

de villiers & moore
CONSULTING ENGINEERS
Electrical, Mechanical, Fire

Our Ref: R5095Y/L0046
Date: 2023-11-20

Your Ref:

Pieterkoen Development Company (Pty) Ltd
P O Box 92
GEORGE
653

Attention: Mr J Branford

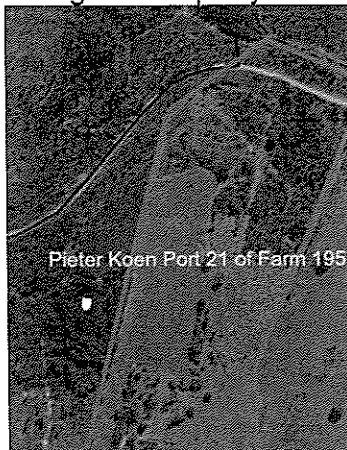
Sir

GEORGE: PIETERKOEN DEVELOPMENT: PORTION 21 OF FARM 195: KRAAIBOSCH
ELECTRICAL RETICULATION BULK SERVICES: REV 002

This report has been compiled by de Villiers & Moore Consulting Engineers, having been instructed our Client, Messrs Pieterkoen Development Company (Pty) Ltd, with purpose of informing the team of the extent of the electrical bulk services required to be put into place to provide the electrical supply to the Development.

LOCATION

The Development is situated on Portion 21 of the Farm 195, Kraaibosch in the administrative district of George Municipality.



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Associate: G.F. ARENDSE Pr Tech Eng

SUPPLY AUTHORITY

The Development is situated in the electrical supply area of George Municipality.

DRAWINGS

Attached to this report is drawing R5095Y/1_Rev C which details the electrical connection point to the Development as well as the existing 11kV cables to the area.

EXISTING ELECTRICAL DISTRIBUTION NETWORK

There is an existing municipal 185mm² x 3c (Al) 11kV PILC cable along the southern access road which feeds from SS-Glenwood (66/11kV Substation).

The Municipality confirmed during our meeting with them as well as by email that there is capacity on this cable to supply the required demand.

Extract from email received from the George Municipal Electrical Planning Department:

*The development will connect on the 11kV network.
A special contribution is payable towards the MV network in the area.*

The capacity will be made available at the SS Glenwood SS, that is currently being upgraded to accommodate the development in the area.

We can have a more detailed discussion at the masterplan meeting for the area.

DEMAND REQUIREMENTS

The demand calculated for the Development is estimated on the attached load calculation document and was taken into account when calculating the Development Charges as well as the capacity on the existing network.

Total Estimated Notified Electrical Demand once Fully Developed = 887kVA

PROPOSED ELECTRICAL MV DISTRIBUTION NETWORK

The medium voltage network currently in place is sufficient to supply the intended Development.

Point of Connection

A new 185mm² x 3c (Al) 11kV PILC cable will be cut into the existing 185mm² x 3c (Al) 11kV PILC cable on the southern side of the Development.

The ring feed will thus be extended into the Development as indicated on the attached drawing, R5095P/1_Rev A which will in turn supply the mini-substations which are located at the load centres of the various areas.

METERING AND RESPONSIBILITY

On completion of the installation and after the one year guarantee period, the responsibilities will be as follows:

The George Municipality will be responsible for the maintenance of the mini-substation and the low voltage network including the low voltage cables, metering kiosks, service connections and earthing network.

Standard George metering to each individual erf will be applicable.

The street lighting network as well as the street lighting equipment will be the responsibility of the Developer/HOA. The street lights will be supplied and metered from a separate street lighting kiosk situated next to the mini-substation and the monthly cost will be for the Developers/HOA account.

ENERGY SAVING MEASURES

The use of the following equipment will be made mandatory

Water and sewage pumps to be supplied with energy efficient motors and vsd motor control.

Water heating to be done using gas or heatpumps.
Lighting to make use of LED lamps only.
Use of motion sensor lighting control.
Photovoltaic Systems will be encouraged.

COST ESTIMATE AND ELECTRICAL DEVELOPMENT CHARGES

The Developer will be responsible for all costs associated with the supply and installation of the electrical infrastructure required to service the Development.
A detailed design of the proposed medium voltage, low voltage, street lighting and earthing will be submitted to George Municipality for approval prior to construction commencing on site.
A detailed cost estimate will be submitted as part of a different process.

The estimated Electrical Development Contributions for the current financial year have been calculated using the current SDP and were obtained from the Electrical Department.
The Development Charges amount to R2 750 312-03 + Vat. (887 X R3100,69)

It must be noted that the Development also attracts a Special Electrical Contribution at the rate of R3 100-00 + Vat per equivalent unit which amount to R967 200-00 + Vat. (312 EU x R3100-00)

It is noted that the amount is adjusted each year at the end of June.

IMPACT

1. Impact on Existing Electricity Consumers
The development will have no detrimental effect on the quality of supply to the existing consumers due to the fact that the development will be supplied by its own substation which in turn will be supplied from the 11kV system.
- 2) Impact on Distribution Authority Operating Costs
The development will have no negative effect on the electrical costs of the distribution authority, due to the fact that the complete electrical infrastructure required for the development will be supplied and installed by the Developer.
- 3) Impact on the Environment
Services will be located within the road reserves to prevent additional disturbances of vegetation.
The internal electrical infrastructure design will take into account energy saving technologies which may include load control, the use of energy efficient lighting, the use of alternative means of water heating and inverter type HVAC equipment

CONCLUSION

We trust the information provided is of sufficient detail to allow for an informed decision to be made.
Please do not hesitate to contact the undersigned should additional information be required.

Yours faithfully



R G HALL Pr Eng
DE VILLIERS & MOORE (PTY) LTD

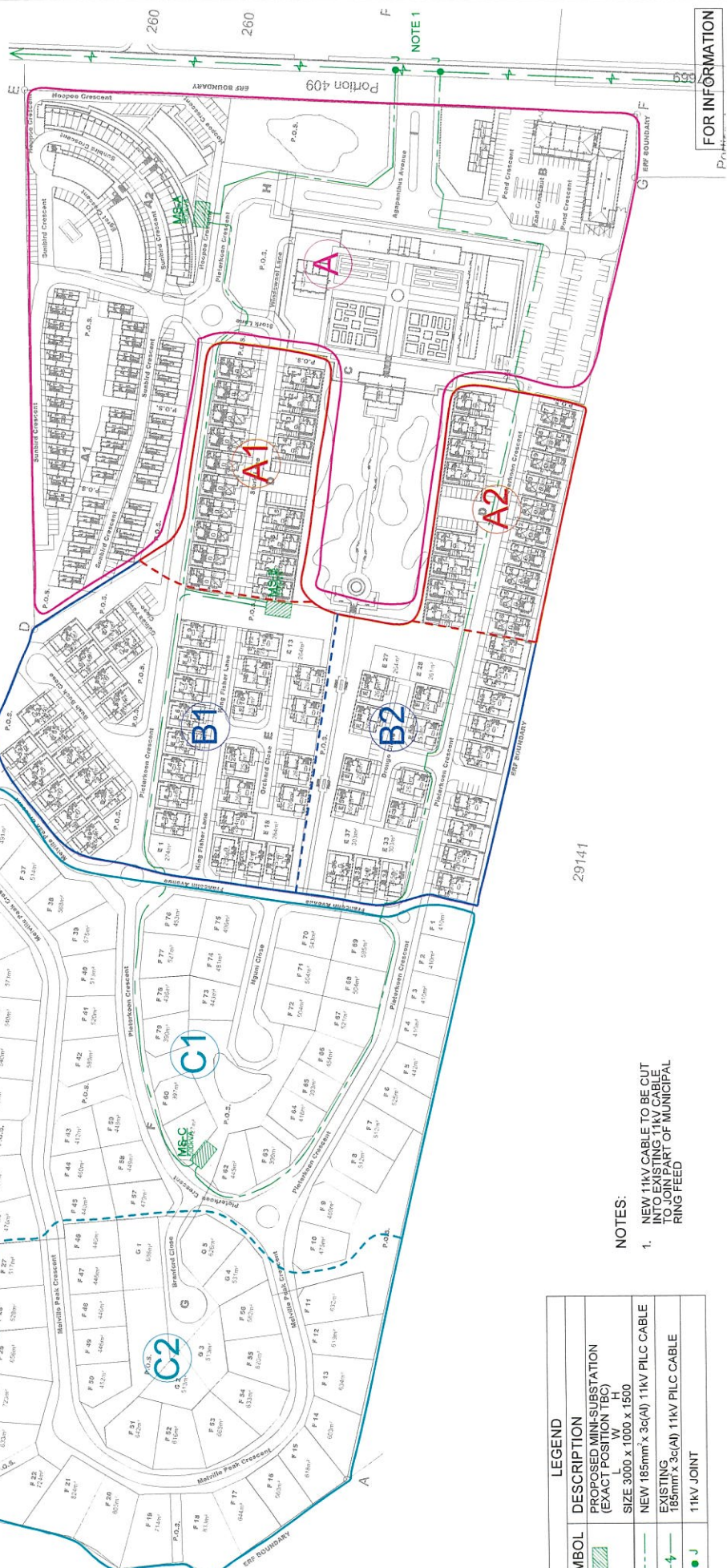
cc Janiel de Kock
Willem de Kock

GEORGE: PIETERKOEN DEVELOPMENT: PORTION 21 OF FARM 195**PROPOSED SUB-DIVISION****ESTIMATED LOAD CALCULATION FOR PLANNING PURPOSES**

Type	Number	Size (m ²)	ADMD	Total
Portion 1 Residential	44		3	132
Portion 2 Sectional Title	84		2,5	210
Portion 6 Business		1125	0,05	56
Residential	9		3	27
Portion 7 Hotel		1480	0,05	74
Portion 8 Dwelling Houses	33		2,5	83
Group Houses	58		1,5	87
Portion 9 Dwelling Houses	33		2,5	83
Portion 10 Dwelling Houses	18		2,5	45
Group Houses	42		1,5	63
Pumpstations	2		14	28
Total				887



Portion 3 of Farm
Kraai Bosch No 195



FOR INFORMATION

LEGEND	
	SYMBOL DESCRIPTION
	PROPOSED MINI-SUBSTATION (EXACT POSITION TBC)
	L W
	NEW 185mm ² x 3c(AI) 11kV PILC CABLE
	EXISTING 185mm ² x 3c(AI) 11kV PILC CABLE
	11kV JOINT

NOTES:

- NEW 11kV CABLE TO BE CUT INTO EXISTING 11kV CABLE TO JOIN PART OF MUNICIPAL RING FEED

		FOR INFORMATION	
Client: Faleriteen Development Company (Pty) LTD	Date: 2023-10-29	Drawn: P.A.	Original: P.A.
Project Title: FARM PIETER KOEN (KRAAI BOSCH 195/21), GEORGE	Scale: 1:1000	Date: 2023-10-29	Drawn: P.A.
Drawing Title: ELECTRICAL RETICULATION PROPOSED PHASING		Drawing No: R5095Y/1	Revision No: ABC
REVISIONS/REVISIONS		GENERAL SPECIFICATIONS	
C REBARED ARCHITECT LAYOUT	2023-10-28	1. THE MAIN ARCHITECT LAYOUT SHALL BE IN ACCORDANCE WITH THE SOUTH AFRICAN NATIONAL STANDARD (SANS) 10400-1:2012.	
B REBARED ARCHITECT LAYOUT	2023-10-27	2. THE MAIN ARCHITECT LAYOUT SHALL BE IN ACCORDANCE WITH THE SOUTH AFRICAN NATIONAL STANDARD (SANS) 10400-1:2012.	
A ISSUED FOR INFORMATION	2023-10-26	3. THE MAIN ARCHITECT LAYOUT SHALL BE IN ACCORDANCE WITH THE SOUTH AFRICAN NATIONAL STANDARD (SANS) 10400-1:2012.	
NEW	DETAIL	4. THE MAIN ARCHITECT LAYOUT SHALL BE IN ACCORDANCE WITH THE SOUTH AFRICAN NATIONAL STANDARD (SANS) 10400-1:2012.	