

CASE STUDY

PROJECT DUAL WASTE TREATMENT PLANT FOR MEAT PROCESSOR
PRODUCT Membrane Bioreactor (MBR), Screw Screen in Tank (SSB-mK)
INDUSTRY Food & Beverage
LOCATION Regional South Australia



BACKGROUND

A major new meat processing facility was being developed for a regional town in South Australia. However, the existing STP did not have capacity to accommodate the expected increase of 1,000 EP. MAK Water was invited to participate in a competitive tender to design, manufacture and commission a new Sewage Treatment Plant in a short time frame to produce Class A effluent suitable for fodder crop irrigation.

SOLUTION

Membrane Bioreactor (MBR) to treat 44 m³/day at the initial stage, with capacity to expand to 188 m³/day in the final stages of the project.

MAK WATER KEY SOLUTIONS

- Design and manufacture of custom 2 x 94 m³/day MBR trains with common 40' plant room
- Standby critical pumps, air scour blowers, aerators.
- SA Water compliant control panel, PLC and HMI
- Dual Influent Screw Screen in Tank units with 3mm perforated screen baskets mounted on custom platform with gravity chutes to bins
- UV & chemical disinfection systems
- Premium Instrumentation package with ClearAccess™ Remote Monitoring and Control
- Self-bunded chemical storage & dosing cabinets
- Balance tanks & sludge tank



Left to right, Balance tanks, Influent Screens on custom elevated platform, Sludge Tank, 40' containerised plant room, self-bunded chemical storage & dosing cabinets.



External view of plant

RESULTS AND BENEFITS

- **Fast Delivery.** A packaged plant enabled approvals to be fast tracked to achieve client's project timeline
- **Safe, compliant effluent.** Membranes provide a physical barrier to viruses and pathogens, as well as suspended solids. The disinfection system includes UV, tank chlorine recirculation and online analysers for monitoring of free chlorine, pH and turbidity
- **Plant Reliability.** The robust dual-train design and standby equipment selection ensures plant is always available and effluent complies with requirements for reuse
- **Flexibility.** A two train design gave the client flexibility to handle the initial low flows while having design capacity to ramp up to the maximum flows as the project progressed to the final stages.