



## Case Study WWTP Department of Immigration & Citizenship Nauru Detention Centre

ABCO Water Systems was contracted to manufacture and install a wastewater treatment plant on the island of Nauru. The treatment plant consists of a sewage pump station, rising main, wastewater treatment plant, and effluent disposal discharged at Class C quality.

Two sea containers were transported to Pearce Air Base with all goods required for this project packed inside. They were then flown by the Royal Australian Air Force direct to Nauru along with the ABCO installers.

On arrival to site, both sea containers were transported to their final destination, where they were unpacked and the installation process began. A fibreglass pump station 1800mm diameter by 2000mm deep was installed containing two submersible pumps on guide rails for ease of recovery. Each pump rated at 520 l/m at 6.5m head. A control panel was installed which offers dual pump and alternating operation. This control panel indicated high level and individual pump failure.

One of the twenty (20) foot sea containers housed the control panel and a pump room. Inside the pump room were a Mixer Pump (2.2kW), an Irrigation Pump (2.2kW) and a Decant Pump (2.2kW). The control room was fully insulated and fitted with a split system air conditioner. Mechanical screening of all influent was provided by way of a 2mm mechanical bar screen with all screened matter discharged by chute to the bin below.

Two tanks were installed for the treatment process, including a Continuous Aeration Tank and Decant Aeration Tank. The Continuous Aeration Tank was fitted with two 7.5kW aerators for continuous operation and the Decant Aeration Tank was fitted with two 7.5kW aerators for intermittent operation.

Treated effluent was stored within a third tank. This was treated with Hypochlorite prior to discharge through poly rising main to the mined (gossan) area adjacent to the treatment plant.

This wastewater treatment plant was ready to receive sewage in four days of the plant being delivered to site.



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