

# SPERNAL UNITED KINGDOM

Circular solutions for :  Water  Materials  Energy

Spernal WWTP is a medium sized plant that serves as Severn Trent Water's "Urban Strategy Demonstration Site" where emerging technologies compatible with a low energy, circular economy approach will be evaluated.

A multi-stream technology test bed will be constructed in 2019. The demonstration plant will incorporate an anaerobic membrane bioreactor (AnMBR) complete with a membrane degassing unit to recover dissolved methane. AnMBR combines several benefits such as: no aeration energy for removal of Chemical and Biochemical Oxygen Demand (COD/BOD), low sludge production and associated treatment efforts, biogas production (production of electricity/heat), pathogen and solids free effluent which can be re-used in a number of applications (e.g.: farming and industrial use).



## Relevant Data

92.000 PE

waste water plant serving the town of Redditch

500 m<sup>3</sup>/day

sewage treatment

DEMO SITE: Spernal WWTP

## Relevant sectors



Agriculture



Domestic sector



Energy sector



Chemical industry

## Key innovations & actions

- **Nutrient removal and recovery** through adsorption or ion exchange technologies
- **AnMBR demonstration** in cold climate northern European countries with a membrane degassing unit to recover dissolved methane for **water and energy reuse**