

# Lion Pty Ltd

## Wastewater treatment plant

Lion's dairy and drinks portfolio includes market leading brands across the milk, juice, cheese, dairy products and soy categories including Berri, Dairy Farmers, COON and PURA.

As part of an overall site upgrade, a new wastewater treatment plant was required to produce effluent of a quality suitable to discharge to the municipal sewer.



Crestmead, Queensland



Advisory services, design and construction

### Project scope

Wiley and Lion chose ADI Systems to collaborate with, to develop an effective and efficient wastewater treatment solution for the site:

- The chosen system is an above-ground anaerobic ADI-BVF reactor (5,500m<sup>3</sup>), followed by a twin 600m<sup>3</sup> Sequencing Batch Reactor (SBR) for anaerobic polishing.
- The BVF reactor is designed to anaerobically pre-treat the process wastewater and digest most of the raw wastewater Chemical Oxygen Demand (COD) and Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS).
- The system produces energy-rich biogas, along with a small amount of waste biomass sludge.
- The anaerobic effluent feeds into two SBRs, which operate in parallel to further reduce the BOD and TSS concentrations, prior to final discharge. The COD and BOD removed through the system both exceed 90%.
- The anaerobic reactor is covered with a floating geomembrane cover, which collects biogas produced during the anaerobic process and prevents release of odours. Biogas is used in the plant boiler to generate process heat for use in the factory, reducing costs and minimising waste.
- The BVF reactor is a low-rate anaerobic digestion technology that is a simple, efficient, low maintenance method of treating dairy wastewater.

### Business value to client

Wiley delivered a large-scale integration project, incorporating a wastewater treatment system; providing Lion with a simple, efficient and low maintenance way of treating wastewater. Lion valued Wiley's food industry experience in delivering water treatment systems within operational food processing facilities.

Wiley's open and collaborative problem-solving approach to project design and management resulted in a custom-designed facility that exceeded the expectations of all stakeholders. Based on an intensive early Discover and design process, Wiley delivered a flexible, future-focused solution, which will evolve with Lion's growing business.

### Partners and consultants

ADI Systems



Complex services



Live environment



Sustainable



Advisory Services

