

CASE STUDY



PROJECT	PFAS TREATMENT PLANT
PRODUCT	Brackish Water Reverse Osmosis (BWRO)
INDUSTRY	Infrastructure and Urban Development
LOCATION	East Coast of Australia

BACKGROUND

Perfluoroalkyl and polyfluoroalkyl substances (commonly referred to as PFAS) are pollutants of increasing public health and environmental concern, consisting of a large variety of man-made organic compounds. Among those compounds, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are the two most widely used and studied. PFAS contamination can be found in soil, groundwater, surface water, and sediments.

The toxicity, bioaccumulation potential, and resistance to natural degradation of these chemicals has led to great concern for their adverse effects on human health and the environment. Subsequently treatment systems to remove these compounds are being installed across Australia and internationally. PFAS and related compounds are currently imported into Australia, mainly for use as mist suppressants in the metal plating industry, hydraulic fluid in the aviation industry and surfactants in the photography industry.

This is the second in a series of PFAS removal plants that MAK Water has provided to a major environmental waste disposal contractor to us in various applications treating PFAS contaminated ground water from various sources.

SOLUTION

- Custom design and manufacture of a water treatment plant for PFAS removal using media filtration, granular activated carbon (GAC), reverse osmosis (BWRO) and specialised resin
- Provisions made to bypass filtration, reverse osmosis or resin as required, for maximum operational flexibility
- Easily transportable system installed in a sea-container for plug and play onsite installation
- Duty/standby pumps and dosing pumps
- Customised premium instrumentation package with ClearAccess™ Remote Monitoring and Control
- Custom drawings and documentation package
- On site commissioning and training of local operators
- Ongoing service agreement with technical support and scheduled site visits by MAK Water Service Technician



Easily transportable system installed in a sea-container for plug and play onsite installation

RESULTS AND BENEFITS

- **Compliance.** Custom plant maintains compliance to meet site specific discharge requirements
- **Plant Reliability.** The high-quality equipment and robust design have provided reliable and flexible operation with minimal maintenance
- **Local.** The plant was designed and manufactured in Australia using materials sourced from local suppliers. Providing superior build quality and spare part availability.



Brackish Water Reverse Osmosis (BWRO) treating contaminated groundwater