CASE STUDY

PROJECT	SEWAGE TREATMENT FOR IRON ORE MINE
PRODUCT	Moving Bed Bioreactor
INDUSTRY	Mining
LOCATION	Pilbara, Western Australia

mak water

water | wastewater | sewage

BACKGROUND

Roy Hill is an integrated iron ore mining, rail and port operation. The mine is located in Pilbara region of Western Australia and the ore is exported through a purpose built iron ore port facility at Port Hedland.

MAK Water was engaged by the Engineering, Procurement, Construction (EPC) contractor to design and construct the wastewater/sewage treatment plant for the mine site's non-process infrastructure area.

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 supervision and commissioning of the plant.

SOLUTION

Containerised Moving Bed Bioreactor (MBBR) to treat 35 m³/day of domestic strength sewage to Class A of Recycled Water for onsite reuse in dust suppression.

DESIGN FEATURES

- Class A effluent for medium risk reuse applications

- Enhanced nutrient removal

- Duty/standby pumps and blowers

- Project preferred electrical equipment

MODULAR/CONTAINERISED PLANT

- Containerised ancillary equipment

- Easily transported and installed onsite

- Prefabricated interconnecting piping and cabling for ease of installation

HASSLE FREE, TURN KEY SOLUTION

- 100% designed, constructed and tested off-site

- Plug and play site installation and commissioning

- Standpipe for dust suppression water truck filling

RESULTS AND BENEFITS

- **Safe, compliant effluent.** Tertiary glass media filtration, Programme Logic Controlled (PLC) controlled chlorine dosing, tank recirculation and chlorine, pH and turbidity analysers.

- **Fully automated, reliable plant.** Low level of operator intervention reduced the client's operating costs.

- **Project compliance.** MAK Water met the project specifications and vendor data requirements.

Moving Bed Bioreactor Sewage Treatment Plant

The sewage treatment plant on site in the Pilbara

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