

# TU Delft

University of Technology

## ERANET BESTF2 BIOWAMET PROJECT



Centro para el  
Desarrollo  
Tecnológico  
Industrial



MINISTERIO  
DE ECONOMÍA  
Y COMPETITIVIDAD



### AnMBR: Anaerobic systems for the transformation of organic matter into methane bio-methane production from urban organic matter

#### Project Description

BIOWAMET entails the demonstration of an anaerobic membrane bioreactor (AnMBR), on a demonstrative-scale, as a sustainable alternative to traditional aerobic wastewater treatment. As such, the traditional concept of wastewater treatment plants moves to a new approach that considers wastewater as a source of energy and nutrients, in turn generating a directly reusable water resource thanks to the disinfection process that ultrafiltration membranes provide.

On a technical level, the project covers three main objectives:

- Turning back the negative energy balance that traditional wastewater treatment plants have (WTPs), achieving positive values of net energy production.
- Providing a comprehensive and economically efficient solution for facilities that require the treatment

of water of different nature and with different characteristics, while producing easily reusable water with optimal conditions to be used in irrigation.

- Reducing the carbon footprint by drastically cutting the energy consumption associated with treatment and giving reclaimed water a new use, taking advantage of its nutrients and avoiding the use of chemical fertilizers.

It will involve treating and recovering urban wastewater in Bitem (Tortosa/ Tarragona) after the reconversion of a number of septic tanks and the wastewater collected in the main building of the Nigrán industrial park (Pontevedra), which is equipped with a decentralised wastewater collection system. In both cases, the treated water will be used for irrigation.



Biowamet Pilot Plant

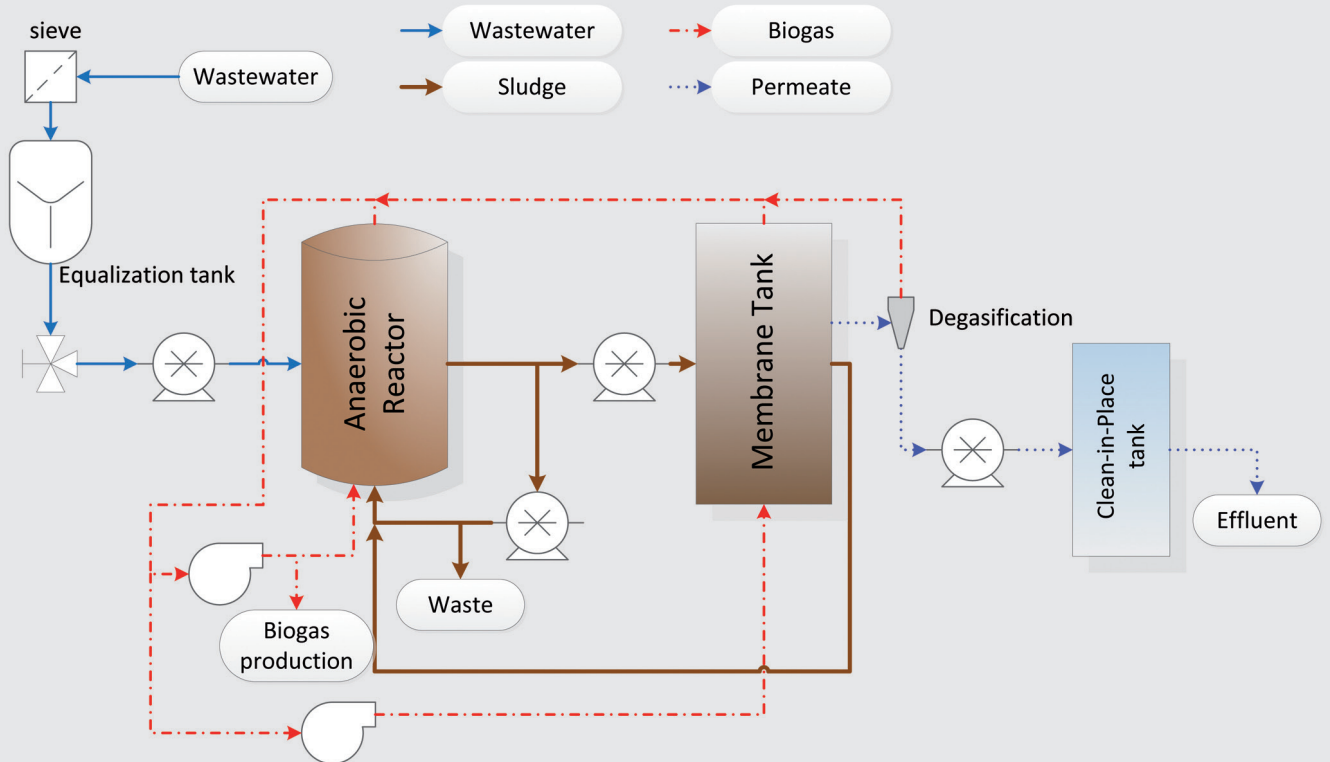


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**Location:** EDAR de Bitem/Tortosa (Tarragona) / Parque empresarial Porto Do Molle, Nigrán (Pontevedra)

**Duration:** From the 1<sup>st</sup> of January 2015 to the 31<sup>th</sup> of December 2017

**Total Budget in Euro:** 2,107,557.96 € **Aqualia:** 686,364 €



### PROJECT PARTICIPANTS

- FCC Aqualia S.A. (Leader)
- University of Southampton
- Delft University of Technology



aqualia

UNIVERSITY OF  
Southampton



### DETAILS OF FUNDING

**Funding:** ERA-NET Plus Bioenergy Sustaining the Future 2 BESTF2.

**Organism:** CDTI / UE.

**Project:** IDI-20150204.

**Grant:** Subsidy partially refundable of 75% of budget (30% non-refundable, 70% refundable).

**Funding Received**  
**FCC Aqualia: 514,773.00 €**