Project – Wastewater Infrastructure

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Shorehaven Wastewater Pumping Station and Pressure Main

Client:
TABEC

Location:
Alkimos WA

Construction Period:
Sep 15 – Dec 15

Project overview

Peet Limited are constructing the Shorehaven land development in Alkimos which is generating increasing flows in the sewer network. To remove the requirement for expensive tankering of sewage effluent, Peet Limited commissioned the construction of a new wastewater pumping station and selected DM Civil to construct the works. The contract included the construction of a 10 metre deep Type 40 standard Water Corporation pumping station with 900 metres of DN200 PVC and DN250 PE pressure main. The pressure main was installed by open trench method as well as a 420 metre section which was directionally drilled through limestone by the DM Civil trenchless division.

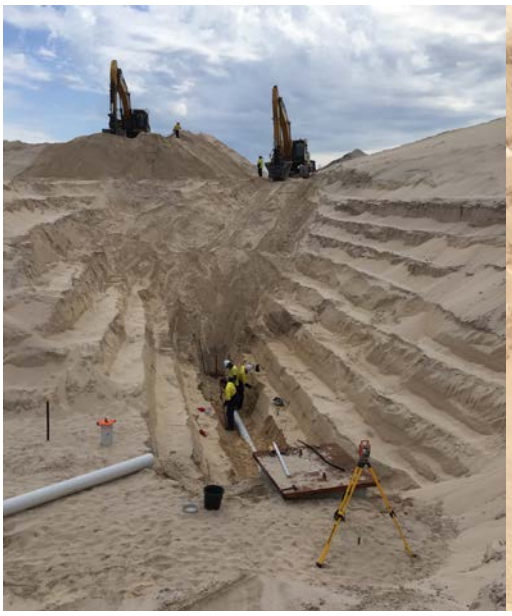
The designer and superintendent for the contract was TABEC engineers. The site was shared with a civil contractor that was constructing subdivisional works including the pumping station site, and that was contracted by DM Civil to cut the existing site to design level prior to excavation for the wet well. The restricted site area and running sand were controlled by benching in rock and the use of a steel caisson in the lower sand section to create a safe working space.

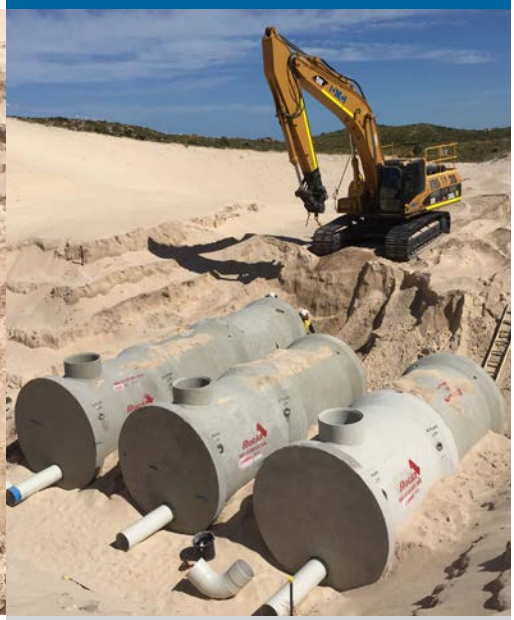
By utilising trenchless techniques to install the DN250 PE pressure main, the impact on the established landscaped verge of Shorehaven Avenue was minimised.

Shorehaven Wastewater Pumping Station and Pressure Main

Significant achievements and benefits

Water Corporation specifications for this type of wastewater pumping station require each access chamber to be plastic lined. DM Civil invested in training and accreditation for appropriate personnel. This allowed DM Civil to complete a greater portion of the work with minimal reliance on subcontractors, thereby reducing safety risks.





DM Civil formed and precast all concrete liners on the project to ensure faster and more efficient construction. After the base of the wet well was in position, two or more segments could be installed and backfilled in a single day. With a modern fleet of machinery including up to 50 tonne hydraulic excavators, the crew was able to lift, track and manoeuvre precast concrete products with a mass of up to 14 tonnes. With the ability to resource projects with company owned modern machinery and in-house specialist fabrication skills, DM Civil can deliver safely constructed high quality products.

To commission the pumping station and its mechanical components requires electrical power and a water supply. Due to the pace of the contract and the timing of the works, these resources were not available from Western Power or Water Corporation. DM Civil provided water from another source and installed temporary power generators to allow a full suite of commissioning activities to be carried out in isolation of final supply. This allowed the facility to be completed on programme to service the surrounding subdivision.

With proactive resourcing of power from temporarily installed generators, DM Civil was able to deliver the project on programme to allow the client to clear their Water Corporation conditions of subdivision.

Contact DM Civil to discuss your wastewater infrastructure projects.

GUARANTEED PERFORMANCE

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