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Shepparton High-Rate Anaerobic Lagoon Cover Replacement



Goulburn Valley Water provides water and wastewater services to more than 60,000 customers covering a region of 20,000 square kilometres. Shepparton is one of Goulburn's 26 wastewater

management facilities and home to the 250ML (mega litres) High-Rate Anaerobic Lagoon treatment basin, which was recently upgraded.

The waste management facility, with a surface area of 50,000m², converts waste into biogas for conversion into clean energy. The works included removing the existing cover, which had reached the end of its service life, desludging the lagoon, remediating related infrastructure and installing the new cover.



To determine the best replacement cover material, Fabtech undertook a rigorous six months of accelerated laboratory testing that concluded a high performance 2mm-thick High-Density Polyethylene (HDPE) would be ideal, providing the client with a 20+ year warranty. The work, which spanned 12 months, began with desludging the existing basin, followed by concrete band-beam refurbishment and finally fitting the new cover. As the facility was 'live' during installation, a pontoon was floated on the lagoon to help workers lay the cover panels.

Since completion, the new cover has improved methane capture for electricity and reduced the amount of methane released into the atmosphere. It has also helped reduce equivalent CO₂ emissions at the plant from 33,000 tonnes to 13,000 tonnes, with further reductions anticipated.

Company: Fabtech Australia
Client: Goulburn Valley Water
Location: Shepparton, Victoria, Australia
Application: Replacing a cover on a wastewater treatment basin to improve methane capture and reduce greenhouse gas emissions, thereby reducing odor for nearby residents
Benefits: Improves methane harvesting for conversion into clean energy, reduces carbon footprint, reduces treatment time/costs, improves resident amenity, conserves natural resources