

CASE STUDY



PROJECT WASH BAY WASTEWATER RECYCLING FOR DEFENCE ARMY BASE

PRODUCT Dissolved Air Flotation

INDUSTRY Infrastructure

LOCATION Enoggera, Queensland

BACKGROUND

To maximise the efficiency of wash down operations at its Brisbane Barracks, the Department of Defence decided to consolidate 18 vehicle and equipment wash down stations into one facility.

Key operational goals for the project included minimising town water consumption, reducing load on the sewerage treatment system and ensuring all relevant environmental and occupation health and safety requirements were met.

SOLUTION

MAK Water (trading as Clearmake at the time) was selected to design, manufacture, install and commission a water recycling system for the new consolidated facility, working in partnership with consulting engineers and the Department of Defence.

The system is flexible enough to wash as little as a single vehicle per day through to more than 200 large vehicles per day.

DISSOLVED AIR FLOATATION WASH BAY WATER RECYCLING SYSTEM

- The recycling system is capable of treating up to 80,000 L/h of wash down water.
- The system removes oil and grease from the water and filters and disinfects the water making it safe to reuse for vehicle wash down.

RAIN WATER HARVESTING SYSTEM

- To make the site water self-sufficient, and account for evaporation and carry over water losses, a rain water harvesting system was included to harvest water from the hardstand area, treat it and use it to top up the wash bay system.

RESULTS AND BENEFITS

- **Facility consolidation.** Consolidation of 18 wash down points to one central facility.
- **No need to use potable town water.** Elimination of the use of potable town water for vehicle wash down.
- **Environmental protection.** Protection of the sewer and storm water systems from wash down water volumes and contaminants.



The dissolved air flotation wash bay water recycling system on site at the Enoggera Barracks



The dissolved air flotation wash bay water recycling system in use at the Enoggera Barracks