

# JURIEN BAY WASTE WATER PUMP STATION #5

Ardross Estates / Water Corporation

## Location

Jurien Bay, WA

## Commencement

May 2011

## Completion

Dec 2011

## Contract Value

\$3.2 million

## Client

Ardross Estates



## Zero Harm

The project is 100% complete and there have been no lost time injuries.

LTIs: 0

MTIs: 0

## Overview

The Jurien Bay wastewater pump station is located at Jurien Bay, in the mid-west Western Australia. The project, which consisted of the pump station, overflow storage, pressure main, gravity sewers enables new subdivision development to proceed.

## Contract Supervision

The contract was managed by a Design Consultant with Cobey as Main Contractor.

## Scope

Cobey was awarded the contract for the type 90 wastewater pump station and 3.6km of PVC pressure main.

The works required were:

- 12mtr deep Excavation & Backfill
- Precast Type 90 wet well & valve pit
- Dewatering Management
- DN1800 overflow storage tanks
- 3.6km of DN250PVC sewer pressure main
- 0.2km of 8mtr deep DN375PVC gravity sewer mains
- Access road construction
- Dust Management
- Testing & Commissioning
- Full site reinstatement

## Project challenges

The pump station base required the excavation to be 12mtr deep. Due to the vicinity of the ocean this meant that dewatering was required from 2mtr below the surface.

Prior to contract award, geotechnical bores were undertaken at the pump station site to determine ground conditions. Unfortunately these bores drilled into cavernous limestone and during excavation released an uncontrollable amount of water.

Dust management on the site was crucial to ensuring local residents remained happy and mitigating environmental damage due to strong winds.

Construction of the pumping station and the pressure main out of the Perth Metro area required experienced planning & management.

### Managing the challenge

Extensive, multi-staged well-point dewatering was used for the pump station excavation to control infiltration. This method was effective until the geotechnical bores release water that multiple pumps could not manage.

Upon discovering the increased flow of water, Cobey immediately contacted the Design Consultant to discuss solutions to the geotechnical bores water flow.

Cobey contacted numerous drilling specialists, Hydrologists and other experts on advice, whilst in the background carried out testing on other parts of site for an alternate wet well location. It was ultimately decided that a new wet well location was needed and Cobey resumed excavation works immediately.

Dust was controlled on site temporarily via use of a water cart and ultimately by hydro mulching the site.

Cobey ensured that management maintained efficient communication on site through regular site visits and phone calls.

### Adding Value

Cobey worked closely with the Design Consultant & Client on changes to the pumping station and pressure main. This resulted in fast tracked solutions to challenges saving time and money.

Cobey specialises in pumping station installation and offered the experience, knowledge and in-house disciplines to ensure that this projects deliverables were met safely.

Cobey also provided the client with a saving of over \$300k to construct the pumping station without the use of grout piling.

