

CASE STUDY

PROJECT	SEWAGE TREATMENT FOR MINING INFRASTRUCTURE AREA
PRODUCT	Activated Sludge Bioreactor (ASBR)
INDUSTRY	Mining
LOCATION	North Queensland



BACKGROUND

One of the large global mining and processing companies was developing a new mine to extend the life of their Weipa bauxite operations by a planned four decades.

MAK Water was engaged by the global Engineering, Construction, and Project Management Company (EPCM) contractor to design and construct the sewage treatment plant for the mine infrastructure area (MIA).

The plant was constructed according to project engineering and design specifications, using project preferred electrical equipment, and supplied with site specific vendor drawing and data package. MAK Water provided site installation support and commissioning of the plant.

SOLUTION

Modular Activated Sludge Batch Reactor (ASBR) to treat 28 m³/day of domestic strength sewage to Class A recycled water for onsite reuse in dust suppression.

MAK WATER KEY SOLUTIONS

- HAZOP, safety in design, operability and constructability studies
- Compliance to client specific specifications including preferred equipment, drawings & data package
- Corrosion resistant fibre-reinforced plastic (FRP) bioreactor with internal plant room providing 20+ year plant design life
- Duty/standby arrangement for all process essential equipment

RESULTS AND BENEFITS

- **Turnkey solution.** Complete design, manufacture and installation package.
- **Pre-tested, modular design.** Plant was fully assembled and factory tested, and supplied with prefabricated interconnecting piping and cabling for easy site installation.
- **Safe, Compliant Effluent.** Designed around the site specific influent quality to meet the required Class A treated effluent quality



MAK Water ASBR plant onsite in North Queensland



Modular design FRP bioreactor in Perth Fabrication facility