

30 August 2019

Attention: Esmé Roux

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COMMENT ON WATER AND SANITATION CAPACITY FOR THE PROPOSED DEVELOPMENT ON ERF 164232: MUIZENBERG

Background

This report is the confirmation of water and sewer infrastructure capacity if adequate to accommodate the proposed development. The proposed development will consist of filling station with a car wash and a convenience store. Currently the site is a vacant and zoned Single Residential 1: Conventional Housing according CTZS Regulations with an extent measured 4 456 m².

The report provides an overview of the existing water and sewer infrastructure near the development and associated conditions and technical requirements to be implemented with respect to this application.

Table 1.1: Estimated water and sewer demands provide by EFG Engineers

ERF Number	Potable Water Demand			Sewer Flow
	Application	Peak Flow (l/s)	Fire Flow (l/s)	Peak Flow (l/s)
164 232	Filling station	1.26	25	0.145

Water Reticulation

The proposed development falls in the "Capricorn zone" pressure management system.

There is an existing 609 mmØ bulk distribution main running across west boundary of the property.

At the corner of Eastbourne road and St Georges street there is an existing 160 mmØ stub with an average pressure and an average static pressure of 30 m and 77 m respectively that tie off 160 mmØ along St Georges street with a velocity of 0.41m/s, and at the North-West corner of the property is an existing 160 mmØ stub tie off 609 mmØ along Prince George drive.

The existing water reticulation system in the vicinity has sufficient capacity to supply the proposed development with potable water.

Refer to Figure 1 for Existing Water layout.

Bulk Water Branch

The City of Cape Town's bulk supply system is expected to have sufficient water resources, treatment, bulk storage and conveyance capacity to supply the estimated annual average daily demand of 1.26 l/s of the proposed development.

Sewer Reticulation

There is an existing 150 mmØ sewer main along St Georges street. The sewer discharged from the development drains by gravity to the catchment of Clifton road Pump station.

Refer to Figure 2 for Existing Sewer layout.

The sewer model shows future master plan that require upgrading of Clifton Rd Pump station and upsizing of the existing 500 mmØ rising main. However, the small flows from the development will not have big impact on the existing infrastructure as they will be off peak compared to residential sewer flows.

Wastewater Branch

The anticipated wastewater flow from the proposed development has been calculated to be 0.145 l/s.

This proposed development is situated within the catchment of the Cape Flats Wastewater Treatment Works; the wastewater treatment works has sufficient hydraulic capacity to accommodate the proposed development.

Water pollution control

The wastewater from the property must comply with Wastewater and Industrial effluent by-law which states the owner must ensure that -

- a) industrial effluent which is likely to contain grease, oil, or fat or inorganic solid Matter in suspension, must be passed through a suitable treatment facility, as may be required by Council, before it is allowed to enter any sewer; and
- b) any cleaning agent used on the premises for any activity may not form stable emulsions or solidify in the system.

Conclusion

The sewer and water bulk infrastructure has sufficient spare capacity to accommodate the proposed development.

Conditions

The Water and Sanitation Department has no objection to the proposed application provided the following conditions are adhered to:

1. The developer/owner is responsible for the payment of development contributions towards the provision of bulk water and sewerage services, in accordance with the City policy and will be subject to annual escalation and the amount payable will be the amount calculated at the time of payment.

2. Where municipal services traverse private property or fall outside a public road reserve, a minimum 3 m wide servitude to be registered in favour of the City by the developer.
3. A wayleave to be obtained from the Water & Sanitation Department prior to any work on municipal land or any activity within 3 m from any municipal service.

Technical Requirements

4. The water and sewer capacities allocated according to this document shall not be reserved if not taken up before the lesser of 5 years or the approved development period.
5. Application must be made for any new water metered connections to the Reticulation District Head.
6. Services infrastructure is subject to quality control during construction and testing prior to approval.

General/ Disclaimer

Information provided is based on best available data. The flows and pressures provided in this comment are theoretical and not measured. All engineering infrastructure locations are an approximate indication and to be verified and confirmed in the field prior to excavation.

Yours Faithfully

 Recoverable Signature

X 

Signed by: Shamile Manie

On behalf of
Michael John Webster
DIRECTOR: WATER & SANITATION DEPARTMENT
