

# **DKE Engineers**

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## **BUSH LAPA, ERF 29138, PAARL – ELECTRICITY SERVICES REPORT**

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#### **1. INTRODUCTION**

DKE Engineers was approached by P-J le Roux Town and Regional Planners to investigate the availability of electrical services for the proposed subdivision of erf 29138 in an industrial area of Paarl.

#### **2. EXTENT OF SUBDIVISION**

The proposed subdivision consists of three areas, namely portion A (1,3570 ha), Portion B (0,0032ha and the Remainder (2,6430 ha). The remainder has an established business on it, namely Bush Lapa.

#### **3. TIME FRAMES**

Not known at this stage.

#### **4. CALCULATION OF ELECTRICAL LOAD**

The category of the development is light industrial. The specific electrical requirements are not known at this stage. Diversified electrical demand figures were taken for the development to attain an overall electrical demand figure of 350kVA, which should be sufficient at this stage.

## 5. ELECTRICITY SUPPLY AUTHORITY

The electricity supply authority for the area is Drakenstein and the existing Bush Lapa (Remainder) is fed from their network.

The current Notified Maximum Demand for Bush Lapa is 126kVA and is fed via a 315kVA minisub on Portion B. Their main switch at the LV kiosk at the minisub is 300A. This LV supply is stepped up to 3,3kV and supplied via a 3,3kV cable to their main building where it is stepped down to 400V.

Drakenstein indicated that a separate substation site, indicated as Portion B, is needed to provide electrical supplies to Portion A and the Remainder. Drakenstein's minisub has been installed on Portion B and both Portion A and the Remainder will be supplied from this supply point.

The exact electrical load requirements for Portion A can only be established once the usage purpose is known, eg a large storage facility will require much less power than a manufacturing plant.

## 6. ELECTRICAL CABLES

The electrical supply for the Bush Lapa runs over Portion A. The services of JD Electrical was used to establish the route of the 3,3 kV supply cable to the Remainder and other electrical cables across Portion A. The 3,3kV supply cable runs along the boundary wall DZ. The distance from the boundary wall varies from 1m to 1,5m and the cable burial depth varies between 450mm and 300mm. The route is indicated on the attached revised plan dated 25/08/23. Please note that the burial depth for the supply cable should be 1m. The current depth is way too shallow and is a safety hazard.

A second cable between the security office at the entrance and the previous on-site petrol storage facility was also located, see the attached revised drawing dated 25/08/23. This cable will have to be disconnected and discarded in conjunction with the new supply to Portion A.

## 7. DRAKENSTEIN SUBSTATION ERF

Drakenstein requires an 8m x 4m substation site registered to Drakenstein and situated in the southwest corner of erf 29138. This is indicated as Portion B on the attached revised drawing, dated 25/08/23 . This Portion already accommodates Drakenstein's minisub. The entire perimeter of this Portion needs to be walled or fenced and an entrance gate from Donkervliet Street side needs to be provided. The perimeter walling or fencing plus the entrance gate need to be in accordance with Drakenstein's specifications.

## 8. SERVITUDES

A 3m wide cable servitude in favour of the Remainder will be required for the 3,3kV supply cable to the Bush Lapa across Portion A, alongside boundary wall DZ as indicated on the attached revised drawing, dated 25/08/23.

Another servitude in favour of the Remainder, measuring 10m x 6m, will be required adjacent to Portion B for the Remainder's existing electrical equipment, as indicated on the attached revised drawing, dated 25/08/23. The site includes a concrete slab which was probably used for a previously installed standby generator.

This servitude area for the electrical equipment of the Remainder, needs to be fenced and supplied with a lockable entrance gate.

The Remainder will need 24/7 access to the electrical equipment in the servitude.

## 9. CONCLUSION

A detailed investigation needs to be done to establish the exact electrical demand required for Portion A once its usage is known.

The existing 3,3kV cable needs to be re-buried to a depth of 1m. Danger tape to be installed as well.

Regards



A J Barnard (Pr Cert Eng)

**DKE Engineers**

REVISED: 25/08/2023

**Notes:**

1. Fig 4bccc represents Erf 29138 Paarl measuring 4 ha in extent
2. All dimensions are shown in metres
3. Lines xy and yz represent the proposed subdivision lines
4. All dimensions are provisional and are subject to cadastral survey
5. Buildings and contours taken from Joubert & Brionk Surveys dated 9 March 2021

Existing Zoning: Industrial Zone

**JOUBERT & BRINK SURVEYS**  
 TOPOGRAPHIC ENGINEERING & CONSTRUCTION SURVEY SOLUTIONS  
 1125 VAN DER MERWEPASSAGE, 7531  
 BAKA WINDY, 7531  
 021 872 2499  
 021 872 2499  
 021 872 2499

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Project: Application for Subdivision:  
 Erf 29138  
 Paarl

Description:

**Subdivision Plan**

**BUSH LAPA**

Scale	N.T.S.	Leaf no.	C 20-83
Taken	F.J.L.R.	Date:	MAY 2023
Rev	F.J.L.R.	Planning no.	C 20-83 REV4

