

# Microvi, Severn Trent and Cranfield University Sign Agreement to Collaborate on Circular Economy Initiative

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*The collaborative project is focused on recovering nutrients from wastewater for reuse in agriculture and other industries.*

HAYWARD, CA, USA, December 10, 2020 /EINPresswire.com/ -- Microvi announced a collaborative project with Severn Trent and Cranfield University focused on recovering nutrients from wastewater for reuse in agriculture and other industries. This advanced initiative is designed to help bridge the gap between nutrient recovery and sustainability in waste streams.

As part of this project, a large-scale pilot will be implemented at Severn Trent's state-of-the-art technology test center at the Sprenal Wastewater Treatment Facility in the United Kingdom. The project will utilize the biomineralization capability of specific bacteria to recover nutrients such as phosphorus, magnesium and potassium from waste streams, helping build a sustainable future and enabling the delivery of a circular economy.

"We are delighted to be collaborating with Microvi and Cranfield University on this exciting project that will help us move towards a more circular approach to treating wastewater on our sites," said Peter Vale, Technical Lead- Innovation at Severn Trent.

"We are pleased to partner with Cranfield and Severn Trent to utilize Microvi's MNE technology in yet another application that could have a significant impact on improvements in wastewater treatment and sustainability," said Ajay Nair, Global Director of Commercial and Technical Strategy at Microvi.

The biomineralization process plays an important role in life sciences and is attracting growing interest in materials chemistry, cleaning technology and resource recovery. Biological formation of phosphorus compounds (e.g.: struvite; magnesium phosphate, etc.), has been demonstrated to be a by-product of the metabolism of specific bacteria that can be found frequently in the environment. The ability of selected bacteria to produce struvite from sludge dewatering centrifuge liquors and activated sludge liquors was demonstrated at Cranfield University. Biomineralization can be exploited to recover nutrients from waste streams by creating a complete recovery process while meeting water reuse quality guidelines and sustainable development goals.

“The application of the biomineral forming bacteria to municipal wastewater and other streams described as wastes is a major breakthrough as it opens a completely new route to recover nutrient rich products promoting a circular economy thinking. The process takes place even in dilute and low nutrient concentration streams, allowing us to recover high purity nutrient rich precipitates that otherwise would be lost to the environment,” said Professor Ana Soares from the Cranfield Water Science Institute.

The project builds on work undertaken by Cranfield University in biomineralization, with Severn Trent providing technical and application expertise and access to waste streams at the state-of-the-art testing facility. Microvi’s MicroNiche Engineering (MNE) platform technology will be used to enable the biological intensification needed for large scale commercial application.

Microvi MNE uses novel biocatalytic composites (biocatalysts) that intensify biological processes while maintaining a controlled population of microorganisms at a much higher density than existing technologies.

Microvi’s wastewater technology has significant advantages over conventional water treatment processes. It requires a smaller footprint and does not generate significant biological solids, while removing BOD, ammonia, phosphorus and nitrate. The solution is operator friendly, stable, robust, and can be used in existing infrastructure.

#### About Severn Trent

Severn Trent is the UK’s second biggest water company. It serves 4.4m homes and business customers in England and Wales. Its region stretches from mid-Wales to Rutland and from north and mid-Wales south to the Bristol Channel and east to the Humber. The company delivers almost two billion litres of water every day through 49,000km of pipes. A further 94,000km of sewer pipes take waste water away to more than 1,000 sewage treatment works.

To find out more about Severn Trent’s performance in comparison to other water companies go to <http://discoverwater.co.uk/>  
[www.stwater.co.uk](http://www.stwater.co.uk) @stwater

#### About Cranfield University

Cranfield University is the UK’s only exclusively postgraduate university. Cranfield Water Science Institute (CWSI) is recognised internationally for its research, education, training and consultancy. CWSI offers leading expertise and training on water and sanitation, water policy and governance, modelling, water and wastewater technology and risk management for the water sector. Most of CWSI research is applied and industry focused, helping to solve real problems for a diverse range of companies, government agencies and NGOs, both in the UK and overseas.

#### About Microvi

Microvi is a transformative biology company based in the San Francisco Bay Area that delivers next-generation biotechnologies for the water, wastewater, bio-based chemicals, biofuels and biopharma industries. Microvi offers commercial technologies around the world to reduce waste,

increase productivity and provide disruptive economics across the value chain. Learn more at [www.microvi.com](http://www.microvi.com).

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