
**ELECTRICAL ENGINEERING SERVICE REPORT WITH COMMENTS FROM
ESKOM**



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ACORN CITY

104 Leslie Avenue
 Fourways
 2191

13 September 2021

Att: Mr Dlamani Malabie

ACORN CITY DEVELOPMENT – ELECTRICAL ENGINEERING SERVICES

1. BULK SUPPLY

The total calculated bulk supply required for the complete development is:

Notified Maximum Demand (NMD): 6730 kVA
 After diversity Maximum Demand (ADMD): 4370kVA

Phase 1				
No.	Description	(kVA) Per Unit (NMD)	Diversity Factor	Total ADMD (kVA)
1	Learning Centre	100	0,7	70
2	SASOL Petrol Station	150	0,7	105
3	Informal Traders - Taxis	50	0,7	35
4	Residential (350 Units)	1050	0,7	735
5	General/Street Lighting	10	1	10
Total calculated Demand (Phase 1)		1360 kVA		955 kVA
Phase 2				
No.	Description	(kVA) Per Unit	Diversity Factor	Total ADMD (kVA)
1	Private Health Care Hospital	500	0,7	350
2	Retail/Automotive Trade	500	0,7	350
3	Residential (400 Units)	1200	0,7	840
4	Private School	200	0,7	140
5	Municipal Offices	250	0,7	175
6	General/Street Lighting	10	1	10
Total calculated Demand (Phase 2)		3160 kVA		1865 kVA
Phase 3				
No.	Description	(kVA) Per Unit	Diversity Factor	Total ADMD (kVA)
1	Hotel	700	0,7	490
2	Light Industrial	1500	0,7	1050
3	General/Street Lighting	10	1	10
Total calculated Demand (Phase 3)		2210 kVA		1550 kVA
Total calculated Demand		6730 kVA		4370 kVA

Directors: -T.G Makamo, LZ Monareng

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2. PROJECT ADMD LOAD FORECAST AND ESTIMATED NEED DATE

The calculated load ADMD per phase:

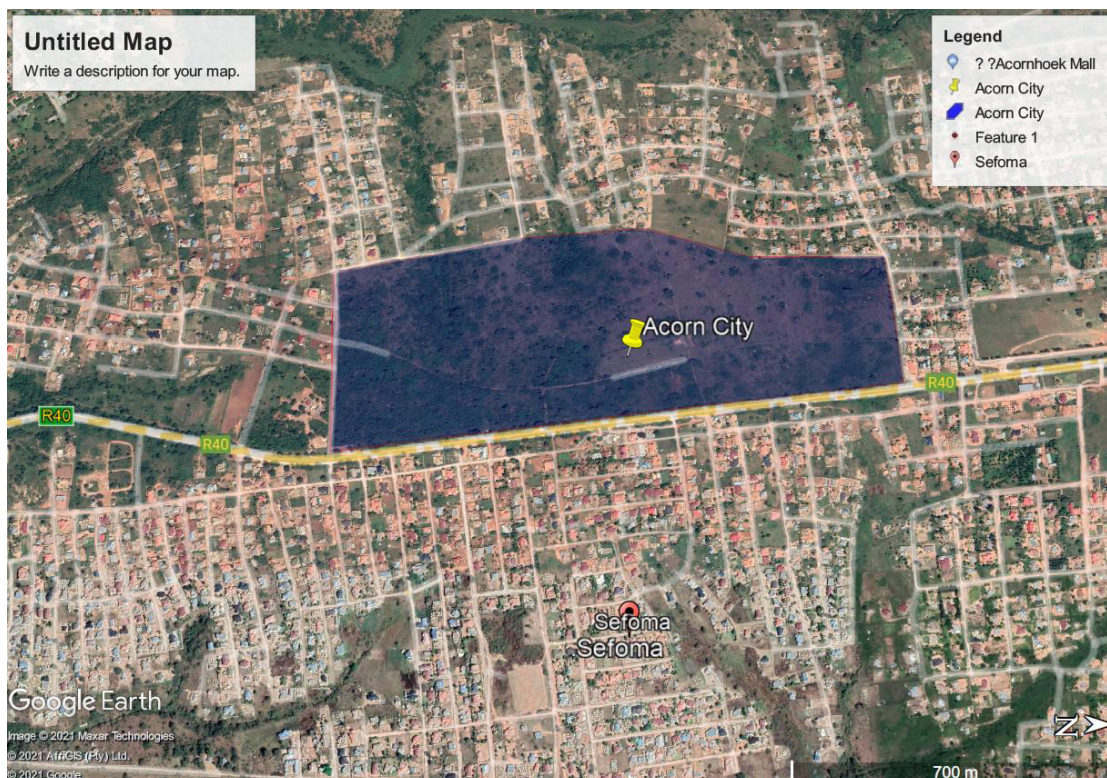
- Phase 1: 955kVA expected completion date: November 2022
- Phase 2: 1865kVA, expected completion date: November 2024
- Phase 3: 1550kVA, expected completion date: November 2027

Project Phase	Calculated Demand per Phase (kVA)	Cumulative Demand (kVA)	Expected Date
Phase 1	1000	1000	Nov-22
Phase 2	2000	3000	Nov-24
Phase 3	1600	4600	Nov-27

3. PROJECT PHASING

Phasing shall be as indicated above.

4. PROJECT GOOGLE EARTH LAYOUT



i. Locality Map 1



ii. Locality Map 2- Proposed Bulk Connection Point

5. PROJECT SERVICES OUTLINE AND HANDOVER

The internal Medium Voltage (MV) reticulation will be designed and constructed by the appointed Electrical Engineers. The design shall be done as per Eskom standards. The design process will go through Eskom's review committees for approval prior to construction. Once the MV reticulation network is completed, the services shall be handed over to Eskom for maintenance and bulk billing.

The MV reticulation design shall incorporate MV-RMU/T3 Switches for connection to individual phases and for metering purposes.

The above proposal does not require the developer to have a distribution license.

The installation of mini-substations, Low voltage reticulation and tenants billing shall be managed by the facility management company.

THOMAS MAKAMO

For and on behalf of

RIVONINGO CONSULTING ENGINEERS (PTY) LTD



Annex D - Letter of Consent

Application to encroach on Eskom's right

With reference to your application dated **26 February 2021** for **APPLICATION FORM FOR TOWNSHIP ESTABLISHMENT IN TERMS OF SECTION 29(1) (D) OF BUSHBUCKRIDGE LAND USE MANAGEMENT BY-LAW, 2014**

Permission is hereby granted under the conditions listed on the attached document.

Kindly indicate your acceptance of these conditions by initiating each page and signing in the appropriate area on the last page of the second copy and returning this copy to Eskom at the following address:

Mhlongse@eskom.co.za or Wayleavesmou@eskom.co.za or NekhahTT@eskom.co.za

Should you have any questions, please do not hesitate to contact us at either of the following:

TEL NUMBER **Tel +27 13 693 2073**
FAX NUMBER: **Fax 086 5373 074**
ADDRESS: **28 Ferreira Street, Orion Building**
 P O Box 1567 Nelspruit 1200 SA

Yours sincerely

SIGNATURE

NAME: **Sebenzile Mhlongo**

TITLE: **Ms.**

The Letter of Consent should contain two copies of the selected generic and specific conditions referring to the specific application received.

The second copy should have a clause at the bottom of the last page, as shown:

I,.....(FULL NAMES AND SURNAME)

Herewith unconditionally accept the stipulations in the Letter of Consent pertaining to my co-use of an Eskom servitude.

SIGNED ATTHIS..... DAY OF (MONTH) (YEAR)

APPLICANT

WITNESS..... WITNESS

The Bushbuckridge Local Municipality
Private Bag X9308
BUSHBUCKRIDGE
1280

Date: 15 June 2021

Enquiries: Sebenzile Mhlongo
Tel +27 13 693 2073
Wayleavesmou@eskom.co.za
Our ref: LD-INV/M/SM/158/2021

Bushbuckridge Local Municipality,

APPLICATION FORM FOR TOWNSHIP ESTABLISHMENT IN TERMS OF SECTION 29(1)(D) OF BUSHBUCKRIDGE LAND USE MANAGEMENT BY-LAW, 2014

Your Ref:

Your application dated 26 February 2021 refers.

This application affects Eskom Distribution ARTHURSEAT/BOELONG 22KV, ACORNHOEK/CHAMPAGNE 22kV Overhead Line Overhead Line which traverses subject area of the proposed waste management license application.

Eskom Distribution will raise no objection to the above mentioned application , provided Eskom's rights and services are acknowledged and respected at all times.

Further to the above the following conditions must be adhered to and accepted in writing;

1. There is a 9 metres building and tree restriction both side of the center line of the 11kV/22kV, which must be adhered to in all future development. No construction will be allowed in these restriction areas and closer to the supporting mechanisms. Eskom rights are protected by wayleave agreement and servitude.
2. All work within Eskom's servitude areas will have to comply with the relevant Eskom earthing standards at the time of construction.
3. No construction or excavation work shall be executed within 11 metres from any Eskom power line structure, and/or within 11 metres from any stay wire.
4. All work within Eskom Distribution reserve area and servitude must be done in accordance with the requirements of the *Occupational Health and Safety Act No. 85 of 1993 as amended*. Special attention must be given to the clearances between Eskom's conductors, structures, cables and electrical apparatus and proposed work as stipulated by *Regulation R15 of the Electrical Installations Regulations* of the aforementioned Act or any other legal requirement.
5. Eskom cannot guarantee the exact position of the underground electrical cables and therefore the applicant's site representatives must expose the cables by hand, in order to establish their location. Eskom's cables must be placed in sleeves encased in concrete

across the width of the servitude, at the applicant's expense where frequent excavations occur in the cable area.

6. Eskom Distribution shall not be liable for the death of or injury to any person or for the loss of or damage to any property where as a result of the encroachment or of the use of the area where Eskom Distribution has its services, by the applicant, his/her agent, contractors, employees, successors in title and assigns.

7. Eskom Distribution's services and equipment must be acknowledged at all times and may not be tampered or interfered with. It is important to acknowledge and respect Eskom's Distributions services at all times. It will be required of the developer to familiarize himself/herself with all safety hazards related to electrical plant.

8. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with. Please note: Where an electrical outage is required, at least fourteen working days is required for arrangement.

9. Eskom is not the landowner thus Eskom's consent doesn't relieve the applicant from obtaining the necessary statutory, landowner's and or municipal approvals.

10. If and where applicable: Wherever any pipe crosses the Eskom services, the edge of the excavation shall not come within 10 metres of the Eskom services and structures. Any angles crossing should preferably be from 45^o degrees to 90^o. Cathodic protection must be installed to prevent corrosion of the pipe. Pipeline markers to be situated at 30 metres intervals and where the pipeline is crossing Eskom's servitude, the pipeline must be clearly marked.

11. The effective management and handling of waste is of crucial importance. No dumping shall be allowed within Eskom Distribution Servitudes. All unwanted waste (gaseous, liquid or solids) should be disposed of at a registered waste disposal site as stipulated under Section 20 of the Environmental Conservation Act (Act 73 of 1989). The applicant will adhere to all relevant environmental legislation. Any cost incurred by Eskom as a result of non-compliance will be charged to the applicant.

12. The use of explosives of any type within 500 metres of Eskom's services shall only occur with Eskom's previous written permission .If and whenever the applicant apply and if permission for the blasting process is granted the applicant must give at least fourteen work days prior notice of the commencement of blasting to Eskom's authorized area representative for the **Arthurseat Area: Mr. Henry Magagula (Snr. Supervisor) Tel: 013 791 0409/ 082 342 1878**. This allows time for arrangements to be made for supervision of and/or precautionary instructions to be issued in terms of the blasting operation.

13. The contractor in charge of the construction or maintenance work on site must at all times be in possession of the letter of approval of the service concerned, and as well as all plans that are required and that are referred to in the correspondence, so that during and inspection the contractor can present the documentation to Eskom official(s) when requested to do so. If no approval can be presented Eskom representative can order the contractor to cease all works until such approval can be presented

14. Eskom will recover costs from the applicant where any damages of Eskom assets and or any penalties suffered by Eskom occur. The Applicant accepts costs if:

- Eskom pylons subside or are damaged as a result of blasting activities.
- Eskom has to incur any costs to comply with statutory requirements because of the applicants or applicant's contractor work or the presence of the equipment or plant in the reserve area. Such proven costs shall be refunded on demand.

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15. Any development, which necessitates the relocation of our services, will be to the account of the developer. If you decide on the option of relocation of the existing power lines, the Customer Services, Regional Key Customer Executive (08600 37566) should be contacted in connection with costs.

Should the applicant or his contractor damage any of Eskom services during commencement of any work whatsoever, then Eskom's 24 hour Contact Centre Tel: 08600 37566 must be dialed immediately to report the incident.

We thank you and hope you will find the above in order. Should you have technical queries on the Eskom standards and specifications please feel free to phone our Standard Implementation Department, contact person: Mmedi Motaung [Tel: 012 421 3034](tel:0124213034)

Yours sincerely



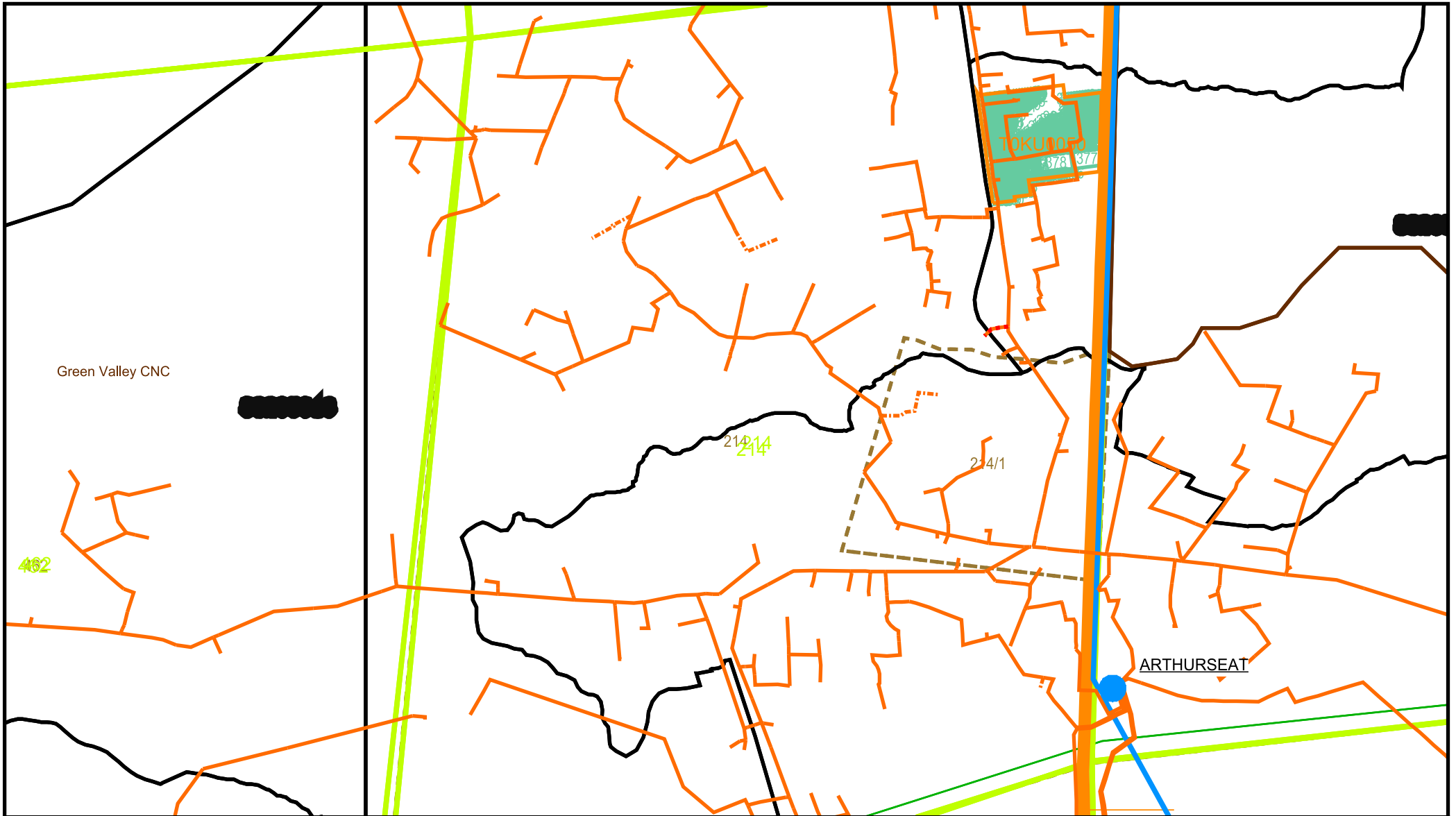
for

Livhuwani Mashamba

LAND DEVELOPMENT AND ENVIRONMENTAL MANAGER

CC SENIOR ENGINEER MMEDI MOTAUNG

CC SENIOR SUPERVISOR MR. HENRY MAGAGULA



Legend

- | | |
|---|--|
| <ul style="list-style-type: none"> External Cable Conductor.Route HV - commissioned 132,0 [kV] Conductor External Cable Conductor.Route HV - commissioned 275,0 [kV] Conductor External Cable Conductor.Route HV - commissioned 533,0 [kV] Conductor External Cable Conductor.Route MV External Cable Conductor.Route MV - commissioned 22,00 [kV] Conductor External Cable Conductor.Route MV - designed 22,00 [kV] Conductor Station,Position HV - commissioned 132,0 [kV] Substation Original Farm,Area Tribal Land,Area Magisterial District,Area Municipality, District Municipality | <ul style="list-style-type: none"> Municipality, Local Municipality Province, Area Registration Division, Area Township / Allotment Area, Area Ward, Area Erf, Area Farm Portion, Area Business Area, Customer Network Centre Business Area, Distribution Operating Unit Business Area, Distribution Sector Business Area, Distribution Zone |
|---|--|

TTN

Title:

Subtitle:

Produced by: Mhlongse on 2021-07-12
 Eskom is not responsible for any errors in the information displayed on this map.



Scale: 1:40000

