Case study

Designing and building a total wastewater treatment solution



Client Profile

- Dairy Processing
- United Kingdom
- 900 m³/day
- 2020

Challenge

An independent family-owned cheesemaker in the UK, producing a range of mozzarella, pizza cheese, cream, whey and milk. With its commitment to sustainability they were looking for a sustainable solution to treat its wastewater to fulfil the permissible discharge as set out by the Environmental Protection Agency (EPA).

Solution

Colubris has designed and built a total wastewater treatment solution. The treatment starts with screening the raw wastewater by a mesh filter unit to remove coarse particles. The screened wastewater is collected in a balance tank for a two (2)-way pH correction. Then pumped to the primary treatment system. In the pipe flocculator the coagulant, neutraliser, and flocculant is dosed to bind the suspended and emulsified pollution. The dosing is done automatically with SmartDose. The DAF unit is equipped with automatic, clog-free micro-bubble diffuser system. The micro-bubble formed helps the pollutants for the flocs forming which will be easily separated in the DAF unit. The sludge is collected in sludge holding tanks. The treated water is fed to the biological treatment system based on FBR system. The effluent from DAF is fed into a selector where it is mixed with a set amount of activated sludge. Afterwards the mixture will be treated in an aeration tank where the bacteria consume the organic pollutants. The separation of treated water and sludge is done by an FBR DAF unit with a little polymer addition to enhance the separation and improve sludge dewaterability. The effluent water of FBR DAF is discharged to the sewer, and the quality is continuously monitored.

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