



Hawkhurst South Wastewater Treatment

te-cyc™ Case Study

Southern Water are required to meet tightening discharge consent requirements and growth drivers as part of their AMP7 capital delivery programme.

The quality drivers set out in the Water Industry National Environment Programme (WINEP) for Hawkhurst are to meet new iron and total Phosphorus discharge permits, a tightened Ammonia permit and an increase in flow and load to cater for population growth

In response to Southern Water's requirements a single stage te-cyc™ process was selected to replace the existing biological trickling filters and humus tanks, re-using some of the existing assets where appropriate and practical.

Hawkhurst South Key Figures

Process Solution	te-cyc™
Population equivalent	2285
Operational date	2022
Max Flow Rate	65m ³ /hr
Ave COD	< 125mg/l
Ave BOD	< 10mg/l
Ave SS	< 5mg/l
Total P	< 0.3mg/l
Ave Ammonia	< 1mg/l
Total Iron	< 4mg/l

The Solution

Due to the tight site constraints and the need to achieve multiple drivers with a low Totex solution, the te-cyc™ process was selected due to its small footprint, reduced chemical consumption and its ability to treat ammonia and phosphate in a combined process stage.

In addition to the core te-cyc™ process stage, the wider project scope included the design and construction of the feed pumping station, ferric storage and dosing equipment, modifications to the existing inlet and primary treatment works, MCC, standby generation facilities and a new power supply was to be provided.

A full 3D model was built as part of the early stages of the design to ensure the solution could be constructed while accommodating the woodland and other site constraints. The model also helped to determine a final site layout working in conjunction with Southern Water's design team.

The site is also adjacent to a protected ancient woodland and provides a diverse wildlife habitat for badgers, bats and birds. To minimise disruption and to ensure sustainability the design had to be adapted to preserve the woodland and habitat.

Reduced chemical
consumption in
a combined
process stage

Effective biological
P-Removal to
achieve tightening
discharge consent
requirements



Small footprint



Nitrate Removal



Phosphorus
Removal



Low TOTEX solution



Reduced chemical
consumption



PROCESS SOLUTIONS®

2 Contech House, Unit 2 Chapel Lane,
Rushington Business Park, Southampton SO40 9AH

te-tech.co.uk
enquiries@te-tech.co.uk
+ 44 (0) 23 8235 1600