

# BOOSTING MIDRAND'S WATER SUPPLY

Johannesburg Water pumps R92-million into new Erand Tower and Pump Station infrastructure project to boost water supply in Midrand.  
By PFUNZO MUDZANANI, Johannesburg Water's project manager

Johannesburg Water has invested R92-million into a new infrastructure project that will help boost water supply to the Midrand area. Construction of the new Erand Tower and Pump Station project is currently underway and will serve as additional capacity to the existing Erand Reservoir complex.

Part of the existing Midrand system consists of the Erand Reservoir site, which comprises a 25 megalitre (ML) capacity reservoir, a 9ML capacity reservoir and a pump station. The existing pump station sources water from the 9ML reservoir and delivers it to a 0.5ML capacity water tower elevated to 30 metres above ground level to produce the required hydrostatic pressure for the distribution of potable water to the local communities.

The Johannesburg Water Master Plan proposed the new and upgraded water pump station that will supply both the new 2ML water tower and the 0.5ML existing tower. To increase the water storage capacity of the existing system, specifically for higher-lying areas, and to unlock the Midrand area for further development, Johannesburg Water is building a new 2ML water tower and pump station. This will increase the current storage capacity and provide a water network with adequate capacity to meet both present and future demands.

The construction of the new Erand Tower and Pump Station forms part of the Entity's Reservoir Storage Upgrade Programme, which aims to ensure the provision of a 24-hour storage capacity in all the entity's reservoirs. The project is currently about 60 per cent complete, and upon completion, will boost water supply in Carlswald, Blue Hills, Kyalami and Barbeque Downs.

The storage capacity is required to mitigate against service disruption should network bursts occur or should there be a supply disruption from the bulk supplier, as well as maintain adequate supply pressure in the reticulation system.

## SCOPE OF WORKS

- Construction of a new 30-metre-high elevated reinforced concrete water tower with a capacity of 2ML. This includes the design and construction of piles, ground beams, shaft walls, columns, radial beams and a cylindrical water tank.
- Construction of a new pump station housing four pumps each, with a head of



New Erand Tower and Pump Station

37 metres drawing water from the existing 25ML reservoir and delivering to both the new and existing water towers, including all the necessary appurtenance and control systems.

- Installation of all inlet and outlet pipework from the reservoir to the pump station and connecting to the existing distribution network.
- Cathodic protection and telemetry requirements.
- Installation of power supply to the new pump station and installation of a standby generator and lightning protection.
- Construction of new manholes and inlet and outlet chambers.
- Construction of paving around the pump station and tower. ●

**TO INCREASE THE WATER STORAGE CAPACITY OF THE EXISTING SYSTEM, SPECIFICALLY FOR HIGHER-LYING AREAS, AND TO UNLOCK THE MIDRAND AREA FOR FURTHER DEVELOPMENT, JOHANNESBURG WATER IS BUILDING A NEW 2ML WATER TOWER AND PUMP STATION.**