

# TURNKEY PROJECT: REFURBISHMENT AND UPGRADING OF THE STANDERTON WATER TREATMENT WORKS AND BULK WATER INFRASTRUCTURE

Name of Client: Lekwa Local Municipality

Country: South Africa - Mpumalanga

Duration: 5 months

Start Date: October 2016

Completion Date: March 2017

Project Value: R14 208 503 (VAT exclusive)

Number of team members: 1 Project Manager, 2 Water Engineers, 1 Construction Manager, 3 Technical Staff

## Problem Statement

The condition of the filters at Standerton Water Treatment Works were identified to be in a very poor condition with three (3) filters out of the eight (8) out of commission. The town of Standerton is growing very fast with the construction of Standerton extension 8 RDP Housing development underway. The clearwater pumps to Old Standerskop Reservoirs, which will supply the new development were found to be small to fill the reservoirs.

## Description of project

The purpose of the project was to refurbish and upgrade the Standerton bulk water supply infrastructure, with a view to:

- Increase the treatment capacity of the Standerton Plant by refurbishing and upgrading the filters;
- Improve the hydraulic integrity of the pumping main to Old Standerskop Reservoirs;
- Provide a reliable water supply to Standerton Extension 8, which is currently being developed;
- Address the reliability of supply issues and shortages in the area being supplied from the Old Standerskop Reservoir

## Description of services provided by Tlou Consulting

The Company's involvement on the project began with an assessment of the condition and performance of the water infrastructure; an identification of infrastructure requirements to improve the performance of the supply system and to determine the capital expenditure required to implement the intervention measures.

The Company was thereafter responsible for implementing the intervention measures, which included:



*Standerton Water Treatment Works*



*Clearwater pumps requiring upgrade*

- Refurbishment of the Standerton Raw Water Pumping Units;
- Refurbishment and Upgrading of the Standerton Water Treatment filters;
- Upgrading of the Clear Water Pumping Units for the 9Ml Square Reservoir (Old Standerskop);
- Commissioning of the 315-mm diameter pumping main to Old Standerskop Reservoir, which includes the installation of air and scour valves;
- Supply and installation of Gate Valves
- Repair of level control valve at the Old Standerskop Reservoir.

Knowledge area applied

- Infrastructure Management Asset
- Infrastructure Planning, Design and Management
- Financial Analysis
- Project Management



*Upgraded Clearwater pumps*

Benefits to the Client

- Increased WTW capacity
- Sufficient and reliable water supply to Standerton extension 8 RDP housing development
- Improved system pressures to high lying areas of Old Standerskop Reservoir.



*Clear water pump house*