

# CASE STUDY



<b>PROJECT</b>	<b>GAS PROCESSING HUB</b>
<b>PRODUCT</b>	Activated Sludge Bioreactor Plus & Dewatering Screw Press
<b>INDUSTRY</b>	Oil & Gas
<b>LOCATION</b>	Western Australia

## BACKGROUND

A remote natural gas, condensate and oil processing facility in north-west Western Australia had an ageing sewage treatment plant (STP) requiring replacement, the operator contacted MAK Water. We took our client through a thorough engineering design process where we had to account for the challenges of the extreme remote location, 20-year design life in a cyclone-prone, corrosive marine environment (AS4312, Category 5), and compliance with our client's exacting engineering standards and specifications MAK Water manufactured, commissioned and continues to visit the sewage treatment plant monthly to keep the plant operating optimally.

[Click to watch a walkthrough video of this sewage treatment plant on YouTube](#)

## SOLUTION

Packaged sewage treatment plant comprising an Activated Sludge Bioreactor Plus (ASBR+), producing Class A treated effluent with enhanced nutrient removal, odour control, and a Dewatering Screw Press (DSP) for onsite sludge dewatering.

### PROCESS / TREATED EFFLUENT QUALITY

- Nutrient removal (T-N from 120mg/L to <12mg/L)
- Class A effluent (BOD <20mg/L, TSS < 30mg/L)
- Odour control for screen, balance & sludge tanks
- Onsite sludge dewatering

### CORROSION RESISTANCE

- FRP bioreactor & FRP insulated plant room
- PE balance/sludge/treated effluent tanks & clarifier
- SS316 control panel and install materials

### COMPLIANCE WITH COMPANY REQUIREMENTS

- Client-preferred electrical equipment
- Hazardous area report & HAZID workshop
- Civil design of slab/foundations
- Seismic analysis
- Custom drawing & documentation package

## RESULTS AND BENEFITS

- **Compliant discharge.** Treated effluent meets the discharge limits for discharge to environment
- **Customised solution.** MAK Water's standard design was modified to meet the client's specific requirements
- **Turnkey.** In-house design, manufacture, commissioning, and ongoing service & maintenance via our Karratha service office



*View across the sewage treatment facility*



*Dewatering Screw Press*