

## Campbeltown STW, Argyll & Bute, UK - Submerged Aerated Filter

### Kempsford STW

- Grade 316 stainless steel tank design provides long life when treating influent with high saline concentrations
- Unobtrusive below ground design ensures that picturesque location is not spoiled
- SAF plants ensures that effluent discharge quality is maintained in a tourist area



**Project Completed** - July 2010

### Background

Scottish Water's Campbeltown STW serves the picturesque town of Campbeltown on the Kintyre peninsula in Argyll and Bute.

Flow to the works was originally split between a membrane treatment plant and an above ground aerobic treatment system installed in cylindrical GRP tanks.

### Brief

Jacopa Limited was asked to design and manufacture a new below ground SAF treatment system with conical final settlement tanks to replace the existing GRP treatment system.

One of the major obstacles to the success of the scheme was the high salinity of the influent.

The following data was provided to Jacopa for plant design:

FFT:	47.5 l/sec
BOD Load:	201 kg/day
TSS Load:	252 kg/day
Effluent:	25 mg/l BOD
(95%ile)	35 mg/l SS

### Solution

Working with Black and Veatch Ltd, a Scottish Water Partner, Jacopa provided a new unobtrusive below ground SAF treatment works, specifically sized to make allowance for the saline problem.

The Jacopa scope of work included the design, manufacture, testing, installation and commissioning of 6 No. Below Ground CB1000 SAF treatment tanks manufactured in grade 316 stainless steel and incorporating fine bubble membrane diffusers and structured corrugated media.

As part of this contract Jacopa also supplied 3 sets of duty/duty/ standby air blowers each with their own acoustic enclosure, 4 No. 7m dia GRP final settlement tanks and training of the site operators.

All plant supplied was design to meet Scottish Water specifications.

Upon completion of the SAF installation the existing above ground aerobic treatment system was decommissioned. Although some of the existing GRP tanks were retained to provide primary settlement.