CASE STUDY

PROJECT WASTEWATER TREATMENT AND WATER REUSE
PRODUCT Membrane Bioreactor (MBR), Dewatering Screw Press (DSP)
INDUSTRY Mining
LOCATION Western Australia

BACKGROUND

A remote mining project required a wastewater treatment plant capable of producing high-quality treated effluent. The client previously relied on basic pond systems, which could not achieve the effluent quality needed for reuse. Diminishing bore reserves also meant the site had no reliable water source for its gold elutions process. This created significant operational challenges including increased costs, schedule delays, and negative sustainability impacts due to ongoing reliance on water carting. The client designated the project as essential for achieving strategic objectives.

SOLUTION

MAK Water partnered closely with the client to develop a smart, future-focused water treatment solution. Our experts selected a membrane bioreactor (MBR) technology that met strict treated effluent requirements, enabling safe and reliable water reuse. The MAK Water team conducted detailed consultations and value engineering to ensure full compliance with site and company specifications whilst remaining mindful of cost impact. The system was designed with redundancy to maximise reliability, supported by remote access capability for fast and efficient technical support.

MAK Water membrane bioreactor (MBR)

MAK WATER KEY SOLUTIONS

- MBR 200 m³/day capacity
- Duty / standby configuration for all mechanical equipment
- Dewatering Screw Press (DSP) to significantly reduce cartage of sludge off site.

RESULTS AND BENEFITS

- **Sustainability.** High-quality treated effluent enables onsite reuse, significantly improving water security, reducing environmental impact and carbon footprint by not trucking.
- **Cost savings.** Eliminates the need for water and sludge carting, reducing operational expenditure.
- **Reliability.** Redundant design ensures consistent water availability for processing with minimal downtime.
- **Proven performance.** MBR technology delivers dependable sewage treatment performance for mining operations.
- **Remote support.** Remote access functionality allows for rapid troubleshooting, improving uptime and efficiency.
- **Ongoing support.** Service agreement supports client operations

Arial view of the site