

# Mahatma Gandhi Road sewer pump station



The current Mahatma Gandhi Road Sewage Pump Station occupies a prime site within the Durban Point Development Corporation's (DPDC) up-market development zone. It has occupied the site bounded by Mahatma Gandhi Road and Albert Terrace since about 1959.

Because the current pump station occupies a prime site within the DPDC up-market development zone, a proposal was made that the pump station be relocated at a site adjacent to the north shaft of the recently commissioned Durban Harbour Tunnel. This new site for the pump station is some 250 m from the original position.

The original pump station is supplied by a gravity sewer of diameter 1 350 mm. This gravity sewer and pump station services the greater Durban catchment area including the CBD and Berea areas from the Umgeni River in the north to the Umbilo River to the south.

In order to supply the new pump station position, the gravity sewer needed to be extended by 221 metres. The pump station was constructed to a depth of 13 m below ground level and part of the construction used the existing shaft from the construction of the Harbour Tunnel in 2006.

This project is a landmark project in the Durban area. This is one of the largest pump stations in the province and effectively transfers all the sewage from Durban CBD, Berea

and surrounding areas across the harbour to a treatment works on the seaward side of the Bluff. This is a multi-discipline project incorporating various unique engineering tasks such as micro-tunneling, deep excavations below the water table, diaphragm walls, underwater concrete pours, large diameter pipework and complex automatic control of the station effectively creating an un-manned facility.

All the above engineering tasks are combined with surface structures that are

environmentally friendly and ergonomically designed. The roof structure of the pump station will form part of the precincts' public open spaces consisting of roof gardens and public access which is unique when it comes to municipal pump stations.

There are various 'firsts' on this project. A micro-tunnel with a curve of this size and in these conditions; is a first of its kind in South Africa. The continuous underwater concrete pour of 1 100 cubic metres is unique and a first of its kind. ▼

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### Project information

- **Name of company entering:** Hatch Goba
- **Project start date:** October 2011
- **Project end date:** October 2014
- **Client:** eThekweni Municipality
- **Main contractor:** Group Five
- **Consulting engineer:** Hatch Goba
- **Sub-consultant:** Drennan Maud Associates
- **Project value:** R120-million