



de villiers & moore
CONSULTING ENGINEERS
Electrical, Mechanical, Fire

SERVICES REPORT ELECTRICAL RETICULATION



AVEC LA TERRE - PORTION 11 OF FARM 1426 PAARL

OCTOBER 2022
REVISION 1

Submitted By: **Wessel Badenhorst**
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Project No: R5156G



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SERVICES REPORT FOR THE ELECTRICAL RETICULATION PORTION 11 OF FARM 1426, PAARL

1. SCOPE

The layout and scope of works are based on the drawings as issued to us on 9 September 2022 and 4 October 2022. The general layout drawings were utilized to compile a provisional reticulation diagram and routes for the electrical reticulation for the proposed development of 216 residential opportunities, and 1 commercial stand.

1.1 Purpose of this cost report

- Provide the basic information parameters on which the preliminary design is based for the electrical supply.
- Provide the guideline for the electrical reticulation and municipal supply capacity.

1.2 Assumptions

The following assumptions have been made for the basis of this report :

- Municipal capacity is sufficient, as discussed with Drakenstein Municipality.

1.3 Scope of Works

The following scope of works is included in this report :

- Arrange availability of supply with the municipality.
- Implement design in accordance with municipality standards, although a bulk MV-connection will be taken from the municipality.
- Streetlighting in accordance with SANS-regulations.
- Internal reticulation of the development.

2. BULK SERVICES

The area is currently supplied with electricity by Drakenstein Municipality.

We had a meeting with Drakenstein Municipality Electricity Department, where their requirements were clarified and agreed.

There is sufficient electrical supply-capacity available from the step-down substation in the area.

The municipality requested a 20x20m erf for a future brick-built substation, that will strengthen the network in the area, and will be utilized to supply this development. This is provided as erf-234. The municipality is satisfied with the location and the size of the erf. The feeder-cables to this substation will be installed in future by Drakenstein Municipality, all external to this development and subject to programming, funding and planning by Drakenstein Municipality.

For this development, temporary switchgear will be installed in the substation, and will be fed from the existing 11kV-overhead line along Schuurmansfontein Road. As part of the development, 11kV-cabling will be installed along Schuurmansfontein Road to the entrance of the development, where a bulk MV-metering point will be located for the supply to the development.

A separate 11kV-cable will be routed in the same trench, along Schuurmansfontein road, to the commercial development, also with their own MV-metering supply point.

See preliminary layouts on the next page.

The total estimated load for the development is 2 326kVA.

Indication of services-routes for electrical & communications :



2/942

10/1426

LEGEND	
SYMBOL	DESCRIPTION
	MINISUB 6x4m SPACE REQUIRED.
	MUNICIPAL MV-METERING KIOSK.
	11kV MV-CABLE
	MAIN LV-CABLE & STREET LIGHT ROUTES.
	FIBRE/COMMUNICATION SLEEVE & MANHOLES, & DEPTHS.

3. STREETLIGHTING

All streetlighting will be designed in accordance with SANS-standards. Decorative fittings will be utilized to complement the development's ambience and theme.

4. ENERGY CONSERVATION

It is in the Developer's interest to ensure that all efforts are made to reduce the maximum demand and use of electricity by the development. The Developer will ensure compliance with the national building regulations pertaining to energy measures on the electrical installations.

All streetlighting will be LED-luminaires with limited light-polution.

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