

# Appendix A: Maps




EIA for the proposed  
100MWp Photovoltaic Plant  
at the Tubatse Ferrochrome  
Smelter, Steelport

LOCALITY

Legend

-  Proposed Development Sites
-  Proposed Solar Arrays
-  Proposed Power Line Corridors
-  Proposed Site Access Roads
-  Proposed Underground Cables
-  Proposed Site Office
-  Proposed Storage Yard
-  Proposed Box Transformers and Inverters
-  Proposed Culverted Watercourses
-  Boreholes
-  Existing Eskom Power Lines

Roads

- Class
-  Provincial
  -  Secondary tar
  -  Existing Site Access Roads
  -  Rivers
  -  Watercourses



Scale 1:14,000

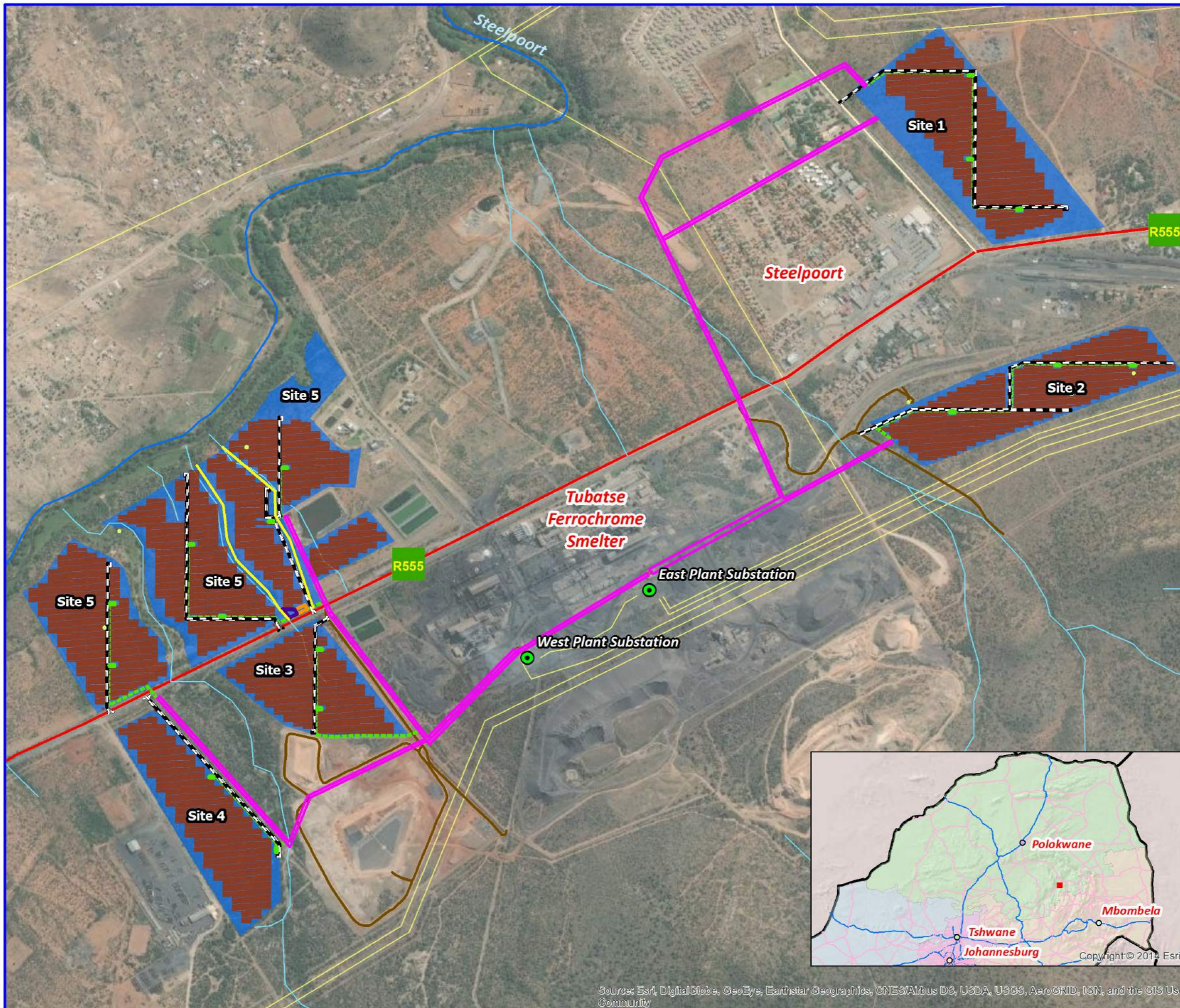
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Date: 22 September 2021  
Created by: Paul da Cruz  
RHDHV Ref: MD5462

Coordinate System: Custom  
Datum: WGS 1984  
Units: Degree

Data Sources:  
ESRI  
MDB  
DTI

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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**ENVIRONMENTAL  
SENSITIVITIES - SITE 1**



**Legend**

-  Proposed Development Sites
-  Proposed Power Line Corridors
-  Proposed Box Transformers and Inverters
-  Proposed Site Access Roads
-  Proposed Storage Yard
-  Proposed Site Office
-  Proposed Underground Cables

**Roads**

- Class**
-  Provincial
  -  Secondary tar

Scale 1:4,000



Date: 20 October 2021  
Created by: Paul da Cruz  
RHDHV Ref: MD5462



Coordinate System: Custom  
Datum: WGS 1984  
Units: Degree

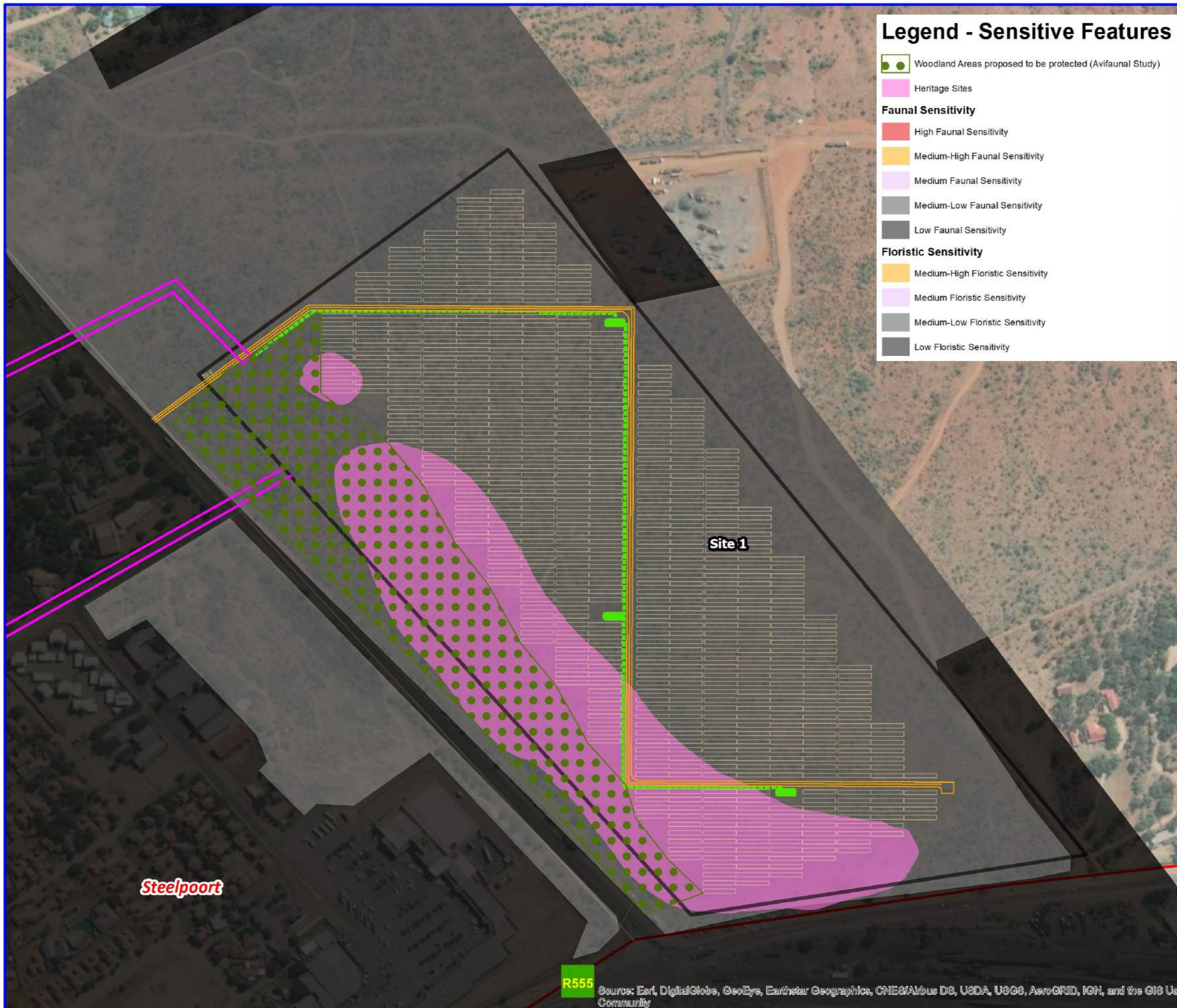
Data Sources:  
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**Legend - Sensitive Features**

-  Woodland Areas proposed to be protected (Avifaunal Study)
  -  Heritage Sites
- Faunal Sensitivity**
-  High Faunal Sensitivity
  -  Medium-High Faunal Sensitivity
  -  Medium Faunal Sensitivity
  -  Medium-Low Faunal Sensitivity
  -  Low Faunal Sensitivity
- Floristic Sensitivity**
-  Medium-High Floristic Sensitivity
  -  Medium Floristic Sensitivity
  -  Medium-Low Floristic Sensitivity
  -  Low Floristic Sensitivity

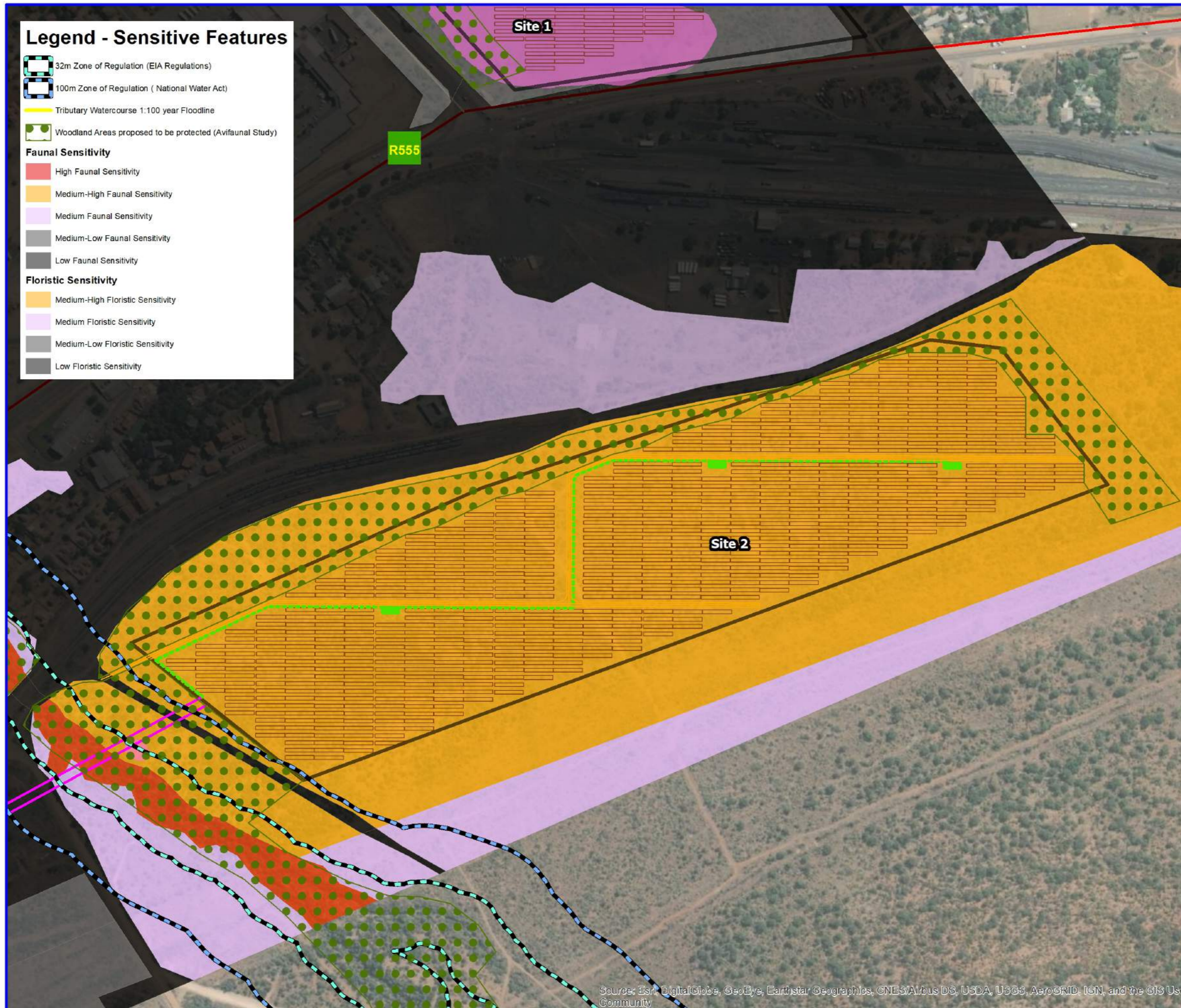


**ENVIRONMENTAL  
SENSITIVITIES - SITE 2**



**Legend - Sensitive Features**



-  32m Zone of Regulation (EIA Regulations)
-  100m Zone of Regulation ( National Water Act)
-  Tributary Watercourse 1:100 year Floodline
-  Woodland Areas proposed to be protected (Avifaunal Study)
- Faunal Sensitivity**
-  High Faunal Sensitivity
-  Medium-High Faunal Sensitivity
-  Medium Faunal Sensitivity
-  Medium-Low Faunal Sensitivity
-  Low Faunal Sensitivity
- Floristic Sensitivity**
-  Medium-High Floristic Sensitivity
-  Medium Floristic Sensitivity
-  Medium-Low Floristic Sensitivity
-  Low Floristic Sensitivity

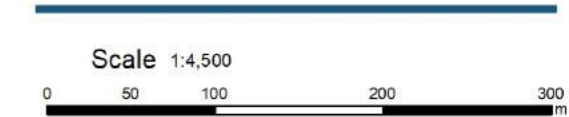


**Legend**

-  Proposed Development Sites
-  Proposed Power Line Corridors
-  Proposed Box Transformers and Inverters
-  Proposed Site Access Roads
-  Proposed Underground Cables

**Roads**

- Class**
-  Provincial
  -  Secondary tar



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Smelter, Steelport

**ENVIRONMENTAL  
SENSITIVITIES - SITE 3**



**Legend - Sensitive Features**

- 32m Zone of Regulation (EIA Regulations)
- 100m Zone of Regulation ( National Water Act)
- Tributary Watercourse 1:100 year Floodline
- Heritage Sites
- Woodland Areas proposed to be protected (Avifaunal Study)
- Priority sections of proposed power lines (Avifaunal Study)
- Faunal Sensitivity**
- High Faunal Sensitivity
- Medium-High Faunal Sensitivity
- Medium Faunal Sensitivity
- Medium-Low Faunal Sensitivity
- Low Faunal Sensitivity
- Floristic Sensitivity**
- Medium-High Floristic Sensitivity
- Medium Floristic Sensitivity
- Medium-Low Floristic Sensitivity
- Low Floristic Sensitivity

**Legend**

- Proposed Development Sites
- Proposed Power Line Corridors
- Proposed Box Transformers and Inverters
- Proposed Site Access Roads
- Proposed Storage Yard
- Proposed Site Office
- Proposed Underground Cables

**Roads**

**Class**

- Provincial
- Secondary tar

Scale 1:3,000



Date: 20 October 2021  
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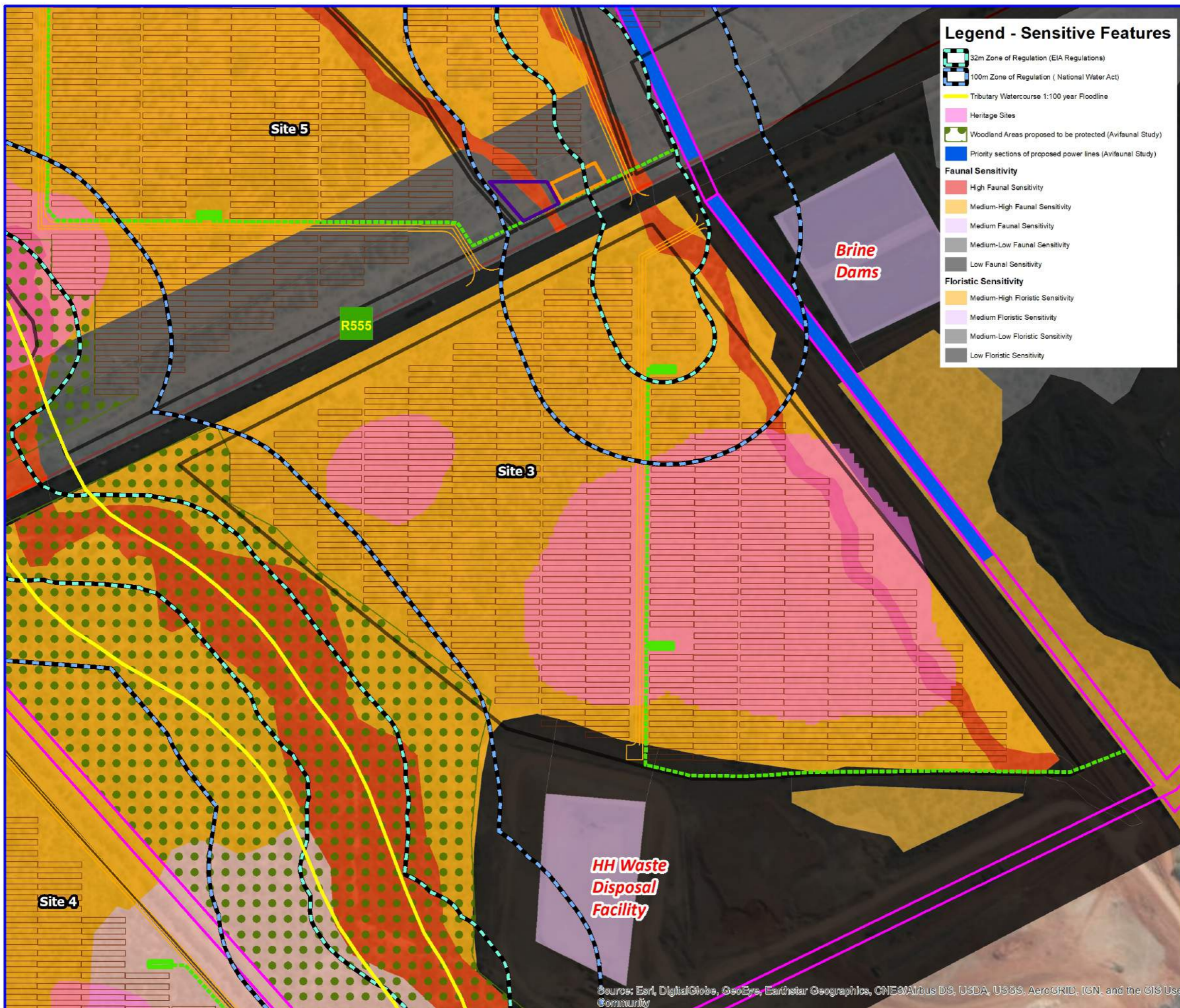
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Units: Degree

Data Sources:  
ESRI  
MDB  
DTI

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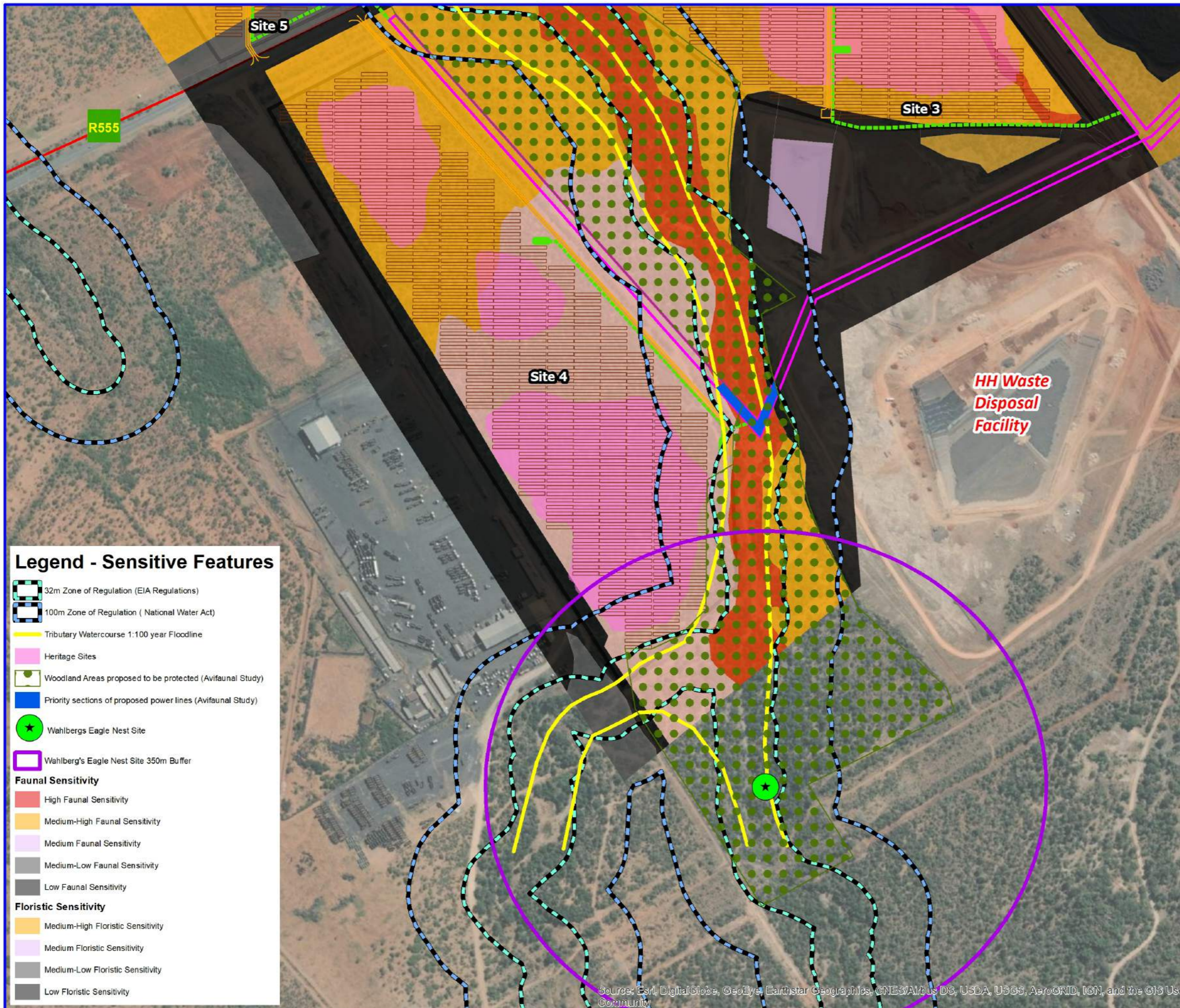


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



EIA for the proposed  
100MWp Photovoltaic Plant  
at the Tubatse Ferrochrome  
Smelter, Steelpoort

**ENVIRONMENTAL  
SENSITIVITIES - SITE 4**



**Legend - Sensitive Features**

- 32m Zone of Regulation (EIA Regulations)
- 100m Zone of Regulation ( National Water Act)
- Tributary Watercourse 1:100 year Floodline
- Heritage Sites
- Woodland Areas proposed to be protected (Avifaunal Study)
- Priority sections of proposed power lines (Avifaunal Study)
- Wahlbergs Eagle Nest Site
- Wahlbergs Eagle Nest Site 350m Buffer
- Faunal Sensitivity**
- High Faunal Sensitivity
- Medium-High Faunal Sensitivity
- Medium Faunal Sensitivity
- Medium-Low Faunal Sensitivity
- Low Faunal Sensitivity
- Floristic Sensitivity**
- Medium-High Floristic Sensitivity
- Medium Floristic Sensitivity
- Medium-Low Floristic Sensitivity
- Low Floristic Sensitivity

**Legend**

- Proposed Development Sites
- Proposed Power Line Corridors
- Proposed Box Transformers and Inverters
- Proposed Site Access Roads
- Proposed Underground Cables

**Roads**

- Class**
- Provincial
  - Secondary tar

Scale 1:5,000



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RHDHV Ref: MD5462

Coordinate System: Custom  
Datum: WGS 1984  
Units: Degree

Data Sources:  
ESRI  
MDB  
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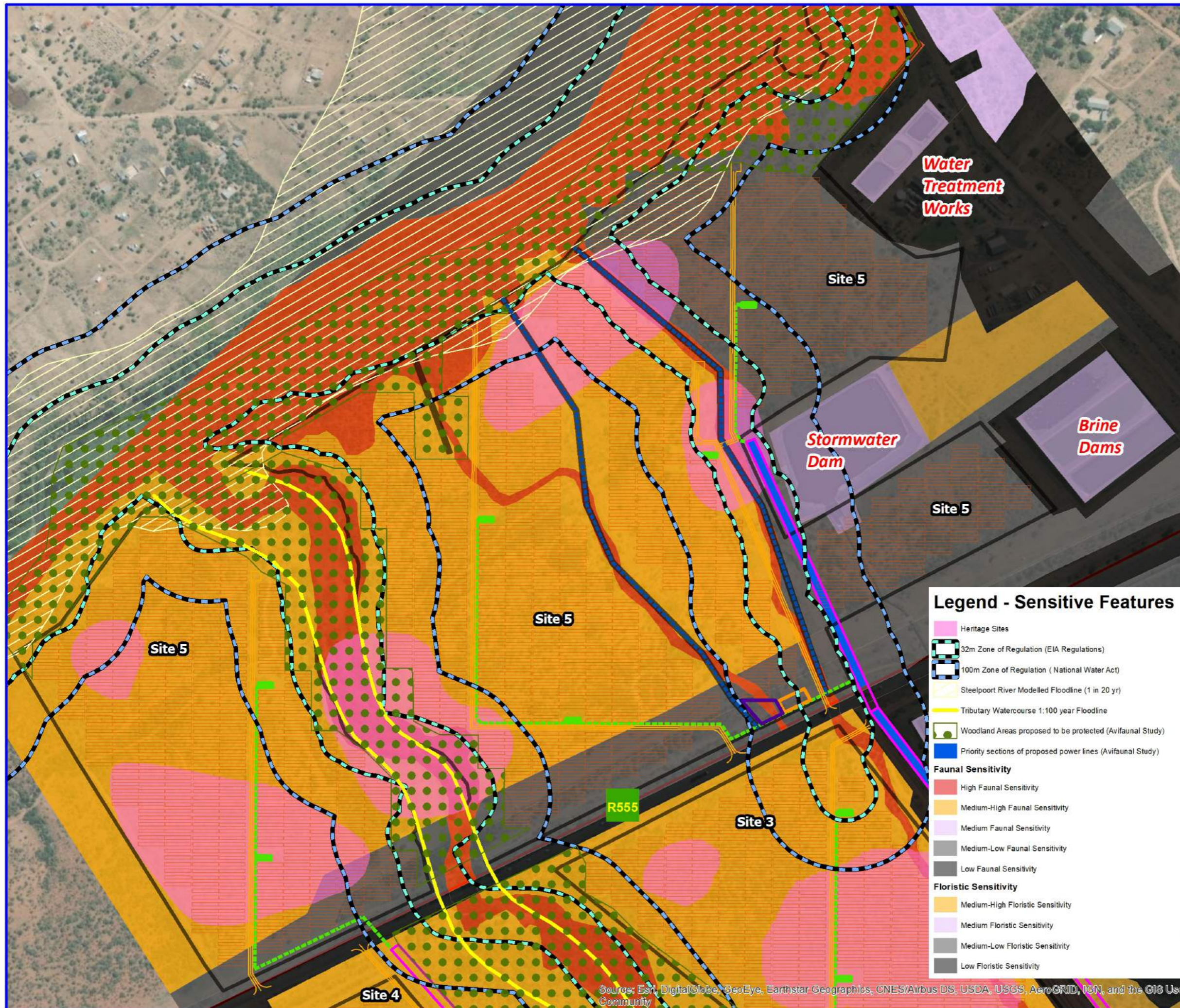
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EIA for the proposed  
100MWp Photovoltaic Plant  
at the Tubatse Ferrochrome  
Smelter, Steelpoort

**ENVIRONMENTAL  
SENSITIVITIES - SITE 5**



**Legend**

- Proposed Development Sites
- Proposed Power Line Corridors
- Proposed Box Transformers and Inverters
- Proposed Site Access Roads
- Proposed Storage Yard
- Proposed Site Office
- Proposed Underground Cables
- Proposed Culverted Watercourses

**Roads**

- Class**
- Provincial
  - Secondary tar

**Legend - Sensitive Features**

- Heritage Sites
  - 32m Zone of Regulation (EIA Regulations)
  - 100m Zone of Regulation (National Water Act)
  - Steelpoort River Modelled Floodline (1 in 20 yr)
  - Tributary Watercourse 1:100 year Floodline
  - Woodland Areas proposed to be protected (Avifaunal Study)
  - Priority sections of proposed power lines (Avifaunal Study)
- Faunal Sensitivity**
- High Faunal Sensitivity
  - Medium-High Faunal Sensitivity
  - Medium Faunal Sensitivity
  - Medium-Low Faunal Sensitivity
  - Low Faunal Sensitivity
- Floristic Sensitivity**
- Medium-High Floristic Sensitivity
  - Medium Floristic Sensitivity
  - Medium-Low Floristic Sensitivity
  - Low Floristic Sensitivity

Scale 1:5,000



Date: 20 October 2021  
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Site 1	
Component	Co-ordinates
Site	A: 24°43'31.05"S; 30°12'17.84"E; B: 24°43'23.35"S; 30°12'28.72"E C: 24°43'47.83"S; 30°12'49.16"E; D: 24°43'50.05"S; 30°12'35.48"E
Access Road	A (Start): 24°43'32.50"S; 30°12'16.37"E B (Bend Point): 24°43'28.55"S; 30°12'21.86"E C: 24°43'28.57"S; 30°12'27.30"E D (Bend Point): 24°43'28.61"S; 30°12'33.19"E E (middle): 24°43'36.84"S; 30°12'33.07"E F: 24°43'45.28"S; 30°12'33.13"E G (End): 24°43'45.41"S; 30°12'44.08"E
Underground Cable	A (start): 24°43'30.27"S; 30°12'19.86"E B: 24°43'28.75"S; 30°12'21.88"E C: 24°43'28.78"S; 30°12'27.27"E D (Bend Point): 24°43'28.93"S; 30°12'32.68"E E (middle): 24°43'35.95"S; 30°12'33.01"E F (Bend Point): 24°43'45.41"S; 30°12'32.90"E G (end): 24°43'45.47"S; 30°12'38.42"E



Site 2	
Component	Co-ordinates
Site	A: 24°44'11.91"S; 30°12'20.15"E; B: 24°44'17.28"S; 30°12'26.92"E C: 24°43'59.76"S; 30°12'51.39"E; D: 24°44'0.40"S; 30°12'54.72"E E: 24°44'5.58"S; 30°12'58.70"E
Access Road	A (Start): 24°44'13.30"S; 30°12'18.97"E B (Bend Point): 24°44'10.22"S; 30°12'25.48"E C: 24°44'10.30"S; 30°12'32.04"E D (Bend Point): 24°44'10.23"S; 30°12'37.33"E E (Bend Point): 24°44'5.28"S; 30°12'37.43"E F (middle) (Bend Point): 24°44'4.43"S; 30°12'39.13"E G: 24°44'4.43"S; 30°12'45.84"E H (End 1): 24°44'4.49"S; 30°12'57.48"E I (End 2): 24°44'10.30"S; 30°12'44.98"E
Underground Cable	A (start): 24°44'13.98"S; 30°12'22.93"E B (Bend Point): 24°44'12.50"S; 30°12'21.10"E C: 24°44'11.42"S; 30°12'23.41"E D (middle) (Bend Point): 24°44'10.41"S; 30°12'25.52"E E: 24°44'10.43"S; 30°12'30.12"E F (Bend Point): 24°44'10.40"S; 30°12'37.59"E G (Bend Point): 24°44'5.27"S; 30°12'37.67"E H (Bend Point): 24°44'4.58"S; 30°12'39.15"E I: 24°44'4.62"S; 30°12'44.09"E J (end): 24°44'4.68"S; 30°12'52.31"E

Site 3	
Component	Co-ordinates
Site	A: 24°44'35.99"S; 30°11'12.17"E; B: 24°44'50.39"S; 30°11'23.56"E C: 24°44'50.64"S; 30°11'13.08"E; D: 24°44'49.25"S; 30°11'8.31"E E: 24°44'42.34"S; 30°10'59.74"E
Access Road	A (Start): 24°44'36.02"S; 30°11'13.45"E B (Bend Point): 24°44'36.91"S; 30°11'11.92"E C: 24°44'41.83"S; 30°11'11.87"E D (middle): 24°44'45.85"S; 30°11'11.86"E E (End): 24°44'49.95"S; 30°11'11.87"E
Underground Cables	A (start): 24°44'49.88"S; 30°11'24.71"E B (Bend Point): 24°44'50.49"S; 30°11'23.19"E C: 24°44'50.46"S; 30°11'17.59"E D (Bend Point): 24°44'50.61"S; 30°11'13.17"E E (middle) (Ben Point): 24°44'50.26"S; 30°11'12.01"E F: 24°44'45.07"S; 30°11'12.02"E G (end): 24°44'39.87"S; 30°11'12.11"E

Site 4	
Component	Co-ordinates
Site	A: 24°45'4.17"S; 30°11'7.55"E; B: 24°45'10.75"S; 30°11'7.77"E C: 24°45'15.09"S; 30°11'2.75"E; D: 24°44'49.91"S; 30°10'47.24"E E: 24°44'46.96"S; 30°10'52.61"E
Access Road	A (Start): 24°44'45.89"S; 30°10'51.17"E B: 24°44'50.44"S; 30°10'55.40"E C (middle): 24°44'55.02"S; 30°10'59.64"E D: 24°45'0.18"S; 30°11'4.23"E E (Bend Point): 24°45'3.68"S; 30°11'7.50"E F (end): 24°45'5.29"S; 30°11'7.45"E
Underground Cable	A (start) (Bend Point): 24°44'55.56"S; 30°10'59.87"E B: 24°44'57.57"S; 30°11'1.70"E C (middle): 24°45'0.67"S; 30°11'4.41"E D (Bend Point): 24°45'3.82"S; 30°11'7.21"E E (end): 24°45'3.47"S; 30°11'8.69"E

Site 5	
Component	Co-ordinates
Site	A: 24°44'32.78"S; 30°10'35.88"E; B: 24°44'31.46"S; 30°10'37.95"E C: 24°44'26.55"S; 30°10'41.51"E; D: 24°44'26.10"S; 30°10'42.34"E E: 24°44'24.47"S; 30°10'45.21"E; F: 24°44'19.56"S; 30°10'53.38"E G: 24°44'17.18"S; 30°10'57.29"E; H: 24°44'15.37"S; 30°11'0.17"E I: 24°44'14.94"S; 30°11'0.51"E; J: 24°44'11.19"S; 30°11'4.38"E K: 24°44'9.63"S; 30°11'5.30"E; L: 24°44'8.99"S; 30°11'5.94"E M: 24°44'8.06"S; 30°11'6.34"E; N: 24°44'7.38"S; 30°11'7.32"E O: 24°44'5.72"S; 30°11'9.58"E; P: 24°44'6.44"S; 30°11'9.38"E Q: 24°44'7.18"S; 30°11'9.92"E R: 24°44'7.36"S; 30°11'10.43"E S: 24°44'7.34"S; 30°11'11.02"E T: 24°44'7.15"S; 30°11'11.33"E U: 24°44'6.44"S; 30°11'11.68"E; V: 24°44'6.23"S; 30°11'11.40"E W: 24°44'5.72"S; 30°11'11.31"E; X: 24°44'5.25"S; 30°11'10.88"E Y: 24°44'3.80"S; 30°11'10.57"E; Z: 24°44'2.32"S; 30°11'10.74"E AA: 24°44'1.18"S; 30°11'11.76"E; AB: 24°44'0.47"S; 30°11'12.00"E AC: 24°44'6.00"S; 30°11'15.75"E; AD: 24°44'11.29"S; 30°11'11.26"E AE: 24°44'15.35"S; 30°11'15.67"E; AF: 24°44'14.91"S; 30°11'17.61"E AG: 24°44'19.89"S; 30°11'16.86"E; AH: 24°44'19.75"S; 30°11'13.53"E AI: 24°44'23.30"S; 30°11'7.90"E; AJ: 24°44'27.66"S; 30°11'9.82"E AK: 24°44'22.64"S; 30°11'18.41"E; AL: 24°44'26.44"S; 30°11'21.73"E AM: 24°44'31.68"S; 30°11'11.63"E; AN: 24°44'34.13"S; 30°11'12.76"E AO: 24°44'42.03"S; 30°10'56.70"E; AP: 24°44'43.26"S; 30°10'54.29"E AQ: 24°44'47.65"S; 30°10'45.10"E;
Access Road 1	A (Start): 24°44'47.71"S; 30°10'46.66"E B (Bend Point): 24°44'46.86"S; 30°10'46.27"E C: 24°44'41.94"S; 30°10'46.38"E D (middle): 24°44'37.34"S; 30°10'46.33"E E (End): 24°44'29.14"S; 30°10'46.59"E
Access Road 2	A (Start): 24°44'37.34"S; 30°11'7.61"E B: 24°44'36.00"S; 30°11'6.96"E C: 24°44'36.01"S; 30°11'1.89"E D (Bend Point): 24°44'36.10"S; 30°10'56.03"E E (middle): 24°44'30.73"S; 30°10'56.17"E F: 24°44'25.72"S; 30°10'56.19"E G (End): 24°44'18.36"S; 30°10'56.05"E
Access Road 3	A (Start): 24°44'35.13"S; 30°11'11.66"E B: 24°44'30.05"S; 30°11'9.55"E C (middle) (Bend Point): 24°44'23.71"S; 30°11'6.92"E D (Bend Point): 24°44'23.40"S; 30°11'5.98"E E (End 1): 24°44'20.15"S; 30°11'6.01"E F (Bend Point): 24°44'23.35"S; 30°11'7.69"E G: 24°44'17.95"S; 30°11'7.45"E H (end): 24°44'11.31"S; 30°11'7.59"E
Underground Cable 1	A (start) (Bend Point): 24°44'34.26"S; 30°10'46.52"E B: 24°44'38.23"S; 30°10'46.48"E C (middle): 24°44'42.77"S; 30°10'46.45"E D (Bend Point): 24°44'46.63"S; 30°10'46.50"E E (Bend Point): 24°44'44.43"S; 30°10'51.20"E F(end): 24°44'45.82"S; 30°10'52.50"E
Underground Cable 2	A (start) (Bend Point): 24°44'26.91"S; 30°10'56.23"E B: 24°44'30.62"S; 30°10'56.23"E D (middle) (Bend Point): 24°44'35.53"S; 30°10'56.23"E E (Bend Point): 24°44'35.87"S; 30°10'56.45"E F: 24°44'35.88"S; 30°11'0.24"E G: 24°44'35.93"S; 3 30°11'3.11"E H (Bend Point): 24°44'35.93"S; 30°11'7.05"E I (Bend Point): 24°44'36.52"S; 30°11'7.45"E J: 24°44'35.21"S; 30°11'10.24"E K (end): 24°44'33.95"S; 30°11'12.88"E

Underground Cable 3	A (start) (Bend Point): 24°44'17.43"S; 30°11'7.66"E B (middle): 24°44'19.93"S; 30°11'7.62"E C (Bend Point): 24°44'22.92"S; 30°11'7.57"E D (Bend Point): 24°44'23.39"S; 30°11'7.85"E E (end): 24°44'23.46"S; 30°11'8.13"E
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Other Components	
Component	Co-ordinates
Powerlines	A (start) (From Site 1): 24°43'30.41"S; 30°12'19.61"E
	B (Bend Point): 24°43'27.78"S; 30°12'17.11"E
	C: 24°43'32.73"S; 30°12'6.88"E
	D: 24°43'36.48"S; 30°11'59.74"E
	E (Bend Point): 24°43'39.07"S; 30°11'54.44"E
	F (Bend Point): 24°43'44.21"S; 30°11'51.93"E
	G (From Site 1): 24°43'34.36"S; 30°12'21.04"E
	H: 24°43'39.29"S; 30°12'12.03"E
	I: 24°43'43.24"S; 30°12'5.03"E
	J: 24°43'49.39"S; 30°11'54.59"E
	K: 24°43'58.03"S; 30°11'58.60"E
	L: 24°44'9.59"S; 30°12'4.37"E
	M (Bend Point): 24°44'21.13"S; 30°12'9.73"E
	N (From Site 2): 24°44'14.26"S; 30°12'22.91"E
	O (middle): 24°44'30.09"S; 30°11'53.31"E
	P: 24°44'30.58"S; 30°11'52.77"E
	Q (Bend Point): 24°44'40.05"S; 30°11'36.85"E
	R (Bend Point): 24°44'51.22"S; 30°11'25.78"E
	S: 24°44'43.64"S; 30°11'20.09"E
	T (Bend Point): 24°44'35.02"S; 30°11'13.63"E
	U (From Site 5): 24°44'23.45"S 30°11'8.31"E
	V: 24°44'54.05"S; 30°11'19.11"E
	W (Bend Point): 24°44'58.02"S; 30°11'11.17"E
	X: 24°45'3.85"S; 30°11'8.72"E
Y: 24°44'55.27"S; 30°11'0.95"E	
Z (end) (From Site 4): 24°44'45.80"S; 30°10'52.59"E	
33kV Substation (Tubatse East)	A: 24°44'30.15"S; 30°11'53.24"E
	B: 24°44'30.37"S; 30°11'53.41"E
	C: 24°44'30.62"S; 30°11'52.90"E
	D: 24°44'30.40"S; 30°11'52.75"E
33kV Substation (Tubatse West)	A: 24°44'39.51"S; 30°11'36.88"E
	B: 24°44'39.75"S; 30°11'37.03"E
	C: 24°44'40.03"S; 30°11'36.53"E
	D: 24°44'39.80"S; 30°11'36.39"E

# **Appendix B: Peer Review of the EIR**



# W & L CONSULTANTS

REG. NO. CK 89/020810/23

26 October 2021

**Royal HaskoningDHV**

78 Kalkoen Street

Fountain Square

Monument Park Ext 2

Pretoria

0181

**Attention: Prashika Reddy**

Dear Prashika,

**PEER REVIEW OF THE DRAFT EIA REPORT COMPILED FOR THE SAMANCOR 60MW PHOTOVOLTAIC (PV) PROJECT**

I herewith confirm that the above information was reviewed as per the requirements stipulated by Royal HaskoningDHV in the letter of appointment received on 15 April 2021.

**SECTION A: DECLARATION OF INTEREST**

- Declaration of Interest: I, Liselle van Niekerk of W & L Consultants Cc, declare that I:
  - Have independently peer-reviewed the documentation, and other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that could have compromised my objectivity and independence when assessing said documentation;
  - Am fully aware of and meets all the requirements of Regulation 13, and that failure to comply with any of the requirements may result in disqualification;
  - Have reviewed all the work (mentioned above) undertaken by the EAP;
  - Will disclose, to the applicant, the EAP, other specialist (if any), the Department and interested and affected parties, all material information that has or may have the potential



to influence the decision of the Department or the objectivity of any report, plan or document prepared or to be prepared as part of the application; and

- Am aware that a false declaration is an offence in terms of regulation 48 of the 2014 NEMA EIA Regulations.

## **SECTION B: COMMENTS**

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### **B1. REVIEW AREA 1: GENERAL ASPECTS**

#### **B1.1 EAP DETAILS:**

- 1 The details of the EAP who prepared the report; and the expertise of the EAP, including a curriculum vitae are included;
- 2 The oath or affirmation by the EAP in relation to: (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and I&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties, is included in the Report.

#### **B1.2 DEVELOPMENT PROPOSAL:**

- 3 A description of the scope of the proposed activity is provided, as well as a description of all listed and specified activities triggered; as well as description of the activities to be undertaken, including associated structures and infrastructure.
- 4 A description of all policies and legislative context within which the development is proposed, was provided, including an explanation of how the proposed development complies with, and responds to the legislation and policy context.
- 5 The need and desirability of the proposed activity were clearly motivated.

### **B.2 REVIEW AREA 2: CONFORMANCE TO THE PLAN OF STUDY**

- 6 The environmental impact assessment process was undertaken in line with the approved plan of study for environmental impact assessment.
- 7 All aspects to be assessed, as indicated in the Plan of Study, were ultimately addressed in the environmental impact assessment process.

- 8 There is no evidence of any deviation from the approved scoping report, including the plan of study, in terms of a deviation from the methodology used in determining the significance of potential environmental impacts and risks.

### **B.3 REVIEW AREA 3: DETERMINE OF SIGNIFICANCE**

- 9 A description of the proposed method of assessing duration and significance was provided.
- 10 A motivation was provided for the preferred development footprint within the approved site.
- 11 A clarification of the process undertaken to identify, assess and rank the impacts associated with the activity, related structures and infrastructure, on the preferred location through the life of the activity, was given.
- 12 The impact assessment conducted, took into account the significance of each issue and risk, including that of cumulative impacts, and provided an indication of the extent to which issues and risks could be avoided or addressed by the adoption of mitigation measures.
- 13 Impacts related to environmental and social risks were identified and assessed.
- 14 Impacts related to the protection of biodiversity and sustainable management and use of natural resources were identified, assessed, and mitigated.
- 15 Impacts associated with Heritage sites were assessed and mitigated.
- 16 Impacts in relation to resource efficiency and pollution prevention were identified and assessed.

### **B.4 REVIEW AREA 4: DEALING WITH MITIGATION**

- 17 All potential environmental impacts, mitigation and closure outcomes, as well as the residual risks of the proposed activity, were assessed and clearly set out in the environmental impact assessment report.
- 18 Suitable measures to avoid, reverse, mitigate and manage identified impacts were indicated and in addition the extent of the residual risks that must be managed and monitored, were determined.

### **B.5 REVIEW AREA 5: ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)**

- 19 The review concluded that the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development, were included in the EMPr.
- 20 The method and frequency of the auditing of the implementation of the impact management actions are clearly described in the EMPr.
- 21 Persons who will be responsible for the implementation of the impact management actions, as well as time frames are included.

22 It is concluded that the EMPr considers all the requirements as prescribed by the Regulations.

#### **B.6 REVIEW AREA 6: COMMUNICATION OF FINDINGS OF IMPACT ASSESSMENT PROCESS**

23 A summary of the findings and recommendations of the specialist reports, as well as an indication of how these findings and recommendations have been included in the final assessment report, were provided.

24 The environmental impact statement provided, contains a summary of the positive and negative impacts and risks of the proposed activity.

25 Design alternatives were provided.

26 A reasoned opinion as to whether the proposed activity should be authorised, was provided.

#### **SECTION C: CONCLUSIONS & RECOMMENDATIONS**

The aim of the peer review is to determine whether the draft versions of the Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) meet the minimum legal requirements for an EIR and EMPr as prescribed in the 2014 EIA Regulations (refer to Regulations 23) and the Peer Review Report must specify the nature of any minimum requirement that has not been complied with (if any).

In addition, the Peer Review must ascertain whether or not the draft versions of the EIA and EMPr contain sufficient information to inform decision making by the competent environmental authority, and indicate any information gaps (if any).

Taking the aforementioned into consideration, the Peer Review concludes that the EIR and EMPr comply with the EIA Regulations, 2014 (amended) and contains sufficient information to inform the decision-making process.

I trust the above is satisfactory. Feel free to contact me if you have any questions regarding the above.

Kind Regards,



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**LISELLE VAN NIEKERK**

Reg. EAP (EAPASA: 2020/1047)

M Sc Environmental Management (UJ)

## **Appendix C: EAP CVs**



# Curriculum Vitae

## Prashika Reddy

Road and Rail

Senior Environmental Scientist

**E:** [prashika.reddy@rhdhv.com](mailto:prashika.reddy@rhdhv.com)

**T:** 0873521577

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Prashika started her career in the environmental field after spending 5 years' working for the Department of Agriculture: Genetic Resources Directorate. She is a Senior Environmental Scientist in the Environmental Management and Planning Unit within the Roads and Rail Advisory Group. In 2010, she obtained her professional registration as a Natural Scientist in the field of Environmental Science. She is a registered Environmental Assessment Practitioner with EAPASA.

Prashika has built up an impressive résumé, having worked on diverse projects mainly in the petrochemical industry, as well as various large-scale power generation projects. She has established good working relationships with key clients and has undertaken several flagship projects on their behalf, such as Sasol and Eskom's Underground Coal Gasification project.

### Years of experience

19

### Years with Royal HaskoningDHV

14

### Professional memberships

SA Council for Natural Scientific Professions, Pr Sci Nat, 400133/10

EAPASA, Registered EAP, 2019/917

### Qualifications

1999: Bachelor of Science Honours: Botany, University of KwaZulu-Natal

2006: Bachelor of Science Honours: Geography (with distinction), University of Pretoria

### Professional experience

#### **Environmental Impact Assessment (EIA), Waste Management Licence and Integrated Water Use Licence for the Underground Coal Gasification (UCG) Project and associated infrastructure in support of co-firing of gas at the Majuba Power Station, Mpumalanga, South Africa, South Africa**

Start Date: 2008 - 2015

Client Name: Eskom Holdings SOC Ltd

Project Value: R 5,900,000

Eskom Holdings (SOC) Ltd appointed Royal HaskoningDHV to undertake the integrated environmental authorisation process, as well as the integrated Water Use Licence, for the UCG pilot project and associated infrastructure in support of co-firing of gas at the Majuba Power Station. UCG is a process whereby coal is converted in situ into combustible gas that can be used for power generation and is one of the new clean coal technologies being developed for implementation by Eskom that intends to diversify Eskom's fuel supply.

Position: Project Manager

Assigned Tasks: Project management, client liaison, compilation of environmental reports, management of the specialist team, authority consultation and co-management of the public participation process

#### **Integrated Environmental Authorisations for the proposed Concentrated Solar Power (CSP) Plants on the farm Sand Draai, Northern Cape Province**

Start Date: 2014 - 2016

Client Name: Solafrika Energy (Pty) Ltd

Project Value: R 1,500,000

Solafrika appointed Royal HaskoningDHV to undertake the integrated environmental authorisation and waste licence processes for two CSP plants (central receiver and parabolic trough) with an electricity generation capacity of between 100 - 150MW to be constructed on the farm Sand Draai, Upington.

Position: Environmental Scientist

Assigned Tasks: Compilation of environmental reports

#### **Environmental Impact Assessment for the Pumped Storage Power Generation Facility in the Steelpoort area, Mpumalanga and Limpopo Provinces**

> Start Date: 2005 - 2007

> Client Name: Eskom Holdings SOC Ltd

> Project Value: R 1,300,000

As part of the increased electricity supply plan, Eskom will be constructing a Pumped Storage Scheme (PSS) in the Steelpoort area, Limpopo and Mpumalanga Provinces. It is planned that the scheme will have an installed capacity of approximately 1520MW. The proposed scheme consists of the following components: upper and lower reservoirs; underground power house complex and associated waterways that link the reservoirs; and ancillary works.

Position: Project Manager

Assigned Tasks: Completion of the EIA study and reports (EIA Report and EMP), project management, client liaison, management of the specialist team, authority consultation and co-management of the public participation process

#### **Basic Assessment Study for Eight New PV Developments on the Farm Bokpoort, Groblershoop**

Start Date: 2019

Client Name: ACWA Power Africa Holdings (Pty) Ltd

Project Value: R 966,123

Due to the changes in the Integrated Resource Plan published in October 2019, ACWA Power intend replacing the authorised CSP site with 8 new PV plants. The updated layout has been revised to incorporate the 8 new PV plants of 200MW each, covering a total of 1200ha (i.e. 150ha for each plant) on Remaining Extent of the Farm Bokpoort 390.

Position: Environmental Scientist and Project Manager

Assigned Tasks: Compilation of environmental reports and project management

#### **Basic Assessment Study for Seven 9.9MW Internal Combustion Engines (ICE) at the Previously Authorised PV Developments on the Farm Bokpoort, Groblershoop**

Start Date: 2020

Client Name: ACWA Power Africa Holdings (Pty) Ltd

Project Value: R 153 000

Recently, the Department of Mineral Resources and Energy issued a Request For Proposal (RFP) to which ACWA Power will be participating. A condition in the RFP requires Bidders to not tap into the national grid for power and requires that a reliability test be undertaken at specified generation rate and time. In meeting the RFP requirements, ACWA Power has decided to supplement their already authorised project infrastructure by the addition of ICE infrastructure in the projects to be bid.

Position: Environmental Scientist and Project Manager  
Assigned Tasks: Compilation of environmental reports and project management

**Environmental Screening Investigation for the Establishment of a Solar Based Electricity Generation System on a Build, Own, Operate and Maintain Basis – 118MW Photovoltaic Plant at the Tubatse Chrome Plant, Steelpoort, Limpopo**

Start Date: 2020

Client Name: Samancor Chrome

Project Value: R 146 000

As part of the Transaction Advisory Services, Royal HaskoningDHV's Environmental Management and Planning (EM&P) Knowledge Group have been appointed to conduct a high-level desktop Environmental Screening Investigation (ESI) of twelve (12) sites to investigate the environmental sensitivities, opportunities and constraints associated with the proposed project for the proposed 118MW PV plant at the Tubatse Chrome Plant in the Steelpoort area, Limpopo Province.

Position: Environmental Scientist

Assigned Tasks: Compilation of environmental reports and project management

**Environmental Impact Assessment (EIA), Waste Management Licence and Integrated Water Use Licence for the Matimba Power Station Ash Disposal Facility, South Africa**

Start Date: 2012 - 2016

Client Name: Eskom Holdings SOC Ltd

Project Value: R 5,800,000

Approximately 4.8 million tons of ash is produced annually from the Matimba Power Station. This ash is currently being disposed by means of 'dry ashing' ~3km south of the power station. The proposed ash disposal facility will ensure that the power station is able to accommodate the 'ashing' requirements for the remaining life (approximately 44 years) of the Power Station.

Position: Environmental Scientist, Project Manager

Assigned Tasks: Compilation of environmental reports (EIA Report and EMPr), project management, management of the public participation process and specialist team

**Charlie 1 Landfill Stormwater Management & Optimisation Project, Sasol Secunda, South Africa**

Start Date: 2015 - 2016

Client Name: Sasol Chemical Industries (Pty) Ltd

Project Value: R 735,000

The Sasol Synfuels, Secunda, Charlie 1 landfill site was authorised in 1993 as a Class II Site, in terms of the Environmental Conservation Act (ECA) (Act No. 73 of 1989). Recent legislation changes such as the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the new Waste Classification and Management Regulations, August 2013 (GN 634) have implications for the management of waste disposal sites. The latest audits conducted at Charlie 1 landfill site highlighted that the water management is not in accordance with the permit requirements. Therefore, the Pollution Control Dam (PCD) of approximately 16000m<sup>3</sup> will be constructed to ensure compliance with the existing permit requirements. It will be constructed to ensure effective management of leachate and stormwater.

Position: Project Manager

Assigned Tasks: Project management

**Scoping Study for the Full-Scale Composting of Sludge Waste Streams, South Africa**

Start Date: 2014

Client Name: Sasol Chemical Industries (Pty) Ltd

Project Value: R 850,000

The proposed project involves constructing a full-scale composting site that will be able to handle approximately 200000 - 300000t/a of sludge generated at the Sasol Secunda plant.

Position: Project Manager

Assigned Tasks: Project management, quality review of Environmental Scoping Report and public participation documentation

**Waste Management Licence for the BMW Waste Facility, South Africa**

Start Date: 2010

Client Name: BMW SA (Pty) Ltd

Project Value: R 168,797

Position: Project Manager

Assigned Tasks: Project management, client management, authority consultation, report compilations and internal review of work

**EIA and Water Use Authorisation for the Removal, Re-Instatement and Re-Positioning of Two High-Voltage Powerlines routed through the Devon Valley Landfill, Stellenbosch**

Start Date: 2019

Client Name: Stellenbosch Municipality

Project Value: R 820,000

The Stellenbosch Municipality owns and operates the Stellenbosch Landfill situated off Devon Valley Road. The landfill comprises completed cells (cell 1 and 2) as well as an operating cell (cell 3). Cell 3 is separated from cells 1 and 2 by an area on the landfill property footprint that is used for access roads, entrance area and weighbridge, green waste chipping and rubble crushing and stockpiling activities. This area is also transversed by two high voltage Eskom powerlines. The presence of these powerlines prevents the Municipality from engineering and operating the area between completed cells 1 and 2 and operating cell 3 as waste disposal cells.

Position: Project Manager and Environmental Scientist

Assigned Tasks: Project management, compilation of environmental reports, management of specialist team

**Site Clearance: Planning and Design for Maintenance and/or Upgrade of the Patrol Roads and Fencing on the Borders between RSA, Swaziland and Mozambique**

Start Date: 2016

Client Name: Department of Public Works

Project Value: R 2,598,000

Undertake the Basic Assessment study, mining permitting as well as Water Use Licencing application processes associated with the border patrol road and fence.

Position: Project Manager

Assigned Tasks: Project management

**Basic Assessment and Water Use Licence for the rehabilitation of the existing P236 gravel road from km6.235 to km14.0 in Ubombo, KwaZulu-Natal**

Start Date: 2016

Client Name: KwaZulu-Natal Department of Transport

Project Value: R 546,186

This project is a rehabilitation of a portion of the existing P236 road from km6.235 to km14.0, where the surfaced width will be increased by 2.5m and where there are climbing lanes; the surfaced width will increase by 5.6m.

In areas where there will be horizontal curve widening, the width will be increased by 4.5m. Furthermore, existing culverts will be lengthened where required to accommodate the increase in the road bed width. A culvert at a stream crossing, is also planned to be replaced at km6.240 of the P236.

Position: Strategic Environmental Advisor

Assigned Tasks: Quality review of environmental reports and public participation documentation

**Basic Assessment and Water Use Licence for the proposed bridge crossing over the uMfolozi River linking the Esiyembeni and Novunula areas within the Mtubatuba Local Municipality, KwaZulu-Natal**

Start Date: 2016

Client Name: KwaZulu-Natal Department of Transport

Project Value: R 522,225

The KwaZulu-Natal Department of Transport (KZN DoT) is planning to construct a bridge over the uMfolozi River and associated link road that will serve to link the Esiyembeni and Novunula local communities situated on either side of the uMfolozi River which is currently impassable save for the existing N2 bridge crossing to the east near Mtubatuba.

Position: Strategic Environmental Advisor

Assigned Tasks: Quality review of environmental reports and public participation documentation

**Basic Assessment for the construction of two 7km long 88kV Power Lines Grootpan / Brakfontein, South Africa**

Start Date: 2015

Client Name: Eskom Holdings SOC Ltd

Project Value: R 458,021

The proposed project involves the construction of two (2) 7km 88kV power lines and dismantling of two (2) 88kV power lines from Grootpan to Brakfontein, south of Ogies in Mpumalanga.

Position: Project Principal

Assigned Tasks: Quality review and overall project management

**Proposed Tinley Southbanks Beach Enhancement Project in the KwaDukuza Municipality, KwaZulu-Natal**

Start Date: 2016

Client Name: Tongaat Hulett Developments (Pty) Ltd

Project Value: R 925,270



The Tinley Manor Southbanks development provides for the coastal resort, however, it does not provide for what is critical for the success of the resort and that is a safe swimming beach in close proximity to the resort. The lack of a safe swimming beach with public amenities adjacent the development was identified as a major constraint. This EIA is therefore targeted at dealing with this constraint and to enable the provision of a new beach resort that has all the requirements to be able to attract international investment, including specifically a safe, swimming beach.

Position: Strategic Environmental Advisor

Assigned Tasks: Provide strategic advice on project, review of environmental reports

**Environmental Impact Assessment for the Cornubia Phase 2 Development, KwaZulu-Natal, South Africa**

Start Date: 2012

Client Name: Tongaat Hulett Developments (Pty) Ltd

Project Value: R 989,660

Conduct a full Environmental Impact Assessment (EIA) for the proposed Cornubia Mixed Use Phased development - Phase 2 in Mount Edgecombe, KwaZulu-Natal.

Position: Strategic Environmental Advisor

Assigned Tasks: Provide strategic advice on project, review of environmental reports

**Cornubia Retail Park - EIA, South Africa**

Start Date: 2012

Client Name: Tongaat Hulett Developments (Pty) Ltd

Project Value: R 370,120

Undertaking the EIA, Public Participation Process (PPP), attending client progress meetings and providing environmental input into the planning of the proposed Phase 2 Retail Development.

Position: Strategic Environmental Advisor

Assigned Tasks: Environmental Scientist. Strategic project advice, quality review and approval of reports

**Centurion Metropolitan Core Masterplan: Stormwater and Flooding, South Africa**

Start Date: 2012

Client Name: City of Tshwane Metropolitan Municipality

Project Value: R 4,300,000

The City of Tshwane requires a multi-disciplinary project team to assist the Client with the Preparation of a Master Plan of the Centurion Metropolitan Core Study Area.

Position: Environmental Scientist

Assigned Tasks: Environmental Screening Investigation

**Environmental Screening for the Commercial 125MW CSP, South Africa**

Start Date: 2012

Client Name: Sasol Technology (Pty) Ltd

Project Value: R 185,000

Environmental Screening Investigation for the proposed 125MW commercial concentrated Solar Power Plant located in Upington.

Position: Project Principal

Assigned Tasks: Project Management, financial management, review of Environmental Screening Report

**Route Determination and Environmental Screening Investigation of 14 K-routes, South Africa**

Start Date: 2016-2019

Client Name: Gauteng Department of Roads and Transport

Project Value: R 5.6 Million

Route determination and ESI for routes K

Position: Environmental Scientist

Assigned Tasks: Environmental Screening Investigation and compilation of the ESI Report

**City of Tshwane: Waste Transfer Facilities, South Africa**

Start Date: 2014

Client Name: City of Tshwane Metropolitan Municipality

Project Value: R 150,000

Report on environmental and sustainability considerations in Waste to Energy (WtE) Plants when they are co-fired with Municipal Solid Waste. Concept designs and environmental screening of various waste transfer stations. Situational assessment of other closed landfill facilities.

Position: Environmental Scientist

Assigned Tasks: Advise the client on Environmental authorisation requirements

**Basic Assessment for the Sasol C3 Expansion Project, Sasol Industrial Complex, South Africa**

Start Date: 2013

Client Name: Sasol Polymers

Project Value: R 267,614

The C3 expansion project was initiated to address an estimated 105ktpa additional propylene that will be

available in 2014 as a result of various optimisation projects on the upstream Sasol Synfuels facilities. An opportunity was identified for the additional propylene to be utilised as feed for the polypropylene (PP) plants, namely PP1 and PP2. The C3 expansion project involves upgrading and implementing changes to the existing PP1 and PP2 process equipment to accommodate the increase in throughput.

Position: Project Principal

Assigned Tasks: Strategic project advice, quality review and approval of reports

**BA for the Sasol Iso-Octanol Long Term Phase II Project, Sasol Industrial Complex, South Africa**

Start Date: 2012

Client Name: Sasol Technology (Pty) Ltd

Project Value: R 261,184

The Iso-octanol long-term phase 2 project involves a process whereby aldehydes are converted in the existing Iso-alcohol stream (in Octene Train III) by hydrogenation to its corresponding alcohols to achieve the desired product specification for the Iso-octanol product. A new reactor and a new distillation column with its associated equipment will be installed for this purpose. The expected Iso-octanol production will range between 7 and 9kt/annum. In addition, a storage tank with a capacity of approximately 400m<sup>3</sup> and a loading pump will be installed to enable storage and loading of the final Iso-octanol product.

Position: Project Principal

Assigned Tasks: Strategic project advice, quality review and approval of reports

**Environmental Impact Assessment for the C3 Stabilisation Project situated on the Sasol Secunda Site, South Africa**

Start Date: 2010

Client Name: Sasol Technology (Pty) Ltd

Project Value: R 447,172.00

**Environmental Impact Assessment for the C3 Stabilisation Project situated on the Sasol Secunda Site**

Position: Project Manager

Assigned Tasks: Project Management, review and compilation of EIA documentation, management of public process, liaise with client and authorities

Environmental Impact Assessment for the proposed Biogas to Power Plant Project at Sasol Synfuels, South Africa

Start Date: 2009

Client Name: Sasol Technology (Pty) Ltd

Project Value: R 167,865

Basic assessment study for the Biogas to power plant project.

Position: Project Manager

Assigned Tasks: Project management, compilation of environmental reports

**Environmental Impact Assessment for the proposed Sasol Bioworks upgrade, South Africa**

Start Date: 2008

Client Name: Sasol Technology (Pty) Ltd

Project Value: R306,101 Sasol One Bioworks Expansion

Position: Project Manager

Assigned Tasks: Overall Project Management and quality control

**EIA or the Amendment of Mining Right for the UCG Pilot Plant, South Africa**

Start Date: 2008

Client Name: Sasol Technology (Pty) Ltd

Project Value: R 404,000

Environmental Impact Assessment and Mining Authorisation for the Underground Coal Gasification Pilot Project located in Secunda Mpumalanga Province.

Position: Project Manager

Assigned Tasks: Overall Project Management and quality control

**Department of Public Works: ECO Work in Pretoria, South Africa**

Start Date: 2010 - 2017

Client Name: Department of Public Works

Project Value: R 2,100,000

Environmental Control Officer and Occupational Health and Safety for the demolition activities associated with the HG de Witt Building in Pretoria.

Position: Project Manager

AssignedTasks: Project Managementand Environmental Control Officer (ECO) work

**AEL OEMPr Compilation**

Start Date: 2019  
Client Name: AEL Africa  
Project Value: R 100,000  
Position: Senior Environmental Scientist  
Assigned Tasks: Compilation of OEMPr for the ISAP and Nitrate Plant

HaskoningDHV are the project managers in charge of the Design and Construction, as well as the designers for the Intelligent Transportation Systems and Urban Traffic Control.

Position: Environmental Scientist  
Assigned Tasks: Environmental Screening Investigation and Ad Hoc environmental advice

**Environmental Status Quo for the Scottsville Local Area Plan**

Start Date: 2018  
Client Name: Msunduzi Municipality  
Project Value: R 2.5 million  
Position: Environmental Scientist  
Assigned Compilation of Environmental Status Quo chapter

**Previous Experience**

**2010 - 2012**

SSI Engineers and Environmental Consultants (Pty) Ltd Associate

**2008 – 2010**

SSI Engineers and Environmental Consultants (Pty) Ltd formerly known as Bohlweki Environmental (Pty) Ltd Senior Environmental Consultant

**White Mfolozi Bridge & Link Road, South Africa**

Start Date: 2016  
Client Name: Kwa-Zulu Natal Department of Transport  
Project Value: R 0.8 million  
Position: EAP  
Assigned Tasks: Compilation of the Basic Assessment Report and EMPr in support of the necessary Environmental Authorisations and permits

**2006 – 2008**

Bohlweki Environmental (Pty) Ltd Junior Environmental Consultant

**2001 – 2006**

Department of Agriculture Senior Plant and Quality Control Officer

**Sundumbili Wastewater Treatment Works, South Africa**

Start Date: 2015  
Client Name: Ilembe Municipality  
Project Value: R2 000 000  
Position: EAP  
Assigned Tasks: Environmental Screening and Environmental Impact Assessment

**Rustenburg Integrated Rapid Public Transport Network (IRPTN), South Africa**

Start Date: 2009  
Client Name: Rustenburg Local Municipality  
Project Value: R 3,000,000,000  
Planning, design and implementation of the Rustenburg Rapid Transport project in Rustenburg.  
The final system, which will consist of several phases, will comprise of approximately 900 busses, 600 kilometres (km), 50 bus routes, 35 km segregated bus lanes, 30 stations, 3 depots, 1 transport management centre, and zero compromise in public transport service quality. Royal

# Curriculum Vitae

## Seshni Govender

Roads and Rail

Environmental Consultant



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**T:** 087 352 1592

Seshni is an Environmental Consultant working on strategic environmental planning and water related projects. Seshni has been involved in numerous Water Use Licence projects, including complex integrated licencing that requires understanding cumulative environmental impacts. She also has been involved in the development of the Environmental Authorisation Processes for the N11-13X Mokpane Ring Road and the development of Photovoltaic Plants in the Northern Cape Province and Gauteng Environment Outlook .

Seshni has drafted applications for complex integrated licences that include components of National Environmental Management Act and National Water Act on behalf of Eskom and private companies. This has exposed her to the intricate mechanisms of trying to integrate environmental impacts with mitigation measures that will be in line with the sustainable development principles.

As an Environmental Scientist Seshni contributes to projects through; report writing, data management and analysis, environmental impact analysis, policy review and public engagement/consultation.

### **Degree**

**BSc Environmental Science (Hons)**

### **Nationality**

**South African**

### **Years of experience**

**9**

### **Years with Royal HaskoningDHV**

**9**

## Professional experience

### **Basic Assessment for the Proposed Developments of Ten (10) Photovoltaic (PV) plants at the Bokpoort farm near Groblershoop, Northern Cape**

- > ACWA Power Energy Africa (Pty) Ltd
- > Northern Cape Province, 2019

ACWA Power Energy Africa (Pty) Ltd (hereafter referred to as ACWA Power) is proposing to construct a solar energy facility (Bokpoort II) consisting of ten (10) photovoltaic (PV) plants on the north-eastern portion of the Remaining Extent (RE) of the Farm Bokpoort 390, located 20 km north-west of the town of Groblershoop within the !Kheis Local Municipality in the ZF Mgcawu District Municipality, Northern Cape Province.

On 21 October 2016, a 900 ha, 150 MW Concentrating Solar Power (CSP) plant was authorised by the Department of Environmental Affairs (DEA). Due to the changes in the Integrated Resource Plan (IRP) published in October 2019, ACWA Power intend replacing the authorised CSP site with eight (8) new PV plants. The updated layout has been revised to incorporate the 8 new PV plants of 250 MW each, covering a total of 1200 ha (i.e. 150 ha for each plant).

Two 250 ha 75 MW PV plants including ancillary infrastructure, were also authorised by the DEA on 24 October 2016. As the PV 1 and PV 2 plants are also approved on the Farm Bokpoort 390 RE, the footprints of these approved PV plants will undergo an amendment to accommodate the 8 new PV plants and ancillary infrastructure.

### **Basic Assessment and Water Use Authorisation for the removal, re-instatement and repositioning of two high voltage powerlines routed through the Stellenbosch Landfill off Devon Valley Road, Stellenbosch, Western Cape**

- > Eskom Holdings SOC Ltd and Stellenbosch Municipality
- > Western Cape Province, 2020

The Stellenbosch Municipality owns and operates the Stellenbosch Landfill situated off Devon Valley Road. The landfill comprises completed cells (cell 1 and 2) as well as an operating cell (cell 3). Cell 3 is separated from cells 1 and 2 by an area on the landfill property footprint that is used for access roads, entrance area and weighbridge, green waste chipping and rubble crushing and stockpiling activities. This area is also transversed by two high voltage Eskom powerlines. The presence of these powerlines

prevents the Municipality from engineering and operating the area between completed cells 1 and 2 and operating cell 3 as waste disposal cells.

Eskom Distribution (Western Cape Operating Unit) therefore proposes removing, re-instating and repositioning the two powerlines (132kV and 66kV) routed through the landfill. The 132kV powerline will be relocated to the northern and eastern boundary of the landfill, whilst the 66kV powerline will be relocated to the eastern and southern boundary. The proposed length of each of the deviated lines are approximately 1km. Two alternative pylon structures are currently being considered i.e. monopoles and lattice towers.

### **Basic Assessment and Environmental Management Programme for the Borrow Pit 5.5L associated with the N11 Section 13X (N11-13X), Mokopane Ring Road, Mogalakwena Local Municipality, Limpopo province**

- > South African National Roads Agency Ltd
- > Limpopo Province, 2019

The South African National Roads Agency Ltd (SANRAL) has commissioned the Detail Design and the Construction Monitoring of the N11-13X Mokopane Ring Road to divert the heavy vehicle traffic that travels to and from the mines on the western side of Mokopane and to Botswana, from the already congested existing N11 section which passes through the existing villages and the Mahwelereng Township.

The N11-13X Mokopane Ring Road is a “greenfields” project where a new road will be constructed. The class of the new road will be Class 1. The new road to be constructed will typically have an overall width of 13.4 m where the initial carriageway will comprise a minimum 2.5 m outer shoulder, 2 x 3.7 m lanes, and 2.5 m inner shoulder. In general, the road reserve varies between 71 – 75 m but there are wider sections where there is a deep cutting or because of allowance for future interchanges.

A limited amount of gravel (G5 – G7 quality) will be available from cut widenings within the road reserve. The remainder of the gravel required for the proposed road construction (gravel layer works) will need to be sourced from borrow pits.

**Application for Postponement of Compliance Timeframes to achieve New Plant Standards at ArcelorMittal South Africa, Vanderbijlpark Works, Emfuleni Local Municipality**

- > ArcelorMittal South Africa
- > Gauteng Province, 2019

In response to Section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No.39 of 2004) (as amended in 2018), ArcelorMittal applied for a postponement of the compliance timeframes to achieve the new plant minimum emission standards, as well as alternative emission standards for certain plants at the Vanderbijlpark Works (AMSAVW), Emfuleni Local Municipality, Gauteng.

**Application for an Alternative Plant Standard and Suspension Application for activities associated with the ArcelorMittal Pretoria Works, City of Tshwane, Gauteng.**

- > ArcelorMittal South Africa
- > Gauteng Province, 2019

In response to Section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (as amended in 2018), ArcelorMittal intends to apply for an alternative plant standard and submit a suspension application of the compliance timeframes to achieve the new plant minimum emission standards for the Pretoria Works, City of Tshwane, Gauteng.

**Water Use Licence application for the Urania-Bronville Powerline Upgrade Project, Matjhabeng Local Municipality, Free State Province**

- > Matjhabeng Local Municipality
- > Free State Province, 2019

The construction of new overhead powerlines to replace the existing underground powerlines that are no longer operational. The works will comprise the supply, delivery, off-loading, installation, erection, commissioning and handing-over (in a proper working condition) of the following infrastructure.

The construction of a new approximately 3.3 km, 132 kV overhead line between the Welkom Main Intake Substation and Urania Substation.

The construction of a new approximately 5.5 km, 11 kV overhead line between the Industries Substation and Bronville Substation.

**Water Use Licence for the Proposed Deviation of the 88kV Firham-Platrand Powerline near Standerton, Mpumalanga Province**

- > Eskom Holdings SOC Limited
- > Mpumalanga Province, 2018

Eskom Holdings Limited, a State-Owned Company (SoC) proposed a deviation of a portion of the existing 88kV Firham-Platrand Powerline from pole 157 to pole 180 within a servitude of 31m and a length of approximately 2km. The purpose of the deviation is to avoid a wetland in which these poles are currently located which poses a network stability risk as it is located within a wetland area.

Firham Platrand is an interconnector between Standerton and Volksrust for network stability, the line supplies Transnet Traction Stations, should the line fail, the trains in the nearby tractions will not be able to move.

**Water Use Licence Application for the Proposed Site Clearance for Planning and Design of a Border Barrier, Patrol Roads and Fencing between the Republic of South Africa (RSA), Swaziland and Mozambique, Phase 1 (KM 0.0 0 KM 54.0)**

- > The National Department of Public Works (DPW) and KwaZulu-Natal Department of Transport (KZN DoT)
- > KwaZulu-Natal Province, 2018

Proposed the upgrade of existing border control infrastructure, and development of new border control infrastructure along a portion of the South Africa (KwaZulu-Natal) - Mozambique Border in the north-eastern part of the KwaZulu-Natal (KZN) Province. This application is termed the 'Phase 1' application and forms a component of a wider project being undertaken by the DPW for the upgrading of border control infrastructure along the South Africa - Swaziland border and the southern part of the South Africa - Mozambique border (the Phase 2 Project). The Phase 1 alignment is comprised of the section of the international border with Mozambique from the high-water mark of the Indian Ocean (KM0.0) to the eastern boundary of the Ndumo Game Reserve (KM54.0).

**Environmental Screening Investigation: Route Determination for the K178 between the Gauteng Provincial Border and PWV1, Gauteng Province**

- > Gauteng Department of Roads and Transport (GDRT)
- > Gauteng, 2018

The purpose of the Gauteng Strategic Road Network (GSRN) conceived by the Gauteng Department of Roads and Transport (GDRT) some 40 years ago was to plan a robust road system, with the objective of preserving transportation corridors and serving as a guideline for the rapid development and urbanisation of Gauteng.

The route for the K178 is the section between the Gauteng Provincial Border (in the east) and the future PWV1 (in the west) with an approximate length of 18.8km. The alignment generally follows the previous planned GDRT route along the alignment of the existing R54.

In the context of integrated environmental management, screening determines whether a development proposal requires environmental assessment, and if so, what level of assessment is appropriate. Screening is thus a decision-making process that is initiated during the early stages of the development of a project.

The main purpose of the ESI was to determine at this stage of the road design whether there are aspects of the development proposal that have the potential to give rise to significant or unacceptable environmental consequences i.e. fatal flaws.

**Water Use Licence Application for the Proposed Site Clearance for Planning and Design of a Border Barrier, Patrol Roads and Fencing between the Republic of South Africa (RSA), Swaziland and Mozambique, Phase 2 (KM 54.0 0 KM 524.0)**

- > The National Department of Public Works (DPW)
- > KwaZulu-Natal and Mpumalanga Provinces, 2018

The National Department of Public Works (DPW) as the applicant, (in conjunction with the KwaZulu-Natal Department of Transport (KZN DoT) as an implementing agent) is proposing the upgrade of existing border control infrastructure, and development of new border control infrastructure along a portion of the South Africa–Mozambique–Swaziland Border in KwaZulu-Natal and Mpumalanga. This application was termed the 'Phase 2' application and forms a component of a wider project being undertaken by the DPW for the upgrading of border control infrastructure along the South Africa - Swaziland border

and the southern part of the South Africa - Mozambique border. The Phase 1 alignment is comprised of the section of the international border with Mozambique from the high-water mark of the Indian Ocean (KM0.0) to the eastern boundary of the Ndumo Game Reserve (KM54.0), whilst this Application (Phase 2) is from KM54.0 to KM524.0.

The project is being undertaken by the DPW in conjunction with the Department of Agriculture Forestry and Fisheries (DAFF) and the South African National Defence Force (SANDF), and Ezemvelo KZN Wildlife (EKZNW) and the iSimangaliso Wetland Park Authority (IWPA) as partner organs of state. The KZN DoT is an implementing agent for one of the infrastructure components (the border barrier structure).

The aim of the project is to stop the illegal trafficking of stolen vehicles and contraband across this section of the international border, as well as to prevent the illegal movement of people as well as livestock that could transmit disease. South Africa has approximately 4 800 km of land border and 2 800 km of coastline border which is required to be secured. South Africa is greatly affected and financial impacted by illegal imports, smuggling and other similar illegal activities which transpire over borders. In order to effectively respond to the range of security and control challenges that are being experienced by responsible organs of the State, it is important to assess the situation and to be able to incorporate a viable solution.

**Basic Assessment for the Proposed Construction of a Bridge over the Rooisloot River, Various Culverts and Borrow Pits Associated With the National Route N11 Section 13x (N11-13x) (Mokopane Ring Road) in the Mokopane Area**

- > South African National Roads Agency Ltd
- > Limpopo Province, 2018

The South African National Roads Agency Ltd (SANRAL) has commissioned the Detail Design and the Construction Monitoring of the N11-13X Mokopane Ring Road. An Environmental Impact Assessment (EIA) study was previously conducted for the proposed re-routing of the N11-13X road. The Environmental Authorisation and subsequent approval of the Environmental Management Plan (EMP) was obtained in 2009. The subject of this Basic Assessment Process was therefore to address the infilling activities within the watercourses which pertain to the Rooisloot Bridge and the associated culverts. There were 5 Borrow Pits associated with this project that were also subject to Basic Assessment Processes.

**NW Environment Outlook, South Africa**

- > North West Department of Rural, Environment and Agricultural Development
  - > Mahikeng, 2018
- Compilation of the water chapter as part of the publication of the North West Environment Outlook

**Integrated Water Use Licence Application for the Rehabilitation of the Existing P236 and Culvert from km 6.235 to km 14.0**

- > KwaZulu-Natal Department of Transport
- > Ubombo, KwaZulu-Natal, 2017

The P236 is located north of Mkhuze and starts at km 0.0 at the intersection with P2-9 and ends at km 32.0, intersecting P449. The application, however, was only for the rehabilitation of km 6.235 to km 14.0 of the P236 as well as the replacement of a culvert at Km 6.240.

**Integrated Open Space for the Greater Khayalami and Ruimsig/Honeydew Sub Regions**

- > City of Joburg, 2017

Development of two integrated open space plans for the Greater Khayalami and Ruimsig-Honeydew Sub-regions which aim to ensure that ecological goods and services are maintained and enhanced so as to contribute to spatial planning in the City of Johannesburg, and both economic and social development.

**Water Use Licence Application for the Proposed Upgrade of Dango Bridge (B1372) and Bedlane Bridge (B1336) situated along P393 (R34) Road Between Nkwalini Pass (Km0,0) and Empangeni (Km24,0)**

- > KwaZulu-Natal Department of Transport
- > Empangeni, KwaZulu-Natal, 2017

The KwaZulu-Natal Department of Transport (DoT) proposed to improve the Provincial road P393 (R34) from P47-4 at Nkwalini Pass (km 0.0) to P230 at Empangeni (km 24.0) within the King Cetshwayo District Municipality in KwaZulu-Natal Province. The project starts at the intersection of P47-4 (R66) with P393 (R34) at Nkwalini Pass (km 0.0) and ends at P230 (km 24.0) towards Empangeni. The Bedlane river bridge (B1334) is situated at km 2.6 from Nkwalini Pass and the Dango river bridge (B1372) is situated at km 3.9 from Nkwalini Pass. The existing P393 road is 8.8m wide and the proposed road geometry for the rehabilitation is 10.0m wide including shoulders.

**Water Use Licence Application for the Proposed Culvert Rehabilitation along Provincial Road P230 from Km37.0 to Km47.0**

- > KwaZulu-Natal Department of Transport
- > Umhlathuze Local Municipality, KwaZulu-Natal, 2017

This project formed part of the Empangeni Road Rehabilitation Programme and covers the rehabilitation of the provincial road P230 between km 37,0 and km 47,0 within the uMhlathuze Local Municipality which forms part of the King Cetshwayo District Municipality (DC28), KwaZulu-Natal. Provincial Road P230 from the intersection with P393 at km 37,0 to km 47,0 near Empangeni is defined as an undivided two lane road, and has been classified as a Class R1 Rural Arterial Road (in terms of the TRH26). The P230 forms part of the R34 long distance heavy haul freight route, which connects the harbour of Richards Bay and the surrounding industrial and commercial areas, with inland provinces.



#### **Integrated Water Use Licence Application for the Canelands Extension Development, KwaZulu-Natal**

- > Tongaat Hulett Developments
- > Kwadukuza Municipality, KwaZulu-Natal, 2017

Tongaath Hulett Development wishes to develop the site for industrial purposes. The site lies adjacent to the existing Canelands Industrial estate. Potential land uses may include general / industrial, logistics, warehousing and distribution. These land uses will complement those of the existing Canelands Industrial Estate and will ensure that this land parcel reads as an extension to the existing development. It is proposed, due to the proximity of the floodplain and numerous other constraints located on-site, that a single platform covering an area of approximately 1.67 hectares (1.67 ha) is created. Both a servicing and traffic report has been completed, which details how this development will be accommodated by the existing bulk infrastructure within the region.

#### **Gauteng Province Environment Outlook Report**

- > Gauteng Department of Agriculture and Rural Development
- > Gauteng, 2017

State of the Environment Report (SoER) is a report card on the condition or quality of the environment. It provides information on how we affect the environment, how the environment affects us, and how this condition has changed over time. Environmental conditions are analysed through the use of environmental indicators which are proxies of environmental status, and which can be monitored over time and space. Reporting on the State of Environment (SoE) is therefore an important tool in identifying, assessing and setting priorities for environmental issues, as well as in determining whether environmental policies and actions are effective. Furthermore, the 'environment outlook' component attempts to describe or predict how environmental challenges will evolve in the near future, and what needs to be done to achieve a more sustainable state of living for all people in the province. The ultimate value of environmental outlook reporting lies in the degree to which that assessment can be used for adaptive environmental management to address anticipated future environmental conditions and pressures.

#### **North West Environmental Outlook/State of the Environment Trend Analysis**

- > North West Department of Rural, Environment and Agricultural Development
- > Mahikeng, 2017

The *Environmental Trend Analysis Report* focused on the publications of the North West Province State of Environment and Environment Outlook Reports dated 1995, 2002, 2008 and 2013, in an effort to expand this trend reporting to fully cover the period 1995 to 2013. This exercise followed on from the 2013 Environment Outlook Report which reported on environmental trends and made related recommendations to guide the province towards a more sustainable future. As such, the following objectives were achieved:

- > The indicators for each chapter were tracked through the reporting period
- > Data Gaps Identified
- > the value of the indicator set determined

#### **Environmental Impact Assessment and Integrated Water Use Licence Application for the Tinley Manor Southbanks Coastal Development, KwaZulu-Natal**

- > Tongaat Hulett Developments
- > Kwadukuza Municipality, KwaZulu-Natal, 2017

Tongaath Hulett Developments proposes to develop the Tinley Manor Southbanks Coastal Development into a mixed-use coastal development including a large residential component. Tinley Manor Southbanks Coastal Development is an approximately 485 ha site, located between the coastal towns of Tinley Manor and Sheffield Beach within the Kwadukuza Municipality, KwaZulu-Natal.

The proposed Tinley Manor Southbanks Coastal Development is set to be the first phase of the development of Tongaat Hulett Developments' land holdings in Tinley Manor, which is situated to the south and north of the Umhlabi River.

#### **Integrated Open Space Plan – Greater Khayalami and Ruimsig-Honeydew Sub-Regions, Johannesburg, South Africa**

- > Client: City of Johannesburg, 2016

Development of two integrated open space plans for the Greater Khayalami and Ruimsig-Honeydew Sub-regions which aim to ensure that ecological goods and services are maintained and enhanced so as to contribute to spatial planning in the City of Johannesburg, and both economic and social development.

**Update of the Dube Tradeport State of the Environment Report**

- > Dube Tradeport Corporation
- > KwaZulu-Natal, 2016

Compilation of the Dube Tradeport State of the Environment Report 2016/2017

**Integrated Open Space Plan - Linbro Park & Greater Bassonia, Johannesburg, South Africa**

- > City of Johannesburg, 2016

Development of two integrated open space plans for the Linbro Park and Greater Bassonia which aim to ensure that ecological goods and services are maintained and enhanced so as to contribute to spatial planning in the City of Johannesburg, and both economic and social development.

**Final Consultation Basic Assessment Report for the Dismantling of a portion of the existing double-circuit power line and the construction of two (2) 7 km long 88 kV power lines within a 2 km corridor between the Grootpan and Brakfontein Substations**

- > Eskom Holdings SOC Ltd
- > Ogies, Mpumalanga, 2015

Eskom Holdings (SoC) Pty Ltd (Eskom Distribution – Mpumalanga Operating Unit) proposes to construct two (2) 7 km 88 kV overhead power lines within a 2 km corridor between Grootpan and Brakfontein Substations near Ogies. The existing power lines are located on GlencoreXstrata mining property. The mine has requested that Eskom relocate the lines as they are within the operational footprint of the mine. The project also involves the dismantling of a portion of the existing 88 kV double-circuit mink power line approximately 5.2 km in length. The new power lines will ensure continuity of supply and access to electricity for the surrounding communities.

**Conduct Pre-Feasibility (FEL-2) Waterberg Heavy Haul Line, South Africa**

- > Transnet SOC Ltd
- > Waterberg, 2015

High-level environmental screening investigation for the proposed +/- 600km rail corridor running from Lephalale to Ermelo as part of the national Strategic Infrastructure Project (SIP) suite.

**Tembisa Hub Plan, South Africa**

- > Intersite Property Management Services
- > Ekurhuleni Metropolitan Municipality, 2015

Preparation of a Precinct plan for the Tembisa Urban Hub in Ekurhuleni.

**Review and Update of the City of Windhoek's Environmental Policy**

- > Consulting Services Africa (CSA)
- > Windhoek, Namibia, 2014

Review the existing City of Windhoek Environmental Management Policy, 2004 and revise and improve the existing policy so that it may be approved, launched, and implemented by the Windhoek City Council.

**Green existing by-laws and develop a set of new environmental by-laws or amend the existing by-laws,**

- > Ekurhuleni Metropolitan Municipality
- > Ekurhuleni, 2014

Review the existing Ekurhuleni by-laws by introducing environmental considerations and develop a set of new environmental by-laws if required.

**Route Determination and EIA for K86, K118, K181 K208, K217 and K219,**

- > Gauteng Department of Roads and Transport
- > Gauteng Province, 2014

Route Determination and Environmental Scan of K-routes in the Gauteng Province.

**Dube Tradeport State of the Environment Report**

- > Dube Tradeport Corporation
- > KwaZulu-Natal, 2014

Compilation of the Dube Tradeport State of the Environment Report 2013/2014

**State of Environment Report (SOER) for City of Johannesburg, South Africa**

- > South African Cities Network
- > City of Joburg, 2014

Compilation of the State of the Environment Report for the City of Johannesburg 2014

**Cornubia Human Settlement - Integrated Water Use Licence Application, South Africa**

- > Tongaat Hulett Developments (Pty) Ltd
- > Cornubia, KwaZulu-Natal, 2013

Water Use Licence Application for the Cornubia Industrial and Business Estate, Phase 1-Retail Park, Cornubia Phase and Cornubia Bridge

**NW Environment Outlook, South Africa**

> North West Department of Economic Development,  
Environment, Conservation and Tourism

> Mahikeng, 2013

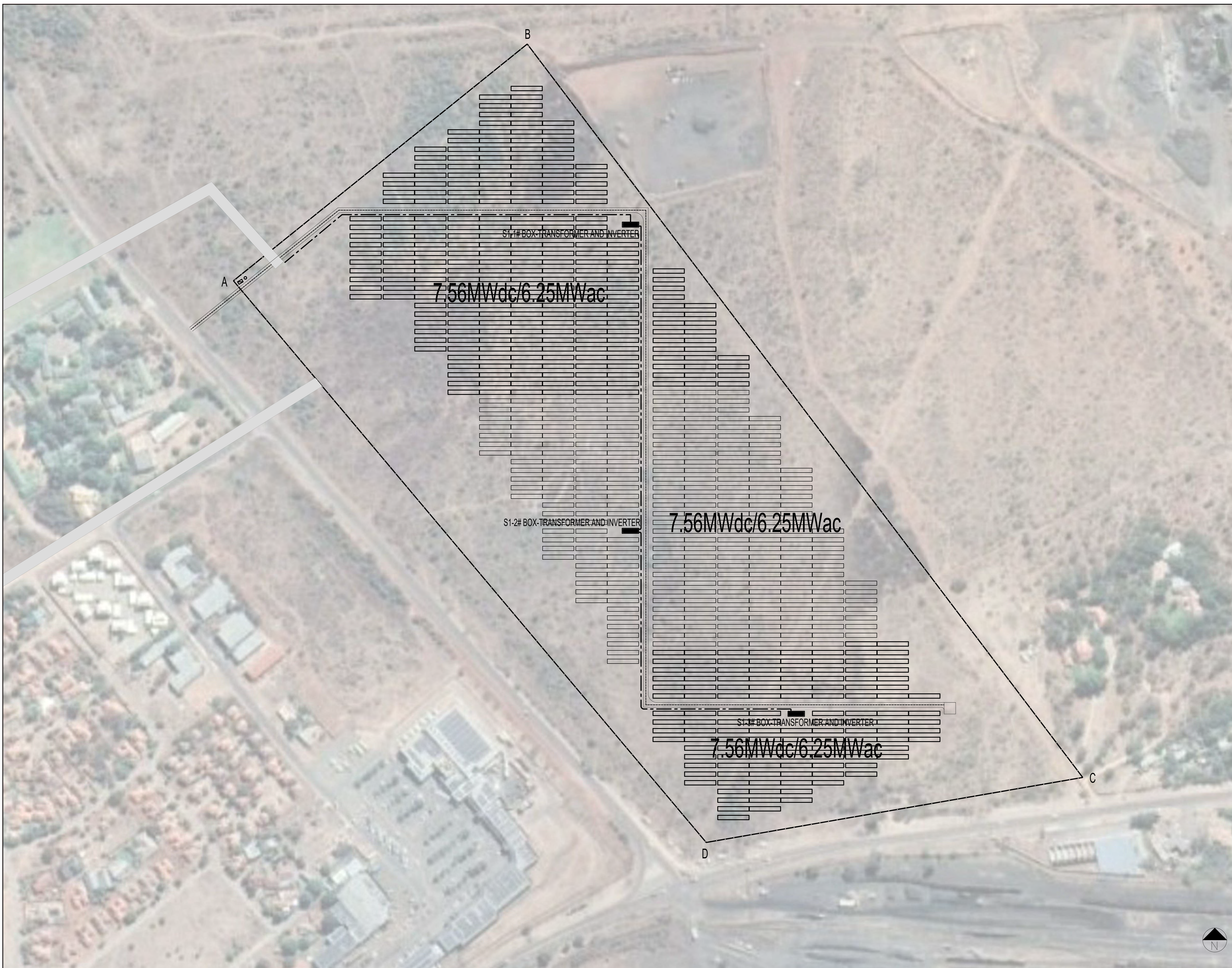
Compilation and Publication of the North West Provincial

**Qualifications**

**2010** BSc (Hons) Environmental Science, University of  
KwaZulu Natal, South Africa

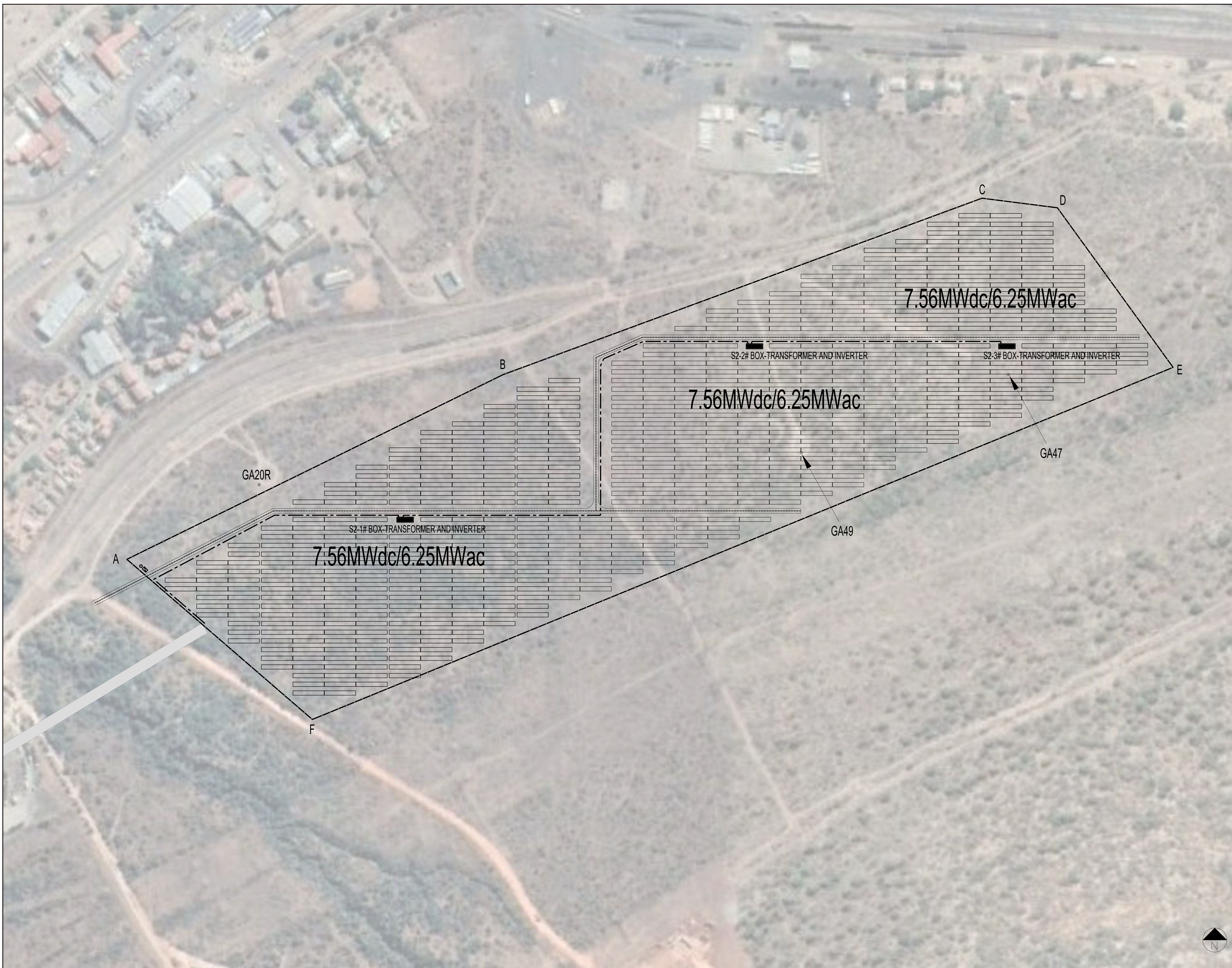
**2009** BSc Environmental Science, University of KwaZulu  
Natal, South Africa

# **Appendix D: Proposed Layouts**



DRG. No.	REFERENCE DRAWINGS										
<b>LEGEND:</b>											
	BOX-TRANSFORMER AND INVERTER										
	SOLAR PV STRUCTURE (2 x STRINGS OF 28 x PANELS) 32m x 5m										
	1.8m CLEAR VIEW FENCE WITH OVERHANG										
	5m ACCESS ROAD										
	GUARD HOUSE										
	33kV UNDERGROUND CABLE										
	WATER STORAGE TANK										
	POWER CORRIDOR										
<b>CO-ORDINATES:</b>											
A: X=80436.369 Y=2735852.535											
B: X=80131.611 Y=2735607.018											
C: X=79955.453 Y=2736307.519											
D: X=79945.979 Y=2736434.993											
<b>NOTES:</b>											
1. NO BOREHOLES OR PUMPS ON SITE 1.											
2. NO PROVISION MADE FOR BESS.											
3. NO SUBSTATIONS ON SITE 1.											
4. NO CULVERTS OR PIPELINES ON SITE 1.											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">T</td> <td style="width: 75%;">ISSUED FOR INFORMATION</td> <td style="width: 10%;">11/08/21</td> <td style="width: 5%;">M</td> <td style="width: 5%;">R</td> </tr> <tr> <td>REV</td> <td>DESCRIPTION</td> <td>DATE</td> <td>REV BY</td> <td>CHKD BY</td> </tr> </table>		T	ISSUED FOR INFORMATION	11/08/21	M	R	REV	DESCRIPTION	DATE	REV BY	CHKD BY
T	ISSUED FOR INFORMATION	11/08/21	M	R							
REV	DESCRIPTION	DATE	REV BY	CHKD BY							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">DESIGNED</td> <td style="width: 20%;">P. KONIG</td> </tr> <tr> <td>DRAWN</td> <td>J. WANDRAG</td> </tr> <tr> <td>CHECKED</td> <td>C. LOTTER</td> </tr> </table>		DESIGNED	P. KONIG	DRAWN	J. WANDRAG	CHECKED	C. LOTTER				
DESIGNED	P. KONIG										
DRAWN	J. WANDRAG										
CHECKED	C. LOTTER										
<b>APPROVED</b> P. KONIG : SIGNATURE: _____ DATE: _____											
 Royal HaskoningDHV Enhancing Society Together PO Box 5195 Tiger Valley 7536 Tel: (021) 936 7500 Fax: (021) 936 7611 Email: capetown@rhdhv.com											
<b>CLIENT</b>  samancor											
<b>PROJECT/DRAWING TITLE</b> SOLAR PROJECT SITE 1 LAYOUT											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SCALE 1:2000 (A0)</td> <td style="width: 50%;">SHEET 1 OF 2</td> </tr> <tr> <td>CONTRACT No. .....</td> <td>PROJECT No. MD5462</td> </tr> <tr> <td>DRAWING No. MD5462-E101.1</td> <td>REV .....</td> </tr> </table>		SCALE 1:2000 (A0)	SHEET 1 OF 2	CONTRACT No. .....	PROJECT No. MD5462	DRAWING No. MD5462-E101.1	REV .....				
SCALE 1:2000 (A0)	SHEET 1 OF 2										
CONTRACT No. .....	PROJECT No. MD5462										
DRAWING No. MD5462-E101.1	REV .....										





DRG. No.	REFERENCE DRAWINGS
<b>LEGEND:</b>	
	BOX-TRANSFORMER AND INVERTER
	SOLAR PV STRUCTURE (2 x STRINGS OF 28 x PANELS) 32m x 5m
	1.8m CLEAR VIEW FENCE WITH OVERHANG
	5m ACCESS ROAD
	GUARD HOUSE
	33kV UNDERGROUND CABLE
	WATER STORAGE TANK
	POWER CORRIDOR
	BOREHOLE POINT
<b>CO-ORDINATES:</b>	
A:	X=80368.667 Y=2737111.573
B:	X=79978.357 Y=2736920.020
C:	X=79451.692 Y=2736737.096
D:	X=79403.445 Y=2736747.020
E:	X=79283.416 Y=2736912.504
F:	X=80179.203 Y=2737277.624
GA8:	X=82520.873 Y=2737218.002
GA20R:	X=80231.426 Y=2737034.135
GA47:	X=78454.049 Y=2736919.983
GA49:	X=79669.087 Y=2737000.979
TWB1:	X=82960.128 Y=2737338.751
TWB2:	X=83009.063 Y=2737955.596
TWB7:	X=82994.746 Y=2737332.906

- NOTES:**
1. NO PROVISION MADE FOR BESS.
  2. NO SUBSTATIONS ON SITE 2.
  3. NO CULVERTS OR PIPELINES ON SITE 2.

REV	DESCRIPTION	DATE	REV BY	CHKD BY
T	ISSUED FOR INFORMATION	11/08/21	M	R

DESIGNED	P. KONIG
DRAWN	J. WANDRAG
CHECKED	C. LOTTER

**APPROVED**

P. KONIG :  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**Royal HaskoningDHV**  
Enhancing Society Together

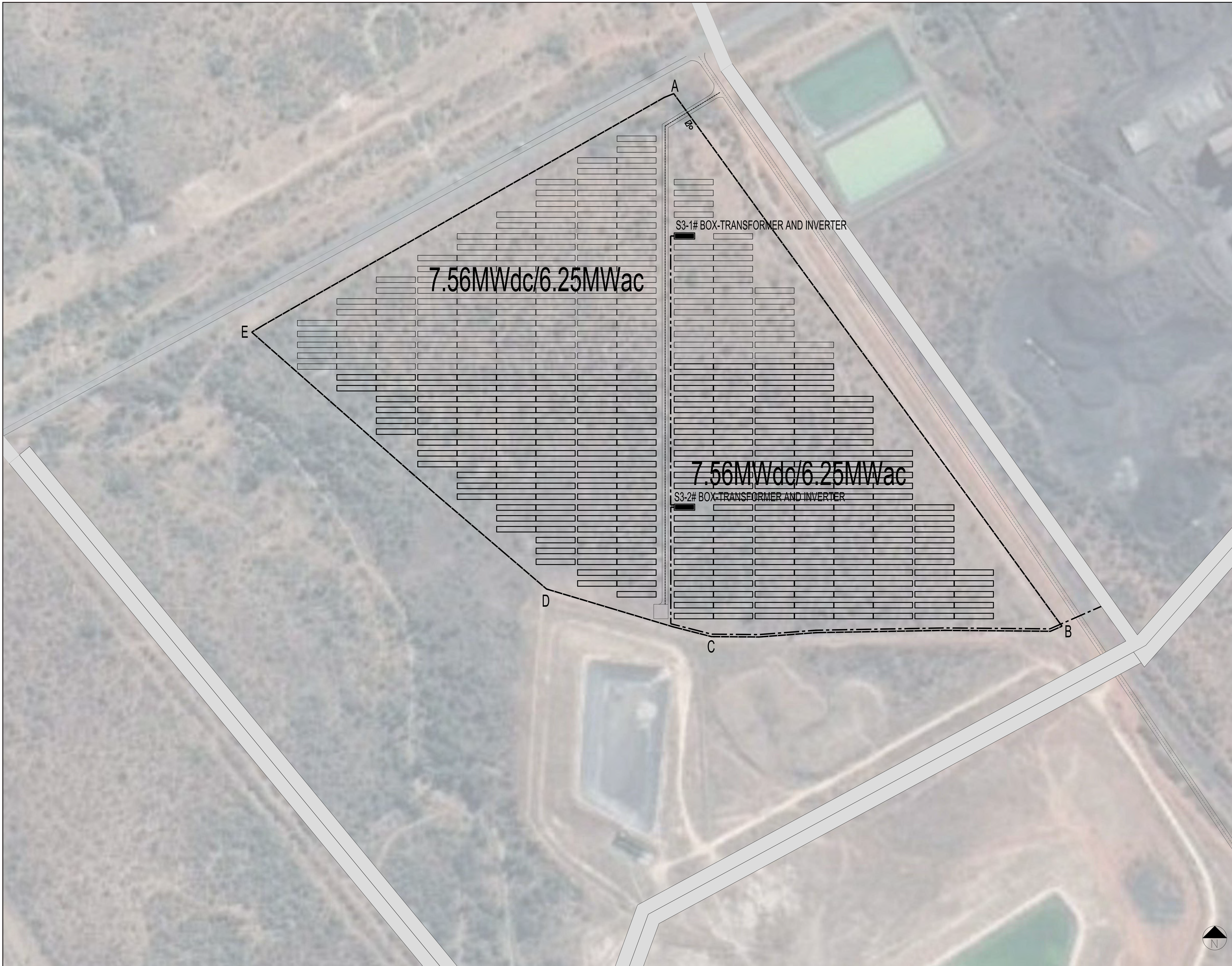
PO Box 5195 Tel: (021) 936  
TIGER VALLEY 7500 Fax: (021)  
7536 936 7611  
Email: capetown@rhdhv.com

CLIENT

PROJECT/DRAWING TITLE

SOLAR PROJECT  
SITE 2 LAYOUT

SCALE	SHEET
1:2000 (A0)	1 OF 2
CONTRACT No.	PROJECT No.
.....	MD5462
DRAWING No.	REV
MD5462-E102.1	



DRG. No.	REFERENCE DRAWINGS
LEGEND:	
	BOX-TRANSFORMER AND INVERTER
	SOLAR PV STRUCTURE (2 x STRINGS OF 28 x PANELS) 32m x 5m
	1.8m CLEAR VIEW FENCE WITH OVERHANG
	5m ACCESS ROAD
	GUARD HOUSE
	33KV UNDERGROUND CABLE
	WATER STORAGE TANK
	POWER CORRIDOR

CO-ORDINATES:  
 A: X=82272.415 Y=2737865.481  
 B: X=81950.269 Y=2738307.342  
 C: X=82241.238 Y=2738315.962  
 D: X=82377.998 Y=2738276.481  
 E: X=82622.696 Y=2738063.313

- NOTES:
1. NO BOREHOLES OR PUMPS ON SITE 3.
  2. NO PROVISION MADE FOR BESS.
  3. NO SUBSTATIONS ON SITE 3.
  4. NO CULVERTS OR PIPELINES ON SITE 3.

REV	DESCRIPTION	DATE	REV BY	CHKD BY
T	ISSUED FOR INFORMATION	11/08/21	JM	RL

DESIGNED	P. KONIG
DRAWN	J. WANDRAG
CHECKED	C. LOTTER

APPROVED:  
 P. KONIG :  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

Royal HaskoningDHV  
 Enhancing Society Together

PO Box 5195 Tel: (021) 936  
 TIGER VALLEY 7500 Fax: (021)  
 7536 936 7611  
 Email: capetown@rhdhv.com

CLIENT

PROJECT/DRAWING TITLE

SOLAR PROJECT  
 SITE 3 LAYOUT

SCALE	1:1000 (A0)	SHEET	1 OF 2
CONTRACT No.	.....	PROJECT No.	MD5462
DRAWING No.	MD5462-E103.1	REV	





DRG. No.	REFERENCE DRAWINGS
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**LEGEND:**

- BOX-TRANSFORMER AND INVERTER
- SOLAR PV STRUCTURE (2 x STRINGS OF 28 x PANELS) 32m x 5m
- 1.8m CLEAR VIEW FENCE WITH OVERHANG
- 5m ACCESS ROAD
- GUARD HOUSE
- 33KV UNDERGROUND CABLE
- WATER STORAGE TANK
- POWER CORRIDOR

**CO-ORDINATES:**

A: X=82820.569 Y=2738205.819  
 B: X=82982.114 Y=2738723.119  
 C: X=82980.478 Y=2738857.891  
 D: X=82518.258 Y=2739065.030  
 E: X=82971.783 Y=2738293.428

**NOTES:**

- NO BOREHOLES OR PUMPS ON SITE 4.
- NO PROVISION MADE FOR BESS.
- NO SUBSTATIONS ON SITE 4.
- NO CULVERTS OR PIPELINES ON SITE 4.

T	ISSUED FOR INFORMATION	11/08/21	M	R
REV	DESCRIPTION	DATE	REV BY	CHKD BY

DESIGNED	P. KONIG
DRAWN	J. WANDRAG
CHECKED	C. LOTTER

**APPROVED**

P. KONIG :  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

Royal HaskoningDHV  
Enhancing Society Together

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**CLIENT**

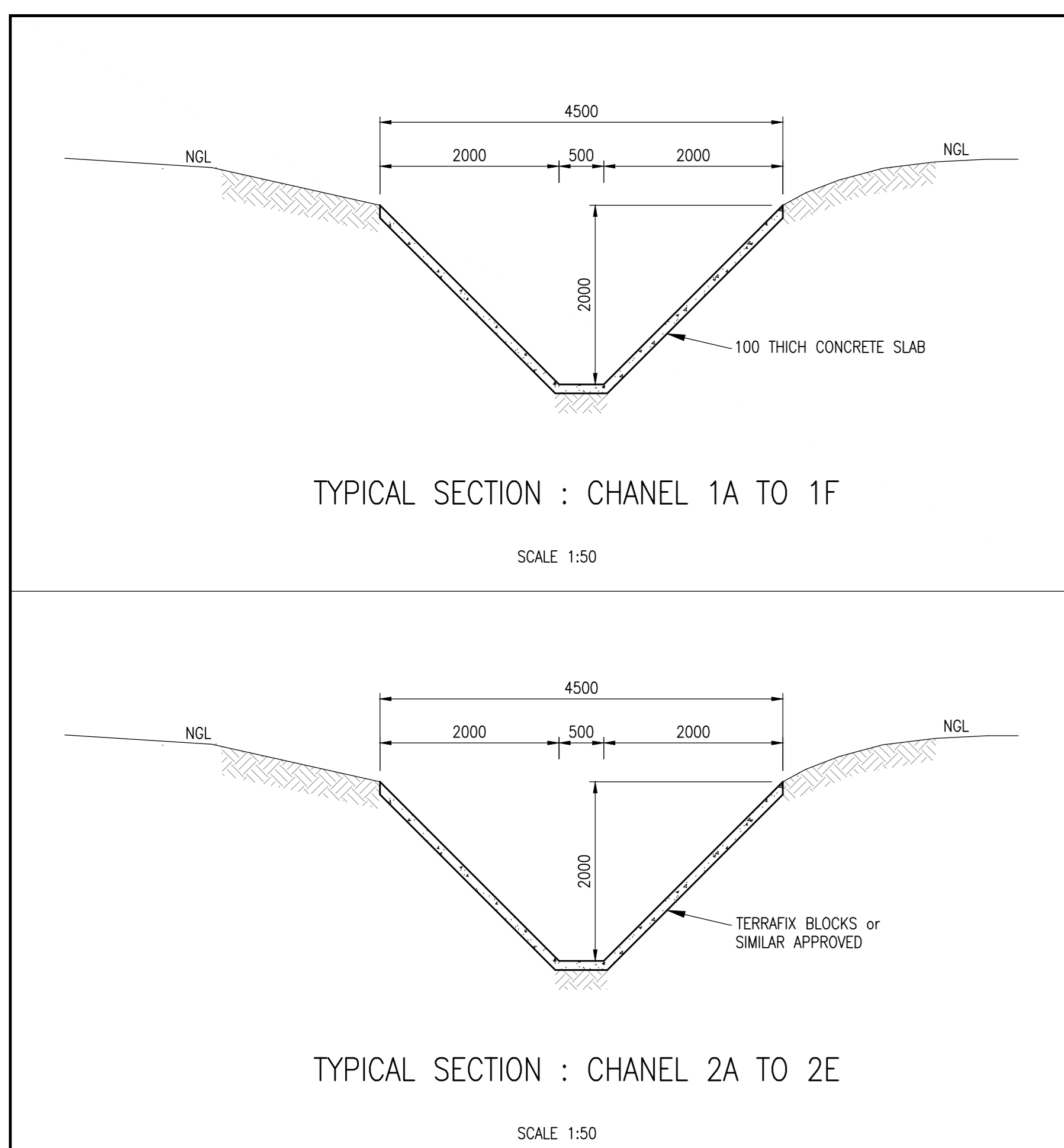
**samancor**

**PROJECT/DRAWING TITLE**

SOLAR PROJECT  
 SITE 4 LAYOUT

SCALE	SHEET
1:1250 (A0)	1 OF 2
CONTRACT No.	PROJECT No.
.....	MD5462
DRAWING No.	REV
MD5462-E104.1	





DRG. No. REFERENCE DRAWINGS

**LEGEND:**

- BOX-TRANSFORMER AND INVERTER
- ▭ SOLAR PV STRUCTURE (2 x STRINGS OF 28 x PANELS) 32m x 6m
- 1.8m CLEAR VIEW FENCE WITH OVERHANG
- 5m ACCESS ROAD
- GUARD HOUSE
- 33KV UNDERGROUND CABLE
- CULVERT (4m WIDE, 2m DEEP)
- WATER STORAGE TANK
- ▭ POWER CORRIDOR
- ⊙ BOREHOLE POINT

**CO-ORDINATES:**

A: X=82083.712 Y=2737774.837  
 B: X=83112.518 Y=2737566.935  
 C: X=83033.045 Y=2737515.863  
 D: X=82693.827 Y=2737289.628  
 E: X=82690.472 Y=2737287.447  
 F: X=82694.909 Y=2737220.797  
 G: X=82692.389 Y=2737217.682  
 H: X=82350.984 Y=2736934.867  
 I: X=82177.141 Y=2736942.814  
 J: X=82092.110 Y=2737106.439  
 K: X=82123.265 Y=2737217.602  
 L: X=82144.431 Y=2737370.002  
 M: X=82386.409 Y=2737474.290  
 N: X=82340.555 Y=2737610.748  
 O: X=82099.452 Y=2737453.611  
 P: X=82005.789 Y=2737570.557  
 Q: X=82288.573 Y=2737733.810  
 R: X=82293.828 Y=2737809.053  
 S: X=82284.482 Y=2737824.581  
 T: X=82288.537 Y=2737825.075  
 U: X=82309.965 Y=2737836.355  
 V: X=82373.291 Y=2737870.711  
 W: X=82485.533 Y=2737883.746  
 X: X=82706.841 Y=2738055.107  
 Y: X=82773.184 Y=2738092.611  
 Z: X=83001.735 Y=2738229.533

1A: X=82692.118 Y=2737288.590  
 1B: X=82690.181 Y=2737439.986  
 1C: X=82585.846 Y=2737568.774  
 1D: X=82553.212 Y=2737646.490  
 1E: X=82442.193 Y=2737768.155  
 1F: X=82371.734 Y=2737869.773

2A: X=82693.562 Y=2737219.319  
 2B: X=82421.833 Y=2737384.963  
 2C: X=82420.065 Y=2737478.451  
 2D: X=82368.978 Y=2737566.962  
 2E: X=82286.732 Y=2737824.671

GA8: X=82520.873 Y=2737218.002  
 GA20R: X=80231.426 Y=2737034.135  
 GA47: X=79454.049 Y=2728919.983  
 GA48: X=79666.087 Y=2737000.979  
 TWB1: X=82960.128 Y=2737538.751  
 TWB2: X=83008.063 Y=2737905.598  
 TWB7: X=82994.746 Y=2737332.906

**NOTES:**

1. NO SUBSTATIONS ON SITE 5.

REV	DESCRIPTION	DATE	REV BY	CHKD BY
T	ISSUED FOR INFORMATION	11/08/21	M	R

DESIGNED	P. KONIG
DRAWN	J. WANDRAG
CHECKED	C. LOTTER

APPROVED  
 P. KONIG : PrEng # 880040  
 SIGNATURE: *[Signature]* DATE: 08/10/2021

**Royal HaskoningDHV**  
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PROJECT/DRAWING TITLE  
 SOLAR PROJECT  
 SITE 5 LAYOUT

SCALE 1:2000 (A0)	SHEET 1 OF 2
CONTRACT No. .....	PROJECT No. MD5462
DRAWING No. MD5462-E105.1	REV △