

Hydro Nation Water Innovation Service Supporting the Trial of a Novel Water Treatment Technology in Scotland

The Hydro Nation Water Innovation Service

The Hydro Nation Water Innovation Service (HNWIS), established by the Scottish Government through Scottish Enterprise and Highlands and Islands Enterprise, identifies innovative Scottish companies, particularly SMEs, and supports them along the innovation path from concept to commercialisation. The partnership, HNWIS, of AECOM, WRc and UK Water Ltd is delivering a three-year programme.

Further information on the service can be found at www.hnwis.scot/

Innovative treatment solutions from a Scottish SME

Bridge Biotechnology is an independent Scottish company with innovation at its very heart; designing, manufacturing and marketing two sustainable, clean technologies for disinfection and purification.

Since its establishment in 2013 Bridge has begun to penetrate a number of markets including: the drinking water industry; the fruit and vegetable supply chain; the biofilm prevention market; legionella prevention market; and the contamination removal market.

Bridge Biotechnology is a company tackling some of the major issues facing our planet such as water scarcity, food security, disease control and environmental degradation.



Bridge Biotechnology 2015 Vibes Awards Hydro Nation Award winner.

Bridge biotechnology have developed two novel technologies:

Capacitive Recovery System (CRS) is a water purification technology based on applying a cell voltage between two oppositely placed porous electrodes. This technology is able to remove a range of ionic species from water, including nitrate, heavy metals, manganese and other components.

Electrolysed Solution (ESOL) is an alternative disinfection approach based on generation of using three ingredients: tap water, salt and electricity.

This technology is already used in swimming pool and spa disinfection and has a number of applications in both the drinking water and wastewater sectors.

Further information can be found at:

<http://www.bridgebiotechnology.com>

"I am extremely pleased with the service provided by HNWS and without such support we would not be trialling with Scottish Water"

Nick Montgomery, Bridge Biotechnology

How HNWS is helping Bridge Biotechnology

Bridge Biotechnology was one of the first companies to engage with HNWS in 2015. Support has been focused on the trial of the CRS technology at Scottish Water's Gorthleck development centre ensuring robust and appropriate testing is undertaken which supports building water industry acceptance of the technology.

Site section

Scottish Water's development test centre at Gorthleck was identified as suitable water treatment test site which has the potential to provide the required controlled conditions. Testing at Gorthleck would enable Bridge Biotechnology to demonstrate performance and durability of the process. It would also allow assessment of waste streams and overall energy use.

HNWS provide the liaison with Scottish Water and supported Bridge Biotechnology in receiving grant funding for the trial.

Planning and trial support

A significant amount of time was spent planning the trial to ensure maximum benefit was achieved from the time and money invested. HNWS worked closely with Bridge Biotechnology and Scottish Water on the following aspects:

- Agreeing the overall objectives of the trial.

- The assessment criteria.
- The approach to include detailed planning of where to site the equipment.
- Development of a reference water quality sampling programme.
- Data collection and independent validation of the results.
- Reporting and engagement with the wide UK water industry.



Roseanna Cunningham MSP and Nick Montgomery from Bridge Biotechnology at the Gorthleck water development centre near Inverness.

"HNWS is pleased to be working closely with Bridge Biotechnology. We see this technology trial as a great example of how the innovation service can support Scottish companies within the Hydro Nation agenda"

Dr Leo Carswell, HNWS

Outcomes

The CRS technology is currently still on trial at the Gorthleck development centre. Results to date are promising and demonstrate the benefit of careful and structured planning. Support in independently analysing the data is ongoing until the trial is completed.