



Case Study



REDUCING SUSPENDED SOLID NUMBERS AT A UK BAKERY

INTRODUCTION

An existing customer of Detectronic, a bakery in the UK, was experiencing historic problems with consent on one of the two trade effluent channels it has flowing on either side of the factory.

The local water authority was threatening legal action following repeated breach of the suspended solids consent limit.

OBJECTIVE

To reduce suspended solid numbers without causing them to breach consent on any other parameters such as flow, pH etc.



Tank 1

PLANNING & IMPLEMENTATION

Space within the site is very limited so Detectronic designed a bespoke system including two 3m high calorifiers which allow the solid content in the effluent to settle to the bottom of the calorifiers through gravitational effect.

The settled content is disposed of separately, whilst the lower solid content effluent flows back down the original channel.

A Detectronic ORAKEL System was added with a suspended solids sensor, TDS (Total Dissolved Solids) sensor and a pair of level sensors. One of the level sensors controls a pump to transfer the effluent into the first calorifier.

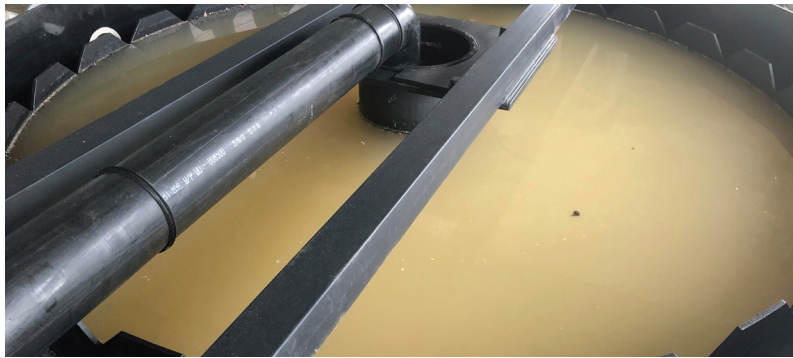
A subsequent pH sensor has been added to ensure the changes made don't cause a pH consent breach and a second standby pump is installed for those occasions when the main pump gets blocked.

Two weirs were fitted. A v-notch for primary flow measurement and a broad crested one for overflow measurement. The addition of a Rain-logger system on site makes sure surface water is not influencing flow



rates.

Data from the ORAKEL is sent to the Detectronic data centre where it is monitored.



Tank 2

RESULTS

The incumbent water company is satisfied that effluent levels are now falling within consent levels and no longer threatening action.

The operational team on site is notified of any alarms or potential blockages, where they can be promptly acted upon.

This is an ongoing project and the project team continue to look for ways to improve it. For instance a small mixer is to be added to the v-notch weir tank in order to increase pH levels back to consent.



Outlet to final sewer on the right

Products and Services

- Multi-channel MSFM
- ORAKEL system
- Level sensors
- TDS sensor
- SS sensor
- pH sensor
- Rain logger
- v-notch weir tank
- Calorifiers



Regent St
Whitewalls Industrial Estate
Colne
Lancashire
BB8 8LJ

+44 (0)1282 449 124
sales@detectronic.org
www.detectronic.org