WET WEATHER OVERFLOW ABATEMENT PROGRAM

(BRIGHTMORE PARK)

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

LOCATION	Brightmore Park, Neutral Bay NSW
CLIENT	Sydney Water SewerFix Alliance
PIPE	500mm SDR 11 polyethylene
GEOLOGY	Sydney sandstone
LENGTH	1,403 metres
TECHNIQUE	HDD

PROJECT OVERVIEW

Prior to this project (diluted) sewage was discharged into Sydney Harbour via two overflows on the Mosman Submain, approximately 185 times in 10 years. The Eaton Street Wet Weather Storage Facility (WWSF) reduces this frequency to the catchment target frequency of 20 spills in ten years. Primarily targeted at swimming sites, the program will provide benefits to the environment and human health, and is part of Sydney Water's long-term SewerFix program of sewerage system improvements.

DESIGN

It was imperative that the bore was able to take all the flow that comes from the pumping station, approximately 300 l/s. If there was any backing up within the pipe, the additional head would act on the pumps and the facility would not be able to meet its design criteria. Because of this, an average grade of 2.7% was required with 1% constant positive grade achieved over the flat section and 4.74% achieved over the steeper section.

CONSTRUCTION

Using the Paratrak System the pilot bore was a complete success. Due to the accuracy of the drilling, the bore can now take more than the design flow rate, providing Sydney Water with an asset with room for future expansion beyond the design requirements. As the drill site was in close proximity to residents, considerable effort was made to reduce noise impact including the installation of sound attenuation around plant and equipment, the use of electric pumps and limited working hours and days in order to successfully undertake the project.

Information gained on the pilot bore was used to develop tooling with the decision made to forward ream straight to final borehole size of 24 inches. Pipe was pulled back in 120 metre pre welded strings.

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