

WATER WEEK

R120m sewage treatment works for CT

PETRONEL SMIT | STAFF WRITER

Multidisciplinary engineering and science consultancy Gibb recently completed the R120-million Helderberg coastal sewerage project for the disposal of sewage within the Helderberg area, at the end of 2009.

The project tackled the need for bulk sewerage services by private developer Heartland Properties in the region, as well as the city's aim to reduce the number of small sewage treatment works (STW), while maintaining the principle of treating effluent locally.

The City of Cape Town municipality installed a new gravity sewerage, pump station and rising main from the Lourens river pumpstation to the Macassar STW. Gibb provided design, construction supervision and project management services.

The will to win, the desire to succeed, the urge to reach your full potential . . . these are the keys that will unlock the door to personal excellence.

Environmentally sensitive areas, geotechnical conditions along the route and the accommodation of future development plans are a few of the challenges that had to be considered when identifying the pipeline route.

"The route chosen, along the back of the coastal dunes, was not only the shortest route from the Lourens river pumpstation to the Macassar STW, but accommodated the proposed development on the Heartland property and reduced the environmental impact," asserts Gibb business development manager for water and sanitation **Chris Hegley**.

To increase the long-term benefit for Cape Town, the company used concrete pipes with high-density polyethylene lining for the deep sections of the gravity line, and glass-reinforced plastic pipe for the shallow sections of the gravity sewerage and the rising main.

Other benefits of the project include a significant reduction in sewage spills from the existing sewerage network, reduced pollution,



HELDERBERG COASTAL SEWERAGE

Environmentally sensitive areas, geotechnical conditions along the route and the accommodation of future development plans are a few of the challenges that had to be considered when identifying the pipeline route

the potential for further economic development in the area with increased infrastructure capacity and reduced burden on the potable water system through effluent reuse for irrigation purposes. Hegley says that, by having a large STW, the option to reuse treated effluent becomes more economically viable.

Meanwhile, he asserts that the most significant focus in the industry currently includes the need to move towards asset management,

WATER WEEK

which will include a greater investment in the rehabilitation of existing infrastructure as well as creating new assets.

"Wastewater treatment plants are also in need of significant attention across the country and must be a focus for the relevant authorities. Besides the need to tackle failing plants, there are also significant opportunities to reduce the burden on the potable water systems by reusing treated wastewater effluent for various applications," Hegley points out.

Further, the recycling and beneficial reuse of solid waste products from wastewater treatment plants can provide a sustainable and commercially attractive method of disposal. Recent advances in technology will also bring desalination plants into consideration for potable water, which is particularly relevant to KwaZulu Natal, as well as the Eastern Cape and the Western Cape.

Gibb also identifies sub-Saharan African countries as key growth areas for water and sanitation services and is already delivering large projects in a number of countries within the region. The company is involved in Eskom's Ingula Pumped Storage Scheme and other large hydropower projects in Zambia and Swaziland, as well as delivering feasibility and planning studies in a number of countries.

ENGINEERING NEWS COUPON ON PAGE 84 E186364

