



SERVICES REPORT
ELECTRICAL RETICULATION SERVICES
PROPOSED HARTENBOS HILLS GARDEN ESTATE
ON ERF 3122 HARTENBOS HEUWELS
WESTERN CAPE PROVINCE



PREPARED FOR:

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Version 03

PROJECT: PG 95

**SERVICES REPORT
ELECTRICAL RETICULATION SERVICES
PROPOSED HARTENBOS HILLS GARDEN ESTATE
ON ERF 3122 HARTENBOS HEUWELS
WESTERN CAPE PROVINCE**

EXECUTIVE SUMMARY

Hartenbos Hills Propco (Pty) Ltd represented by Messrs. AJK Projects will be the developers of the Hartenbos Hills Garden Estate located on Erf 3122, Hartenbos Heuwels, Western Cape Province. The development falls within the jurisdiction area of Mossel Bay Local Municipality. The farm measures approximately **79,2906ha**, of which 24.2Ha is developable.

According to surveys conducted on site, the Local Municipality have available electricity infrastructure in the area and will be the authorised supplier of bulk electricity to the proposed development. This was confirmed in writing by the Mossel Bay Local Municipality, Electricity Department.

The Mossel Bay Local Municipality, Electricity Department indicated that the new development will be supplied from an overhead line adjacent to the eastern perimeter of the development, in the vicinity of the proposed main entrance. The development will be supplied with a bulk electrical connection from the overhead line via a suitable Metering Ring Main Unit (M-RMU).

The Notified Maximum Demand (NMD) of the development as per estimated load is **2,089 kVA** and was calculated as per/according to the supply authority's prescriptions. Alternative energy sources such as Heat Pumps, Solar Water Heating and Gas Systems will be implemented for water heating and cooking purposes normally required by the supply authorities and applicable statutory regulations. The provision of a communal Solar PV farm to supplement daytime usage will also be investigated and dealt with separately.

The external and internal reticulation services will be by means of underground medium and low voltage cable networks. Upon completion, the networks from after the metering-RMU will be taken over by the Hartenbos Hills Propco (Pty) Ltd Homeowners Association (HOA) for operation and maintenance.

Low-level lighting system will be considered for the streets and public areas lighting.

A formal enquiry was lodged with the Mossel Bay Local Municipality Electricity Department for comments on available infrastructure, capacity and costs applicable on this development. (feedback enclosed in this Report).

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WESTERN CAPE PROVINCE**

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ADDENDA:

- Addendum 1 : Site Location Map
- Addendum 2 : Google Earth Overview - Proposed Electrical Bulk Supply
(30 April 2021)
- Addendum 3 : Drawing: Proposed Medium Voltage Electrical Reticulation
- Addendum 4 : Mossel Bay Local Municipality: Buk Contributions
- Addendum 5 : Summary of Cost Estimate
- Addendum 6 : Mossel Bay Local Municipality: Correspondence

SERVICES REPORT

ELECTRICAL RETICULATION SERVICES

PROPOSED HARTENBOS HILLS GARDEN ESTATE ON ERF 3122 HARTENBOS HEUWELS WESTERN CAPE PROVINCE

1 INTRODUCTION AND BACKGROUND

1.1 Brief

Hartenbos Hills Propco (Pty) Ltd represented by Messrs. AJK Projects, appointed Buro Tech Consulting Engineers CC on 10 April 2017, to investigate and prepare a Services Report for the electrical reticulation services and bulk supplies to the proposed Hartenbos Hills Propco (Pty) Ltd development, namely Hartenbos Hills Garden Estate on Erf 3122, Hartenbos Heuwels.

The proposed development is located within the jurisdiction area of the Mossel Bay Local Municipality. The development is planned for a typical Retirement Village Township with essential amenities like/such as medical doctor's rooms, sporting facilities, service centres and vegetation garden.

1.2 Scope of the Study

The scope of this study covers the preliminary planning of the electricity supply to the development as well as the electrical reticulation services to the proposed development. The scope of the study can briefly be summarised as follows:

- Obtaining of information on existing infrastructure;
- Determining and planning of proposed new Medium Voltage electrical connection;
- Determining of financial implications

1.3 Availability of Information

1.3.1 Information was obtained from the Local Municipality on 08 July 2020 and 30 April 2021.

1.3.2 It was confirmed that the Local Municipality supply electricity to all adjacent properties with electrical infrastructure available in the vicinity of the proposed development (*municipal correspondence included with this Report*).

1.3.3 The following representative were contacted from the respective supply authorities:

Mossel Bay Municipality:

Manager (*Planning & Customer Services - Electrical*)

Mr. : Petrus Harmse

Tel: +27 44 606-5084

1.4 Services Negotiations

Service negotiations and contract agreements will be finalized between the developer and the Local Municipality.

2 DESCRIPTION OF EXISTING SYSTEMS

The Local Municipality will be the supplier of electricity to the proposed development. An existing 11kV overhead line from the nearby Sonskynvallei 66/11kV Substation, passes directly east of the proposed development.

3 AVAILABLE CAPACITY

Following discussions with the Local Municipality, Electrical Planning & Customer Services Division beforehand, a formal enquiry was submitted on 03 July 2020, with feedback confirming availability of capacity to the development received on 08 July 2020. On 30 April 2021 it was confirmed with the Mossel Bay Local Municipality that the capacity is still available – refer Addendum 6.

No upgrade work will be required to either the Sonskynvallei 66/11kV Substation or the existing 11kV overhead line. Bulk contributions will be payable.

4 LOAD ESTIMATE

- 4.1 With the exception of a water reservoir on the most northern corner of the proposed development, no other electrical loads exist on the property.
- 4.2 Load estimates were determined as prescribed by the Local Municipality.
- 4.3 The total new estimated electrical load for the development is as follows:

ERF 3122 HARTENBOS HEUWELS

Rev 12

2021-05-10

PROPOSED ZONING	LAND USE COMPONENTS	Units	DEVELOPABLE FLOOR AREA (m ²)	kVA/unit or VA/m ²	Unit	Total Load (kVA)
350m ² - 550m ²	Type A, B, C, D & E	279	—	4.50	kVA[ADMD]	1 256.0 kVA
V1: Main Admin Bldg	Various, Ref Legend		1 500.00 m ²	90.00	VA/m ²	135.0 kVA
V2: Health Care Units	Consulting Rooms etc		188.00 m ²	60.00	VA/m ²	12.0 kVA
V2: Health Care Units	Frail Care units	34	—	2.70	kVA[ADMD]	92.0 kVA
V3: Club House	Pool, Gym		294.00 m ²	80.00	VA/m ²	24.0 kVA
V4-V8: Village Apartment	Flats	147	—	2.70	kVA[ADMD]	401.0 kVA
101-116: Terrace Apartments		60	—	2.70	kVA[ADMD]	123.0 kVA
Restaurant			—	90.00	VA/m ²	21.0 kVA
Pump Station	Allowance		—	25	kVA	25.0 kVA
		520				2 089 kVA

The total notified maximum demand is calculated to be **2,089 kVA**.

4.4 Phased Development

The development will be developed in phases. In terms of the electrical supply, the proposed phasing could possibly be as follows:

DESCRIPTION	PHASE 1	PHASE 2	PHASE 3	PHASE 4
Load Requirement	1 175 kVA	216 kVA	437 kVA	261 kVA
Cumulative Load	1 175 kVA	1 391 kVA	1 828 kVA	2 089 kVA

4.5 Application for Electricity

A formal enquiry was submitted to the Local Municipality for a new bulk connection point. Refer to Addendum 6.

5 POINT OF SUPPLY

- 5.1 The proposed point of supply is the existing 11kV overhead lines which run along the eastern boundary of the proposed development, right adjacent to the proposed main entrance to the development.
- 5.2 The power supply to the development from the overhead line will be by means of new 11kV switchgear and bulk metering, supplied by the developer. It is proposed that the Schneider's RM6 metering unit be installed.
- 5.3 The RM6 metering unit will be installed inside a private road reserve, and as such an electrical servitude in favour of the Local Municipality for the supply cable to the metering RMU, as well as the metering RMU will have to be registered.
- 5.4 The reservoir will be supplied from the new underground networks in the proposed development.
- 5.5 Drawings indicating the proposed supply point position are enclosed.
- 5.6 The developer will be responsible for the supply and installation of the new underground 11kV reticulation system into the new development. The system will be taken over and maintained by Home Owners Association.

6 PROPOSED INTERNAL RETICULATION SYSTEM

- 6.1 Considering the environmental and aesthetical aspects on this type of development, an underground reticulation system is proposed for medium and low voltage networks inside the development.
- 6.2 The proposed internal reticulation network will be fed from one intake point at the main entrance from the existing 11kV overhead line as agreed with the Local Municipality.
- 6.3 Miniature substations (Minisubs) will be provided to transform the voltage from 11kV to 415Volt.
- 6.4 The internal MV cable routes with miniature substations (Minisubs) will be installed in the private road servitude – refer Addendum 3.

- 6.5 The Home Owners Association will be responsible for the maintenance and operation of all internal electrical infrastructure.
- 6.6 The system will be according to approved municipal standards.
- 6.7 The developer will be responsible for the installation of the metering units after the stand owners have submitted formal applications for electricity.
- 6.8 Normal street and area lighting will not be required for this development. Only low-level lighting will be considered for street and public lighting where required.
- 6.9 Detailed drawings indicating the electrical services will be prepared during the final design and documentation stage of the project.

7 ALTERNATIVE POWER SOURCES

7.1 Diesel Generator Set

Allowance for a 200kVA diesel generator set to supply essential loads in the community frail-care complex.

7.2 Heat Pump Water Heating Systems

Heat Pump Systems are the preferred method for the heating of water. Using a third of the energy, when compared with Standard Hot Water Cylinders, this type of technology is ideally suited for developments of this nature, where a large number of residential units are clustered together.

7.3 Solar Water Heating

The usage of solar panels for the heating of the water for the geysers will also be considered for the development. It is one of the most feasible methods to save electricity with a system that is environmentally friendly. The units comprise basically of a solar collector/heat exchanger panel mounted on the roofs of the residential units. The geyser is equipped with an electrical heating element as back-up together with a thermostat control to assist with the heating process when the sun energy is inadequate.

7.4 Electricity Generation and Gas

A communal Solar Farm in Grid-tie configuration can be established on the site to supplement daily electricity requirements. Should constraints be experienced with available space for the Solar Farm, then implementation on the roofs of the dwellings will be considered. If the requirement is to overcome Load Shedding, the system will need to be paired up with a storage system (for example batteries) at an additional cost. The usage of electricity can be further reduced by using gas for cooking (*stoves*) & water heating (*geysers*).

8 BULK SERVICE CONTRIBUTIONS

The bulk service contributions and costs are payable at R5,100.00 /kVA (VAT Incl.) by the developer. Refer Addendum 4 for more details.

9 FINANCIAL IMPLICATIONS

9.1 The Cost Estimates for external and internal reticulation services were determined based on the preliminary design and general standard requirements. The cost and charges related to the municipal bulk supply are estimated amounts only and will be adjusted when the formal quote is received from the Local Municipality.

9.2 Refer to Addendum 5 for a summary of the cost estimates.

10 CONDITIONS

The final conditions must still be determined as laid down by the Local Municipality for the proposed development.

11 REGISTRATION OF SERVITUDES

11.1 Servitudes will have to be registered in favour of the Mossel Bay Local Municipality for the following:

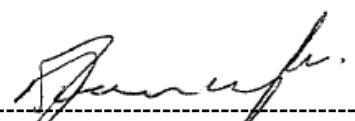
- A 3m×6m servitude for the metering Ring Main Unit (M-RMU) at the main entrance.
- A 2 meter wide (measured from side to side) servitude along the cable route for the main supply cable from the existing overhead line to metering-RMU.

Refer to Addendum 3 for more details.

12 TELEPHONE RETICULATION

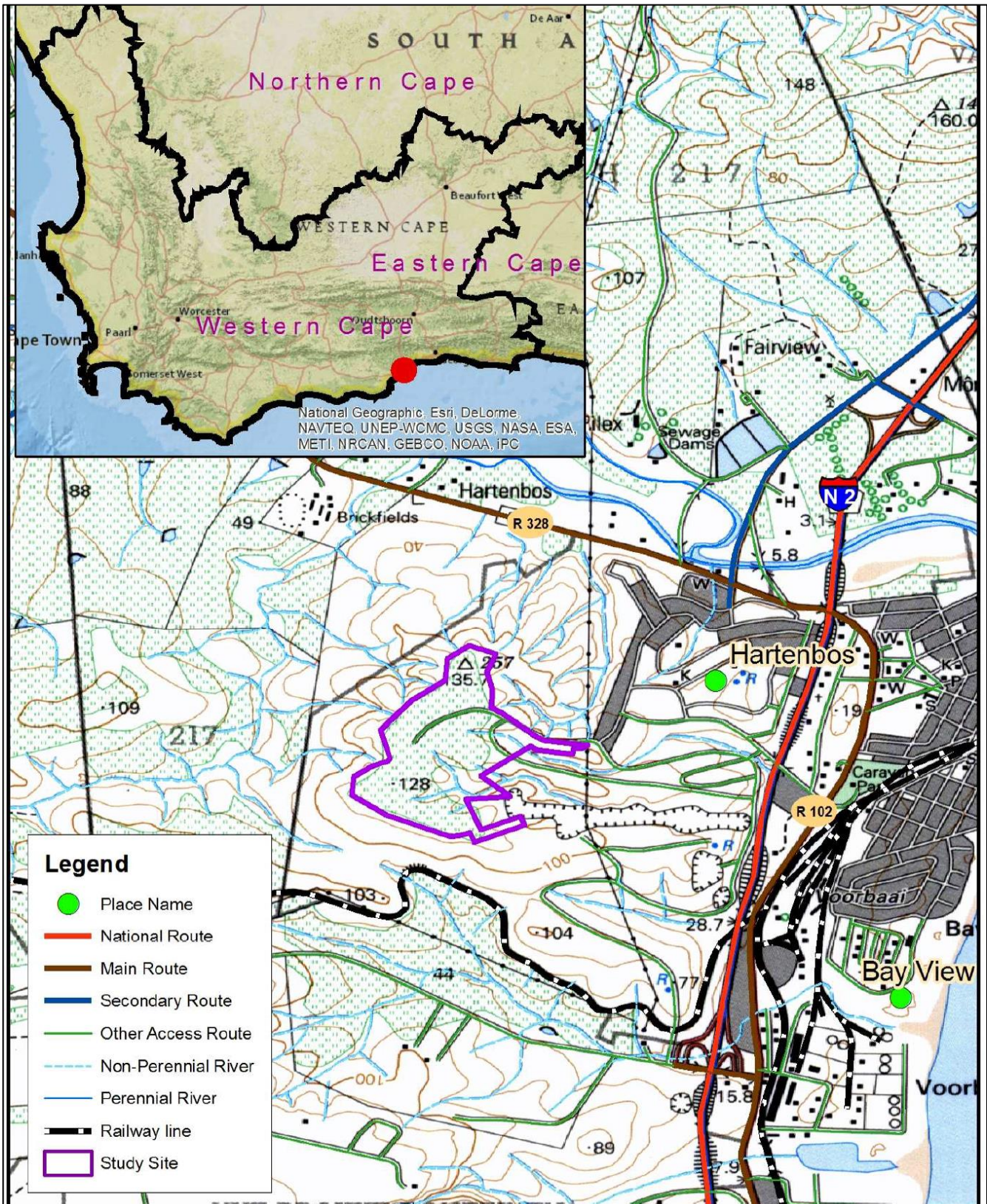
A telephone/data communication network will be provided for the development. The Civil Engineers will address the final designs and submissions to Telkom Planning or the responsible firm.

--oo0oo--



NJS VAN WYK (Pr Eng)

ADDENDUM 1
SITE LOCATION MAP



Legend

- Place Name
- National Route
- Main Route
- Secondary Route
- Other Access Route
- Non-Perennial River
- Perennial River
- Railway line
- Study Site

504632
Hartenbos Heuwels
EIA Investigation

Source of information:
 Orientation: MDB 2009
 Roads: CDSM 1996

N
 1:30 000
 0 400 800 m

Map produced
 By : **S · E · F**

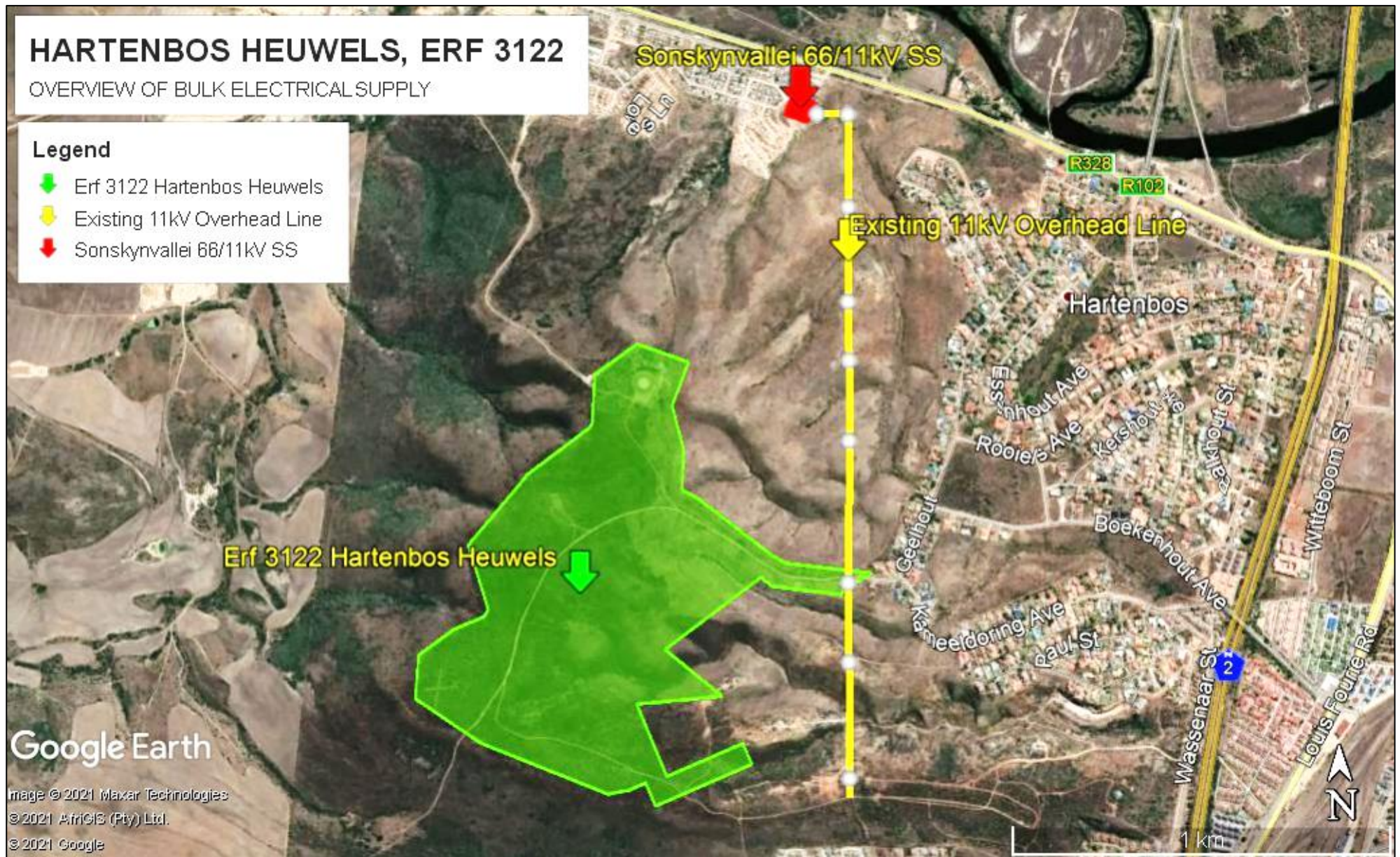
ADDENDUM 2
GOOGLE EARTH OVERVIEW
PROPOSED ELECTRICAL BULK SUPPLY
(30 April 2021)

HARTENBOS HEUWELS, ERF 3122

OVERVIEW OF BULK ELECTRICAL SUPPLY

Legend

-  Erf 3122 Hartenbos Heuwels
-  Existing 11kV Overhead Line
-  Sonskynvallei 66/11kV SS



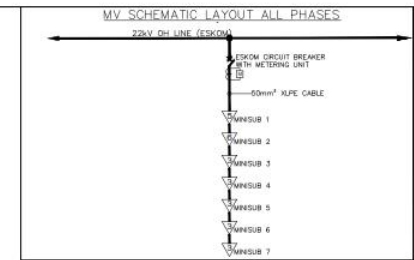
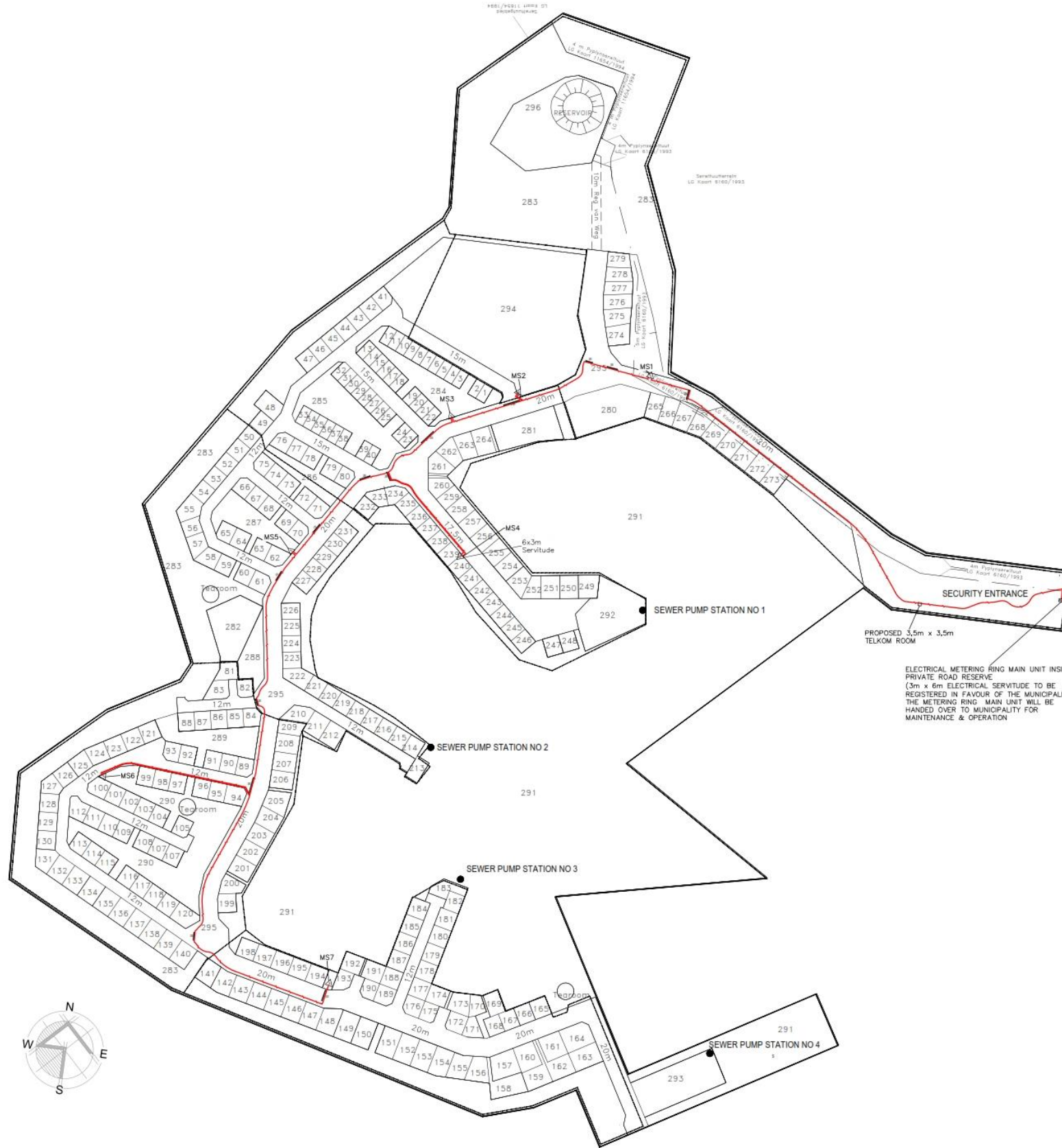
Google Earth

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ADDENDUM 3

DRAWING:

PROPOSED MEDIUM VOLTAGE ELECTRICAL RETICULATION



LEGEND

EXISTING	PLANNED	DESCRIPTION
		RM6 UNIT WITH METERING
		OUTDOOR SUBSTATION (TYPE S1B)
		T1 DISTRIBUTION KIOSK
		T3 DISTRIBUTION KIOSK
		T4 DISTRIBUTION KIOSK
		MINISUBSTATION "X" INDICATES TRANSFORMER CAPACITY ON N.L. 2=200kVA 3= 315kVA 5= 500kVA 6= 630kVA 8= 800kVA
		COMMUNAL SUBSTATION (TYPE S2)
		LV AND MV JOINT
		3 DOOR MAXIMUM DEMAND METERING KIOSK
		LV DISTRIBUTION BOX
		COMBINED LV DISTRIBUTION AND METERING BOX (3/6/9/12 WAY)
		SECTION POINT / OPEN CIRCUIT
		THREE PHASE TRANSFORMER "X" INDICATES TRANSFORMER SIZE
		POLE MOUNTED TRANSFORMER
		3.5m POLE WITH 70W HPS POST TOP LUMINAIRE
		STREETLIGHT POLE WITH 70W / HPS OUTREACH ARMATURE (8.5m MH)
		STREETLIGHT POLE WITH 70W / HPS OUTREACH ARMATURE (8.5m MH) WITH PHOTOCELL CONTROL UNIT
		NEW CABLE SLEEVES ("X" INDICATES NUMBER OF SLEEVES)
		EXISTING CABLE SLEEVES ("X" INDICATES NUMBER OF SLEEVES)
		TRANSFORMER BOUNDARY
		TOWN BOUNDARY
		MANHOLE

CABLE LEGEND

R, W, B RED, WHITE & BLUE PHASES
 NOTE: ALL EXISTING ELECTRICAL CABLES SHOULD BE INDICATED WITH SOLID LINE AND ALL PROPOSED ELECTRICAL CABLES SHOULD BE INDICATED BY MEANS OF BROKEN LINE

SYMBOL	DESCRIPTION
	11kV CABLE 3-Core/70mm² PLCSWA Cu CONDUCTOR (RED)
	STREETLIGHT CABLE (16mm² Cu/3-Core LV CABLE)
	16mm² Cu/3-Core LV CABLE (HOUSE CONNECTIONS)
	150mm² Cu/4-Core LV CABLE + 70mm² BCEW
	240mm² Al /4-Core LV CABLE + 70mm² BCEW
	PHOTOCELL CABLE (1.5mm² Cu/3-Core)
	11kV MV OVERHEAD LINE
	LV OVERHEAD LINE

CONNECTION:
POLE WITH 11kV FUSED GANG LINK

SERVITUDE (2m WIDE MEASURED SIDE TO SIDE) FOR THE CABLE ROUTE, FROM OVERHEAD LINE TO METERING RING MAIN UNIT, IN FAVOUR OF MUNICIPALITY. THIS CABLE WILL BE HANDED OVER TO MUNICIPALITY FOR MAINTENANCE & OPERATION

PROPOSED 3.5m x 3.5m TELKOM ROOM

ELECTRICAL METERING RING MAIN UNIT INSIDE PRIVATE ROAD RESERVE (3m x 6m ELECTRICAL SERVITUDE TO BE REGISTERED IN FAVOUR OF THE MUNICIPALITY) THE METERING RING MAIN UNIT WILL BE HANDED OVER TO MUNICIPALITY FOR MAINTENANCE & OPERATION

Buro Tech CC
 Consulting Engineers
 Roodegedde Ingenieurs.
 TEL: (012) 542 1010
 E-mail: buretech@burotech.co.za
 www.burotech.co.za

DATE	DESIGNED	DRAWN
2021/05/06	R.G.	R.B.
DRAWING NO:	REVISION	
PG95 - 01	F	

PRELIMINARY NOT FOR CONSTRUCTION

NO	DATE	DRAWN	AMENDMENT	REQUESTED	CHECKED	SIGNATURE
A	2018/06/04	D.C.J.	FIRST ISSUE FOR APPROVAL	R.G.	N.v.w.	
B	2020/04/07	R.B.	UPDATED METERING UNIT DESCRIPTION	N.v.w.	N.v.w.	
C	2020/07/27	D.C.J.	UPDATED TO NEW LAYOUT AND REVISED MV NETWORK	R.G.	N.v.w.	
D	2020/11/30	R.B.	UPDATED TO NEW LAYOUT & UPDATED MINISUB POSITIONS	R.G.	N.v.w.	
E	2021/04/29	R.B.	UPDATED TO REV 7 ARCH DRAWING	R.G.	N.v.w.	
F	2021/09/06	R.B.	UPDATED NOTES	R.G.	-	
-	-	-	-	-	-	
-	-	-	-	-	-	



VERIFICATION BY ELECTRICITY INFRASTRUCTURE PLANNING AND DESIGN: 400V/11kV/132kV

VERIFICATION OF DESIGN BY ENERGY AND ELECTRICITY DEVELOPMENT DIVISION

ELECTRICAL DEVELOPMENT

DATE: SIGNATURE:

ENERGY AND ELECTRICITY DEPARTMENT
 TEL: 044 606 5082



APPROVED BY:

FOR TSHWANE ENERGY & ELECTRICITY DEVELOPMENT DIVISION

PROJECT/DRAWING TITLE	HARTENBOS HILLS GARDEN ESTATE ELECTRICAL MV RETICULATION PLAN			
PROJECT STATUS	DESIGN	ACTUAL PAPER SIZE	APPROVED BY:	DATE OF APPROVAL:
SHEET 1 of 1	SCALE: 1:2500	A1	N.v.w.	



ADDENDUM 4

MOSSEL BAY LOCAL MUNICIPALITY: BULK CONTRIBUTIONS

Extract from Mossal Bay Tarrifs 2020/2021 – Page 27

TARIFFS 2020/2021

2019/20 (Inc VAT)

2020/21 (Inc VAT)

12 DEVELOPMENT & PLANNING (continues)

12.3 Development contributions

The by-law on Municipal Land Use Planning and relevant Council Policies, directives and legislation are to be used as guidelines when cost for development contributions are determined.

12.3.1 Unit costs used to determine development contribution charges:

Service	Units		
Water	R/kl	R 22,940	R24,000.00
Sanitation	R/kl	R 31,370	R33,000.00
Roads	R/VKT	R0.75	R0.80
Stormwater	R/c.HA	R 84,230	R88,000.00
Solid Waste	R/kg/day	R440.00	R460.00
Electricity: Connection at 66/11kV substation	R/kVA	R2,760.00	R2,900.00
Electricity: Connection at Erf boundary	R/kVA	R4,850.00	R5,100.00

In all other cases where network costs are not available the guidelines stipulated in NRS 069 shall be used to determine the development contribution charges payable.

ADDENDUM 5
SUMMARY OF COST ESTIMATE

**SUMMARY ELECTRICAL RETICULATION AND SECURITY SERVICES
COST ESTIMATE - ALL PHASES**

Rev 12
2021-05-06

						TOTAL, ALL PHASES		
Item	Description			Costs Total (R)	Costs per Unit Total (R)		% of Total	
					520			
1	EXTERNAL MV ELECTRICAL RETICULATION							
1.1	Installation excl. Bulk Contributions (To be Finalised)		Yes	R621 000	R 1 194		2%	
1.2	Bulk Services Contributions <i>See Note 02</i>	2089 kVA	Yes	R9 262 700	R 17 813		27%	
1.3	Partial Services as per Agreement (Negative amount is credit)		No	R0	R 0		0.0%	
				R9 883 700	R 19 007		29%	
2	INTERNAL ELECTRICAL RETICULATION							
2.1	Internal MV Reticulation		Yes	R5 856 000	R11 262		17%	
2.2	Internal LV Reticulation (Apartments & Ancillary Bldgs.)	241	Yes	R1 535 500	R6 371		4%	
2.3	Internal LV Reticulation (Including street lighting & metering)	279	Yes	R5 747 400	R20 600		17%	
2.4	Standby Generator & Reticulation		Yes	R660 000	R1 269		2%	
3	ACCESS CONTROL & ELECTRICAL FENCING	<i>See Note 4</i>	Yes	R1 823 200	R3 506		5%	
4	INTERCOM (TELEPHONE -TELKOM) CONTROL		Yes	R50 000	R96		0%	
5	CCTV & PERIMETER LIGHTING	<i>See Note 5</i>	Yes	R2 721 800	R5 234		8%	
				R18 393 900	R 35 373		53%	
	Contingency	10.0%		R1 901 490	R3 657		5%	
				R30 179 090	R 58 037		87%	
6	PROFESSIONAL FEES							
6.1a	Reticulation Services <i>See Note 3</i>			R1 881 600				
6.1b	Electronic Services			R826 600				
6.1c	Building Services			R0				
6.2a	Total Professional Fees	excl Discount		R2 258 200				
6.2b	Total Professional Fees	Discount	10.0%	-R225 820				
6.2c	Total Professional Fees	incl Discount		R2 437 380				
6.3	Preliminary capacity and availability investigation			R0				
6.4	Electrical Engineering Services Report			R79 600				
6.5	Access Control & Security Report			R10 400				
6.6	Telecoms & Data Infrastructure Report			R20 800				
6.7	Assistance with Telecoms & Data Contracts			R156 000				
6.8	Disbursements			R480 000				
6.9	Safety Officer			R299 000				
6.10	Site Supervision Staff			R1 012 000				
6.11	Total of Professional Fees & Costs			R4 495 180	R8 645		13%	
	TOTAL ESTIMATED COSTS BEFORE ESCALATION (VAT EXC.)			R34 674 270	R 66 681		100%	
7	ESCALATION							
	Allowance	0.0%		R0	R 0		0%	
8	TOTAL ESTIMATED COSTS AFTER ESCALATION (VAT EXC.)			R34 674 270	R 66 681		100%	
	SAY			R34 675 000	R 66 683			

Notes:

1	All amounts exclude VAT and escalation
2	As per Mossel Bay 2020/21 Tariff Structure
3	Cost estimates exclude internal apartment/block electrical (lights/plugs etc), only main supplies to blocks allowed for
4	Access Control & Electrical Fencing
	Allowance MorphoWave + Boom Gates, Pedestrians Gates etc + Electric Perimeter Fencing
5	CCTV & Perimeter Lighting
	Allowance for CCTV at Guard House/Main Entrance & perimeter fence (incl perimeter lighting).
6	Solar PV excluded. Modelling and pricing will be dealt with separately

ADDENDUM 6

MOSSEL BAY LOCAL MUNICIPALITY: CORRESPONDENCE

From: Harmse, Petrus [mailto:pharmse@Mossel Bay.gov.za]

Sent: 30 April 2021 07:24

To: Ralph Gordon <ralphg@burotech.co.za>

Cc: Olivier, Morné <molivier@Mossel Bay.gov.za>; Van Zyl, Ryan <rvanzyl@Mossel Bay.gov.za>; Nico Van Wyk <nicovw@burotech.co.za>

Subject: RE: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good day Ralph

I hereby confirm that the capacity for the development of Erf 3122 is still available as requested.

Kind regards



Petrus Harmse

Manager (Planning & Customer Services - Electrical)

Mossel Bay Municipality

101 Marsh Street, Mossel Bay

Email: pharmse@Mossel Bay.gov.za

Web: www.Mossel Bay.gov.za

Tel: +27 44 606-5084

Anti-Fraud Hotline: 0800 333 466

Print this email only if necessary. Go Green / Druk hierdie e-pos net as dit noodsaaklik is. Gaan Groen.

From: Ralph Gordon <ralphg@burotech.co.za>

Sent: Thursday, April 29, 2021 1:46 PM

To: Harmse, Petrus <pharmse@Mossel Bay.gov.za>

Cc: Olivier, Morné <molivier@Mossel Bay.gov.za>; Van Zyl, Ryan <rvanzyl@Mossel Bay.gov.za>; Nico Van Wyk <nicovw@burotech.co.za>

Subject: RE: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good afternoon Petrus,

With reference to the below, can you please confirm whether the status quo regarding availability of capacity is still applicable
Many thanks.

Best Regards,



Ralph Gordon

Buro Tech Consulting Engineers

Tel: +27 (012) 542 1010

Cell: 082 600 2537

Ralphg@burotech.co.za

www.burotech.co.za

From: Harmse, Petrus [<mailto:pharmse@Mossel Bay.gov.za>]
Sent: 08 July 2020 09:41
To: Ralph Gordon <ralphg@burotech.co.za>
Cc: Olivier, Morné <molivier@Mossel Bay.gov.za>; Van Zyl, Ryan <rvanzyl@Mossel Bay.gov.za>; Nico Van Wyk <nicovw@burotech.co.za>
Subject: RE: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good morning Ralph

Your e-mail dated 3 July 2020 refers.

All is still acceptable as stated in your e-mail.

Kind regards



Petrus Harmse

Manager (Planning & Customer Services - Electrical)

Mossel Bay Municipality

101 Marsh Street, Mossel Bay

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Print this email only if necessary. Go Green / Druk hierdie e-pos net as dit noodsaaklik is. Gaan Groen.

From: Ralph Gordon <ralphg@burotech.co.za>
Sent: Friday, July 3, 2020 10:44 AM
To: Harmse, Petrus <pharmse@Mossel Bay.gov.za>
Cc: Geldenhuys, Charles <cgeldenhuys@Mossel Bay.gov.za>; Van Zyl, Ryan <rvanzyl@Mossel Bay.gov.za>; Nico Van Wyk <nicovw@burotech.co.za>
Subject: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good morning Petrus,

Against the backdrop of our correspondence of 2018 (*refer further below for your convenience*), we would like to re-confirm the status quo for this project with the municipality as follows:

1. **BULK ELECTRICAL CONNECTION** – also refer to attached.

Will be from the existing 11kV Overhead line from the Sonskynvallei 66/11kV substation configured as follows,

- An underground 11kV cable be connected to the overhead line via a set of surge arrestors and a fused gang-link.
- A ground mounted RM6 (SF6 gas insulated circuit breaker) Schneider type metering unit be installed adjacent to the point of connection
- The metering point will demarcate the point of separation of responsibility from the municipality to the HOA.

➤ Please confirm this to still be acceptable.

2. **LOAD ESTIMATE** – as per Municipal Guidelines for Unit Loadings

The **total demand** is calculated to be **2 338 kVA** (*see below for more details*)

PROPOSED ZONING	LAND USE COMPONENTS	Units	FAR	DEVELOPABLE FLOOR AREA (m ²)	kVA/unit or VA/m ²	Unit	Total Load (kVA)
350m ²	Type A	130		—	4.50	kVA[ADMD]	585.0 kVA
350m ²	Type B	6		—	4.50	kVA[ADMD]	27.0 kVA
400m ²	Type C	29		—	4.50	kVA[ADMD]	130.5 kVA
500m ²	Type D	23		—	4.50	kVA[ADMD]	103.5 kVA
(350-550m ²)	Type E	28		—	4.50	kVA[ADMD]	126.0 kVA
V1: Main Admin Bldg	Various, Ref Legend			1 500.00 m ²	90.00	VA/m ²	135.0 kVA
V2: Health Care Units	Consulting Rooms etc			188.00 m ²	60.00	VA/m ²	12.0 kVA
V2: Health Care Units	Frail Care units	34		—	2.70	kVA[ADMD]	92.0 kVA
V3: Club House	Pool, Gym			294.00 m ²	80.00	VA/m ²	24.0 kVA
V4-V8: Village Apartment	Flats	147		—	2.70	kVA[ADMD]	401.0 kVA
101-118: Terrace Apartments		240		—	2.70	kVA[ADMD]	656.0 kVA
Restaurant				224.00 m ²	90.00	VA/m ²	21.0 kVA
Pump Station	Allowance			—	25	kVA	25.0 kVA
		637					2 338 kVA

➤ Please confirm availability of supply on the 11kV overhead line from Sonskyn 66/11kV substation.

BULK CONTRIBUTIONS

Bulk Contributions will be payable in terms of Item 12.3.1, specifically “Electricity: Connection at Erf boundary” 2020/2021

12.3.1 Unit costs used to determine development contribution charges.

Service	Units		
Water	R/l	R 22,940	R24,000.00
Sanitation	R/l	R 31,370	R33,000.00
Roads	R/VKT	R0.75	R0.80
Stormwater	R/c HA	R 84,230	R88,000.00
Solid Waste	R/kg/day	R440.00	R460.00
Electricity: Connection at 66/11kV substation	R/kVA	R2,760.00	R2,900.00
Electricity: Connection at Erf boundary	R/kVA	R4,850.00	R5,100.00

I also include the latest SDP herewith for your reference.

I look forward to your comment on the above aspects relating to the project.

Best Regards,



Ralph Gordon
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From: Harmse, Petrus [<mailto:pharmse@Mossel Bay.gov.za>]
Sent: 23 February 2018 08:39
To: Nico van Wyk <Nicovw@burotech.co.za>
Cc: Geldenhuys, Charles <cgeldenhuys@Mossel Bay.gov.za>; Van Zyl, Ryan <rvanzyl@Mossel Bay.gov.za>
Subject: RE: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good day Nico

I hereby approve the proposed point of connection as described in your e-mail.
You must please submit an Electrical Engineering Report to the Director Technical Services for approval.
MV Cable - Table 18 (11/11kV).
Bulk contribution charges of R4 343.93/kVA (VAT includes) will be applicable.

Kind regards



Petrus Harmse

Manager (Planning & Customer Services - Electrical)
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From: Nico van Wyk [<mailto:Nicovw@burotech.co.za>]
Sent: 20 February 2018 04:24 PM
To: Harmse, Petrus <pharmse@Mossel Bay.gov.za>
Cc: Geldenhuys, Charles <cgeldenhuys@Mossel Bay.gov.za>; Naidoo, Dick <dnaidoo@Mossel Bay.gov.za>;
Kotie Kruger (Dr.) <ajkruger@vodamail.co.za> <ajkruger@vodamail.co.za>; Ralph Gordon
<Ralphg@burotech.co.za>
Subject: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good day Petrus,

Our previous correspondence and the telephonic discussions with Mr Charles Geldenhuys refer.
The development is going ahead and the proposed layout is attached for your information.

The electrical load estimate is as follows:

ERF 3122 HARTENBOS HEUWELS - LOAD ESTIMATE		Rev 05	2018-02-19	
PROPOSED ZONING	Units	kVA/unit or VA/m ²	Unit	Total Load (kVA)
500m ² to 700m ² Erven	187	5	kVA[ADMD]	935 kVA
200m ² Erven	162	4.5	kVA[ADMD]	729 kVA
Sect Title @ MED Centre (600m ²)	72	3	kVA[ADMD]	216 kVA
Clubhouse/HOA & Sports Facilities	0	100	kVA	100 kVA
Gate Houses	0	10	kVA	10 kVA
Reservoir	0	10	kVA	10 kVA
TOTAL DE MAND				2 000 kVA

It is confirmed that there is adequate capacity in Sonskynvallei substation as per previous correspondence. Mr. Charles Geldenhuys has also confirmed during August 2017 that the development can be fed from the overhead line that traverses the development. The proposed point of connection is also indicated on the attached layout.

The following configuration is proposed for connection to the overhead line:

- An underground 11kV cable be connected to the overhead line via a set of surge arrestors and a fused gang-link.
- A ground mounted RM6 (SF6 gas insulated circuit breaker) Schneider type metering unit be installed adjacent to the point of connection
- The metering point will demarcate the point of separation of responsibility from the municipality to the HOA.

The municipality is requested to comment and/or approve the proposed point of connection as described above.

Kindly also confirm if the bulk contribution charges of R3600/kVA is still applicable.

Thank you and kind regards

Nico van Wyk

Buro Tech Consulting Engineers

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100kW Solar PV Installation

Completed March 2016

From: Nico van Wyk
Sent: 23 May 2017 06:41 PM
To: 'Petrus Harmse - Mossel Bay Electrical Planning (pharmse@Mossel Bay.gov.za)' <pharmse@Mossel Bay.gov.za>
Cc: Charles Geldenhuys - Mossel Bay Electrical (cgeldenhuys@Mossel Bay.gov.za) <cgeldenhuys@Mossel Bay.gov.za>; Dick Naidoo (dnaidoo@Mossel Bay.gov.za) <dnaidoo@Mossel Bay.gov.za>; Kotie Kruger (Dr.) (ajkruger@vodamail.co.za) <ajkruger@vodamail.co.za>; 'Schalk Cilliers' <SchalkC@atkv.org.za>
Subject: HARTENBOS HEUWELS Erf 3122 - NEW DEVELOPMENT - ELECTRICAL BULK SUPPLY

Good day Petrus,

Thank you for the opportunity to discuss the proposed development of Hartenbos Heuwels on Erf 3122 today. The ATKV is proceeding as developer with the development on the property as indicated on the map/layout attached. The previous layout is attached for information only – the new layout will be forwarded when available.

The notified maximum demand cannot yet be determined – an indication is 2000kVA. The development will be fed from Sonskynvallei substation as discussed. Kindly forward the drawing of the existing cable routes to be followed to the development. PDF will be adequate at this stage.

Further details will be provided when available. A visit will be paid to your office with my next visit to the project.

Thank you for your kind assistance.
Kind regards

Nico van Wyk

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