BAIDA WULKURAKA (POULTRY PROCESSING WASTEWATER TREATMENT PLANT IN QLD

Located in Wulkuraka west of Brisbane, Baiada is a large poultry abattoir serving the greater Queensland community. The Hydroflux project involved the design and complete construction of all civil, mechanical and electrical aspects of the wastewater treatment plant. The wastewater treatment plant was completed and commissioned by Hydroflux Industrial in 2015.

The overall process involved installing new drainage from the factory to an inground rotary screen. Waste water is then pumped from a pump well to a 500KL balance tank.

The wastewater is then chemically conditioned prior to entry to the HyDAF system where flocculated material is removed and the wastewater is discharged to sewer. Sludge generated by the DAF is transferred to a mixed sludge tank prior to dewatering in a HUBER Screw Press.

The screenings are compacted prior to discharged into a bin and the screened water is pumped to the balance tank. A 9m tall stainless steel balance tank was supplied due to lack of available space.

Agitation of the balance tank prevents accumulation of solids and ensures suitable mixing of the wastewater that enables a consistent waste stream to be delivered to the HyDAF.

The tank is agitated by a novel pneumatic mixing system, proprietary to Hydroflux. The Hydroflux HyDAF HD100 system is designed to treat up to 100kl of wastewater per hour.

The dissolved air system is selected based on the solids load in each case to ensure an appropriate air to solids ratio is achieved.

Sludge from the DAF system is transferred to a mixed sludge storage tank prior to dewatering in a Huber inclined sludge press. The screw press dewateres the sludge into a spadable cake with a dry solids concentration in excess of 30%.