

Constructed Wetlands – Domestic, Commercial and Industrial

Constructed Wetland Association (CWA) Annual Conference

13-14th July, National Coal Mining Museum, Wakefield

Day 1

- 9:00 – 9:30 Registration
- 9:30 – 9:40 **Conference Opening**
Rick Hudson, *CWA Chairman and Managing Director, Cress Water Solutions*
- 9:40 – 10:05 **An overview**
Paul Cooper, *Independent Consultant*
- 10:05 – 10:30 **Performance of constructed wetlands in the UK Water Industry**
Geoff Sweaney, *Principal Consultant, Halcrow Group Limited*
- 10:30 – 10:55 **The dangers of over-development of wetlands technology**
Peter Hiley, *Principal Water Scientist, Scott Wilson Ltd*
- 10.55 – 11.20 Break
- 11.20 – 11.45 **Pilot scale evaluation of 8 state-of-the-art subsurface flow wetland designs for sewage treatment at the Langenreichenbach Ecotechnology Research Facility**
Tom Headley¹, Jaime Nivala^{1,2}, Kinfe Kassa¹, Linda Olsson³, Manfred van Afferden¹, Scott Wallace⁴ and Roland Müller^{1, 1} *Helmholtz Centre for Environmental Research - UFZ, Germany,*²*Aarhus University, Denmark,*³*IFM Biology, Section Ecology, Sweden,*⁴*Naturally Wallace Consulting LLC, USA*
- 11:45 – 12:10 **Nitrification potential in subsurface flow constructed wetlands: a review**
Eleanor Butterworth, *Cranfield University and Severn Trent Water*
- 12:10 - 12:35 **Sub-terra technology for waste management**
Saleh Al-Muzaini, *Kuwait Institute for Scientific Research (KISR), Kuwait*
- 12:35 – 13:00 **Nineteen years experience designing and installing vertical flow reed-bed systems and the creation of attractive landscaped treatment systems incorporating wetlands and ponds**
Rick Hudson, *Managing Director, Cress Water Solutions*
- 13:00 – 14:15 Lunch

- 14:15 – 14:40 **Passive sewage effluent upgrading with vertical flow constructed wetlands**
Gabriela Dotro and Bruce Jefferson, *Cranfield University*
- 14:40 – 15:05 **Compact vertical flow reed beds for tertiary sewage treatment**
Chris Weedon, *Watercourse Systems Ltd*
- 15:05 – 15:30 **An investigation into contaminant removal in an aerated saturated vertical flow constructed wetland treating septic tank effluent**
Clodagh Murphy and David Cooper, *ARM Ltd*
- 15:30 – 15:50 Break
- 15:50 – 16:15 **Managing clogging in Severn Trent wetlands**
Gabriela Dotro^{1,2}, Paul Griffin² and Bruce Jefferson¹, ¹*Cranfield University*, ²*Severn Trent Water*,
- 16:15 – 16:40 **10 year inventory and performance evaluation of vertical flow constructed wetlands in Denmark**
Carlos Arias, *Aarhus University, Denmark*
- 16:40 – 17:00 Questions and discussion session
- 17:00 – 17:45 Wetland visit

Day 2

- 9:00 – 9:15 Registration
- 9:15 – 9:40 **Water recycling without membranes: Do vertical flow constructed wetlands offer a viable alternative**
Bruce Jefferson, Gabriela Dotro, Axelle Besancon, Paul Jeffrey, Wilfred Kaweda, Ronnie Frazer Williams, Marc Pidou and Lisa Avery, *Cranfield University*
- 9:40 – 10:05 **Reed beds and beyond: An holistic approach to water management**
Lucian Gill, *Oceans ESU Ltd*
- 10:05 – 10:30 **Humans, horses, heavy industry – and beer**
Phil Shepherd, Ian Griffin and Matthew Simpson, *Wildfowl & Wetlands Trust (Consulting) Limited*
- 10:30 – 10:55 **The use of a constructed wetland for the treatment of vegetable washings in the food industry**
John Cornick and Richard Elliot-Martin, *Ecoteric Systems Ltd*
- 10:55 – 11:15 Break
- 11:15 – 11:40 **Dewatering sludge originating in water treatment works in reed bed systems**

Steen Nielsen¹ and David Cooper², ¹Orbicon A/S, Denmark, ²ARM Ltd

11:40 – 12:05 **A full scale trial to determine treatment efficacy of aerated constructed wetlands to treat glycol from de-icing operations at airports**

Scott Wallace¹, Clodagh Murphy², M. Limer¹, R. Knight³, David Cooper², ¹*Naturally Wallace Consulting LLC, USA*, ²*ARM Ltd*, ³*BAA, Heathrow Airport Ltd*

12:05 – 12:30 **New design and performance assessment guidelines for constructed wetlands for mine water treatment**

Devin Sapsford¹, Jennifer Geroni¹ and Ian Watson², ¹*Cardiff University*, ²*The Coal Authority*

12:30 – 12:55 **Hydraulic performance of several UK's Coal Authority mine water treatment lagoons and wetlands**

Faradiella Kusin and Adam Jarvis, *Newcastle University*

12:55 – 13:10 Discussion and questions session

13:10 – 14:30 Lunch

14:30 – 16:30 Wetland visit

17:00 Close