

CASE STUDY

PROJECT	SEWAGE TREATMENT FOR COAL MINE
PRODUCT	Membrane Bioreactor (MBR)
INDUSTRY	Mining
LOCATION	Queensland



BACKGROUND

A coal mine in Queensland needed to replace a sewage treatment plant as the existing asset had come to the end of its life.

MAK Water was engaged directly by the mine site owner to design and construct the replacement sewage treatment plant.

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

MAK Water provided a Membrane Bioreactor (MBR) Sewage Treatment Plant to produce treated effluent complying with Class A+ effluent in QLD, and enable the mine to recycle the wastewater

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 rotating equipment



Modular designed plant fully assembled, and factory tested

RESULTS AND BENEFITS

- **Informed Buyer Model.** A fit-for-purpose solution that complies with client specifications in a commercially sensible manner.
- **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
- **Lowest operating cost.** Plants were designed to minimise operator intervention and fitted with remote monitoring and control capabilities.



Corrosion resistant fibre-reinforced plastic (FRP) bioreactor