



WASTEWATER TREATMENT SOLUTION ALLOWED CUPITT'S ESTATE TO IRRIGATE TO THE SURROUNDING LAND

A clever process wastewater and sewage treatment solution from Aerofloat ensured compliant effluent for Cupitt's Estate.

BACKGROUND

Situated on the NSW South coast, Cupitt's Estate houses a boutique winery, brewery and fromagerie, as well as a restaurant, wedding venue and cottage accommodation. The estate had outgrown its existing treatment systems and was looking for a more effective wastewater treatment solution.

Given the variety of processes on site, the wastewater from Cupitt's Estate had three distinct streams. Firstly, production wastewater from its food and beverage processes, including its cheese-making facility, winery and brewery, required a suitable solution to remove the suspended solids (SS), fats, oils and grease (FOG), biochemical oxygen demand (BOD), chemical oxygen demand (COD) and nutrients from the wastewater. The sewage wastewater coming from the kitchen and toilet facilities at its restaurant and conference centre also required treatment. The final stream was sewage wastewater from the onsite cottage accommodation.

THE NEED

Cupitt's Estate required a wastewater treatment plant to successfully treat domestic sewage and wastewater from its brewery, cheese production and winery processes.

THE BENEFIT

The mixed waste from Cupitt's Estate was treated to a quality suitable for discharge to the surrounding terrain, meeting the strict regulations by local authorities.

THE SOLUTION

Aerofloat's wastewater treatment design included Sequence Batch Reactors (AeroSBRs) that applied Aerofloat's patented aeration system and unique ALS decanter. The system was fully automated and had remote monitoring capabilities to assist with system optimisation and diagnostics.





THE AEROFLOAT SOLUTION

The strict wastewater regulations demanded by the local council meant that Cupitt's Estate required a system that would treat its wastewater and sewage to a high standard.

The team at Cupitt's Estate was recommended to speak with Aerofloat given the company's experience in providing innovative solutions for wastewater and sewage treatment. Aerofloat's proprietary technology for sewage treatment offered a mechanically simple solution that provided a high effluent quality and maintenance-friendly operations.

Aerofloat's solution was designed to treat up to 35m³ each day of wastewater, ensuring the treated effluent was compliant with local council's strict standards for disposal by irrigation.

Two Sequence Batch Reactors (AeroSBRs) with Aerofloat's patented aeration mechanism were integral to the design, offering a robust and reliable treatment option with proven results in the industry. Compared to other SBRs on the market, the maintenance-friendly benefits of Aerofloat's patented aeration system were welcomed by the team at Cupitt's Estate.

In addition to the AeroSBRs, Aerofloat installed an upfront screen, a balance, effluent and sludge tank. Chemical dosing was installed for Phosphorus removal and liquid chlorine dosing was installed to disinfect the high quality treated effluent from the AeroSBRs.

Additional storage on site for the treated effluent was provided to allow treated effluent to be stored during wet weather and irrigated when the rain stops.

The system also had remote monitoring capabilities and enhanced automation to limit maintenance requirements. Aerofloat's engineers could log on to the system and view the plant remotely should Cupitt's Estate operators require any assistance with optimisation and diagnostic work.

RESULTS

Despite the challenges presented by the COVID-19 global pandemic at the time, Aerofloat worked with Cupitt's Estate to ensure the system was installed in the agreed timeframe and have continued to work with the team to provide support with chemical optimisation and servicing as required.

