushtaq, M., Banks, C.J. and Heaven, S., University of Southampton, UK

Combining physical and chemical pre-treatment processes to reduce running costs and sludge volumes in municipal WWTP's

Dunnewijk, J. and Kluit, A., Nijhuis Water Technology, The Netherlands

Squeezing more energy from feedstocks: enzyme addition and enzymatic activity monitoring

Williams, H.G., Kumi, P., Devlin, D., Williams, J., Dinsdale, R., Esteves, S. and Guwy, A., University of Glamorgan, UK

From sludge to fuel tank

Hu, R. and Le, M.S., United Utilities Group PLC, UK

Energy recovery from anaerobic digestion as compared to energy recovered from close-coupled gasification

Abu-Orf, M., Goss, T., Davies, G., Stinson, B. and Hartz, F., AECOM Water, USA

Enhancing biogas production with combined ultrasound and enzymatic hydrolysis treatment

Negral, L., Marañón E.*, Fernández-Nava Y. and Castrillón L., University Institute of Industrial Technology of Asturias, University of Oviedo, Spain

Biogas processing and utilization

Full-scale experience with biological biogas desulfurization using the Thiopaq technology

Driessen, W., van Zessen, E. and Visser, Paques bv, The Netherlands

Utilizing green gas to its full potential using high selective gas separation membranes

Lems, R., Langerak, L. and Dirkse, E.H.M., DMT Environmental Technology, The Netherlands

Performance and costs of hollow fibre membrane systems for biogas upgrading

Edeki, L., Esteves, S.R.R. and Guwy, A., University of Glamorgan, UK

Enhancement of biogas production from waste activated sludge after microwave pretreatment

Elagroudy, S.¹, El-Gohary, F.², Ghobrial, F.¹ and Warith, M.³, ¹Ain Shams University, Egypt, ²Water Pollution Research Department, National Research Centre, Egypt, ³Ryerson University, Canada

Technologies for biogas utilisation -getting more energy for less effort in 5 steps

Lems, R. and Dirkse, E.H.M., DMT Environmental Technology, The Netherlands

Quantifying the elements - an insight in to the technology and systems for the on-line analysis and flow measurement biogas

Dakin, C., Gas Data Ltd, UK

Sludge Conditioning and Dewatering

Top range dewatering of digested and THP sludge with Bucher HPS press in the UK

Huppert, M.¹, Hofmann, F.¹, Fountain, P.², Shana, A.² and Asaadi, M.³, ¹Bucher Unipektin AG, Switzerland, ²Thames Water Utilities, UK, ³AD Technologies, UK

Experiences and performances with industrial sludge dewatering and the Bucher press

Krauss, W., Bucher Unipektin AG, Switzerland

Dewatering investigation of digested THP sludge

Lee, K., Ledoux, S., Kelleher, K., Murthy, S. and Fountain, P., Thames Water Utilities, UK

Dewatering sludge originating in water treatment works in reed bed systems – 4 years experience

Nielsen, S.¹ and Cooper, D.J.², ¹Orbicon A/S, Denmark, ²ARM Ltd, UK

Experiences of optimising centrifuges for dewatering

Wild, S., United Utilities, UK

SORP WORKSHOP

Further details available shortly

Day 3 - Wednesday 16th November

Operating Experiences with Energy Recovery

The new Shanghai WWTP digestion egg shape for intense energy recovery to sludge drying

Wang, L.¹, Chabrier, J.P.², Wanshan, L.³, ¹Shanghai Municipal Sewerage Company, China, ²Enviro-Consult, France, ³Artelia Group, China

Avonmouth – sewage treatment works or power station?

Law, I., GENeco, UK

Mersey Valley Processing Centre [MVPC] Shell Green Extension, Widnes, Digested Sludge Recovery Centre – United Utilities plc

Gilbert, A., Veolia Water Solutions & Technologies, UK

The successful implementation and optimisation of advanced digestion for Dwr Cymru Welsh Water

Wilson, S.¹, Oliver, B.² and Merry, J.², ¹Dwr Cymru Welsh Water, ²Imtech, UK

Cellruptor full-scale commercial validation report and results from Yorkshire Water Esholt WWTW

Spooner, J.¹ and Asaadi, M.², ¹Eco-Solids International, ²AD Technologies, UK

Commissioning of thermal hydrolysis plants

Jolly, M., Tattersall, J. and Knight, G., Black & Veatch Ltd, UK

Optimising CHP performance with CAMBI advanced digestion

Riches, S.¹ and Nossiter, P.², ¹Anglian Water, ²Black & Veatch, UK

Incineration vs thermal hydrolysis

Bigot, B., Veolia Water Solutions & Technologies, UK

Using Six Sigma methodology for thermal drying energy demand reduction

Adam, J., Celtic Anglian Water, Ireland

Understanding of municipal wastewater sludge drying behaviour: drying test and influence of physico-chemical properties

Li, T., Alibar, J.P., Ruel, S.M. and Dauthuille, P., Suez Environnement, France

Conclusions on the treatment of sludge granules by pyrolysis

Stanford, C.¹ and Clode, K.², ¹Southern Water, ²Environmental Power International Ltd

Energy from tannery sludge and organic waste

Bowden, W., SLG Technology Ltd, UK

Regulation and Environmental Impact

Implementing a regulatory framework to promote biosolids reuse in the Emirate of Abu Dhabi

Smith, R., Griffiths, M. and Hannan, C., Regulation and Supervision Bureau, Emirate of Abu Dhabi

Chemical treatment of sewage sludge to reduce leachability

Mortula, Md. M., American University of Sharjah, United Arab Emirates

Total greenhouse gas budget of biosolids at a water treatment plant in Melbourne, Australia

Majumder, R.¹, Livelsey, S.J.¹, Laidlaw, W.S.¹, Gregory, D.² and Arndt, S.K.², ¹The University of Melbourne, ²Melbourne Water Corporation, Australia

Odour and the law: the legal regimes for the control of odour emissions

Tilling, S., Burges Salmon LLP, UK

Bioaerosol monitoring – a practical evaluation of methodology

Hall, S.^{1,2}, Gibson, H.¹, Lambert, A.M.² and Hill, D.J.², University of Wolverhampton, ²Crestwood Environmental Limited, UK

Biosolid in the removal of cationic dye methylene blue (MB) from aqueous solution as an effective alternative low cost adsorbent: an adsorption study

Sen, T.K., Hui, N.K.H., Ang, A.M., Curtin University, Australia

Biosolids in Europe

Evans, T.D., Tim Evans Environmental, UK

Sludge Derivatives

Sequential production of bio-diesel, ethanol, hydrogen and methane as a 'biorefinary' concept using leather solid wastes and effluent treatment sludges for zero solid discharge

Shanmugam, P.¹, Latha, S.², Kanthasamy, P. and Mandal, A.B.³, ¹CLRI (CSIR) Government of India, ²Indian Institute of Technology, ³Central Leather Research Institute, India

Glass-ceramics produced from sewage sludge by microwave heating

Tian, Y., Zuo, W., Chen, D., and Wu, D., Harbin Institute of Technology, China

Biochar production: Tackling the problems of waste management, energy generation and carbon sequestration

Crombie, K., Brownsort, P. and Mašek, O., UK Biochar Research Centre, University of Edinburgh, UK

Opportunities from the Renewable Heat Incentive

Renewable heat from sludge treatment; a technology solutions view on the potential of RHI to drive growth of renewable heating in the wastewater sector

Kerr, D., SCFI Group, Ireland

Renewable Heat Incentive (RHI) and the water and wastewater industry: opportunities, obstacles and solutions

Wilson, W. and Phillips, J., Burges Salmon LLP, UK

UK biomethane market developments

Baldwin, J., CNG Services Ltd

