



Pipe-laying outside the town of Beaufort West

Drought relief for Beaufort West

The Beaufort West Municipality emergency bulk water supply project was initiated to counter the severe drought conditions being experienced at the end of 2017. There was no water in the town's Gamka Dam and existing boreholes could not supply sufficient water to meet current and future demand.

To alleviate the situation, the municipality applied for funding from the Western Cape Provincial Government, which was then sourced via the Department of Rural Development. Based on its three-year panel tender, **Neil Lyners and Associates (Lyners)** was appointed as the main civil engineering consultant and project manager.

The project was executed under the GCC 2015 contract at an approximate value of R23 million (incl. VAT). Due to strict expenditure deadlines to be met by end of March 2018, installations took place from January to April 2018, which was the main and most notable achievement of this project. The engineers had to 'feed' the contractors with final designs as they were installing pipes.

"Recent recorded historical water demand indicated that an upgrade was long overdue, since demand had already exceeded the yield capacity of Beaufort West's existing water resources, excluding the Gamka Dam," explains Francois van Eck, technical director, Neil Lyners and Associates. "The overall objective was to utilise the available water sources more effectively in order to ensure sustainable longer-term supply."

The project scope included new bulk water pipelines, the mechanical and electrical equipping of five existing boreholes, and the construction of a new booster pump station at the existing reclamation plant. To ensure that the added water sources reached the community, Lyners also assisted the municipality with a leak detection programme to minimise losses in the water network.

Currently, Lyners is executing a pilot project in Beaufort West, which entails the replacement of traditional and prepaid water meters with smart prepaid meters. This will enable the municipality to manage its potable water consumption much more effectively.



Typical mechanical and electrical borehole equipment installation

The new booster pump station



"From our George office, we're assisting most of the local municipalities within the Garden Route and Klein Karoo regions, as well as Karoo Hoogland Municipality in the Northern Cape. Our focus is mainly on water and sewer bulk supplies, in addition to general civil, structural and electrical engineering infrastructure projects," Van Eck concludes. **3S**

PROFESSIONAL TEAM:

Main civil engineering consultant and project manager:

Neil Lyners and Associates

Mechanical/electrical engineering subconsultants:

MNE-OAK

Environmental assessment practitioner:

Sharples Environmental Services

Main civil engineering contractor:

De Jagers Civil Contractors

Mechanical and

electrical subcontractor:

TG Electrical

PROJECT SCOPE:

Beaufort West emergency bulk water supply

- Connect five boreholes to the new booster pump station, with uPVC rising mains of 75 mm, 90 mm, 110 mm and 160 mm in diameter
- New 200 mm diameter uPVC rising main from the new booster pump station to the town's reservoir
- New booster pump station with capacity of 40 ℓ/s
- New mechanical and electrical installations at the boreholes and pump station
- New security fences and alarm systems at the boreholes and around the pump station building
- Electrical and control associated infrastructure within the MCCs for boreholes and pump station
- Telemetry/Scada to tie in the boreholes and pump station with the existing bulk water supply system
- 15 km of new pipeline