

Dewatering Scarborough Beach Stormwater Drainage Refurbishment

The Brighton Beach Scarborough site underwent refurbishment of its stormwater drainage outfall network to enhance water management into the Indian Ocean. This case study highlights the project components, encountered challenges, and implemented solutions.

Originally a two-week project, the timeline extended due to design amendments from the principal client, resulting in additional planning adjustments.

A Dewatering Management Plan was developed by NPE that included:

Effluent Discharge: Directed to an infiltration basin with 1.5m bunded walls.

Monitoring: Daily discharge field monitoring and weekly lab water sample analysis to ensure compliance with discharge criteria.

Dewatering & Stormwater bypass pumping is required for several areas in the project. This includes the existing bubble-up pit designated for the 1450mm diameter concrete pour around its base. Additionally, dewatering is necessary for the area surrounding the concrete-encased outfall pipe, which has an inside diameter (ID) of 375mm (450mm OD 'outside diameter') and spans 6 meters in length and 1.5 meters in width. Furthermore, there are six screw piles that are 4 meters deep, with the top 2 meters wrapped in Denso tape, also requiring dewatering. A stormwater bypass system was required to be installed in the existing access chamber infrastructure to manage and maintain the active use of the main stormwater drain network whilst construction works are underway.

The Scarborough Beach refurbishment aimed to improve stormwater drainage while meeting environmental regulations. Despite extended timelines, effective collaboration ensured successful outcomes while protecting the local ecosystem.

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