

# THREE TOWNS SEWERAGE SCHEME - HDD

OIL/GAS | **SEWER** | STORMWATER | POWER | WATER | TELCO

## PROJECT OVERVIEW

The \$A118 million ‘Three Towns’ sewerage scheme connected residents and businesses in Glossodia, Freemans Reach and Wilberforce with a reticulated sewerage system, northwest of Sydney. The project involved the construction of over 116 kilometres of pipeline with a large percentage undertaken by HDD.



### LOCATION

Freemans Reach & Richmond NSW



### CLIENT

PSP Alliance for Sydney Water



### PIPE

250mm and 500mm SDR 11 polythylene



### GEOLOGY

Clay, shale & cobble



### LENGTH

Up to 460 metres



### TECHNIQUE

HDD

## SCOPE OF WORKS

UEA was engaged primarily for two portions of the project:

- The design and construction of the 460-metre gravity storage pipe from the new Freemans Reach pump station
- The installation of a 250mm transfer main under creeks and roads from the newly constructed pump station to the upgraded Richmond STP

## CHALLENGES

Works within the pump station site required a large excavation in order to set up the D100 x 120 HDD rig on a positive grade from the beginning of the bore. Difficulties arose when large quartzite cobble was encountered along the bore line of the same type, requiring casing on the Hawkesbury River HDD crossing. Both the PSP delivery team and UEA’s team used forward thinking and developed a successful methodology whereby a shaft was excavated over the required connection point, eliminating the need for casing and allowing the successful installation once reaming works were complete.

A number of smaller 250mm PE HDD installations were also completed as a part of the project. These included several creek crossings and two main road crossings, whilst also working in close proximity to defence force assets and the under boring of the Western Suburbs railway line.



## COMPLETION

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Works were completed ahead of time despite the difficult ground conditions, and UEA was engaged for further HDD works by the client.