Table of Contents

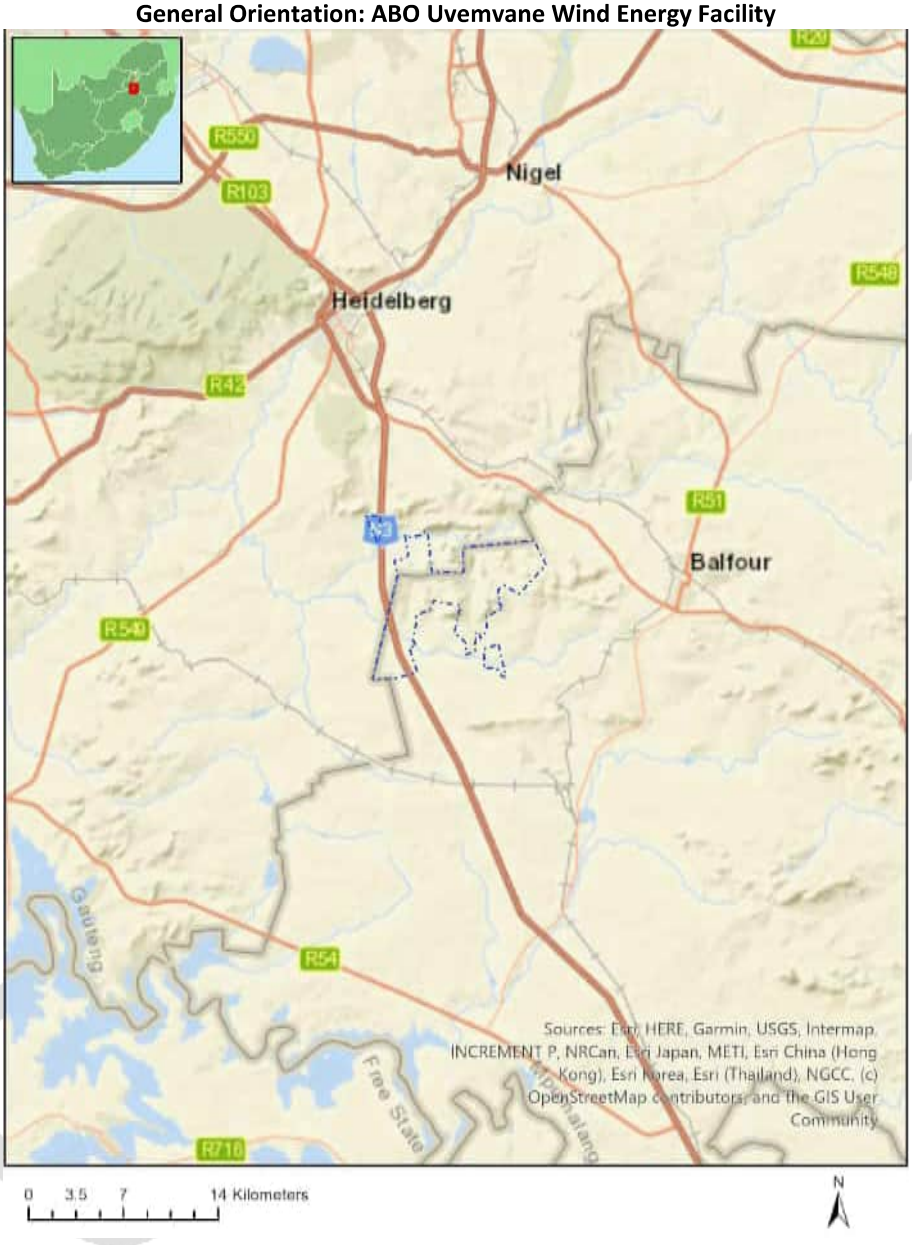
Proposed Project Location 3
Orientation map 1: General location 3
Map of proposed site and relevant area(s) 4
Cadastral details of the proposed site 4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area 6
Environmental Management Frameworks relevant to the application 6
Environmental screening results and assessment outcomes 6
Relevant development incentives, restrictions, exclusions or prohibitions 7
Proposed Development Area Environmental Sensitivity 7
Specialist assessments identified 7
Results of the environmental sensitivity of the proposed area. 10
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY 10
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY 11
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY 12
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY 13
MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY 14
MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY 15
MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY 16
MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY 17
MAP OF RELATIVE FLICKER THEME SENSITIVITY 18
MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY 19
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY 20
MAP OF RELATIVE NOISE THEME SENSITIVITY 21
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY 22
MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY 23
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 24
MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY 25

OFFICIAL

Proposed Project Location

Orientation map 1: General location

General Orientation: ABO Uvemvane Wind Energy Facility



Map of proposed site and relevant area(s)

Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	DRIEFONTEIN	405	0	26°39'11.56S	28°28'2.7E	Farm
2	WELTEVREDEN	449	0	26°42'35.06S	28°27'41.86E	Farm
3	ZANDHOEK	451	0	26°41'47.92S	28°27'33.68E	Farm
4	KLEINFONTEIN	446	0	26°44'11.65S	28°23'24.59E	Farm
5	VLAKFONTEIN	448	0	26°44'27.21S	28°26'22.96E	Farm
6	ORION	413	0	26°38'42.3S	28°24'46.15E	Farm
7	LAGERSPOORT	406	0	26°36'54.64S	28°24'33.42E	Farm
8	KLIPFONTEIN	450	0	26°42'51.21S	28°28'53.36E	Farm
9	STEYNSKRAAL	399	0	26°37'18.75S	28°27'54.29E	Farm
10	WILDEBEESTFONTEIN	559	0	26°38'0.67S	28°30'34.98E	Farm
11	DE HOEK	411	0	26°37'39.87S	28°21'57.62E	Farm
12	POTGIETERSRUS	693	0	26°40'33.18S	28°28'24.2E	Farm
13	TWEEFONTEIN	560	0	26°41'20.76S	28°30'7.01E	Farm
14	MALANSKRAAL	407	0	26°41'7.49S	28°25'9.68E	Farm
15	MODDERFONTEIN	410	0	26°40'34.55S	28°22'22.58E	Farm
16	STEYNSKRAAL	399	11	26°37'53S	28°28'22.21E	Farm Portion
17	DRIEFONTEIN	405	1	26°38'52.61S	28°27'52.28E	Farm Portion
18	DRIEFONTEIN	405	7	26°38'54.16S	28°26'52.9E	Farm Portion
19	DRIEFONTEIN	405	2	26°40'17.12S	28°27'8.35E	Farm Portion
20	DRIEFONTEIN	405	5	26°38'43.16S	28°29'0.04E	Farm Portion
21	DRIEFONTEIN	405	0	26°40'1.45S	28°27'40.66E	Farm Portion
22	DRIEFONTEIN	405	8	26°40'14.6S	28°28'16.67E	Farm Portion
23	LAGERSPOORT	406	39	26°37'36.74S	28°23'15.94E	Farm Portion
24	LAGERSPOORT	406	8	26°38'26.48S	28°24'0.84E	Farm Portion
25	LAGERSPOORT	406	5	26°38'39.88S	28°25'42.6E	Farm Portion
26	LAGERSPOORT	406	32	26°38'25.05S	28°26'19.28E	Farm Portion
27	LAGERSPOORT	406	21	26°38'2.16S	28°23'16.55E	Farm Portion

Disclaimer applies

28	LAGERSPOORT	406	11	26°37'33.74S	28°25'7.94E	Farm Portion
29	LAGERSPOORT	406	7	26°37'48.71S	28°24'39.05E	Farm Portion
30	LAGERSPOORT	406	45	26°37'32.82S	28°24'10.22E	Farm Portion
31	LAGERSPOORT	406	2	26°36'27.1S	28°23'46.99E	Farm Portion
32	LAGERSPOORT	406	40	26°36'9.46S	28°23'21.31E	Farm Portion
33	LAGERSPOORT	406	30	26°37'36.15S	28°23'14.85E	Farm Portion
34	MALANSKRAAL	407	8	26°40'39.54S	28°25'11.66E	Farm Portion
35	MALANSKRAAL	407	4	26°41'20.53S	28°25'5.15E	Farm Portion
36	MALANSKRAAL	407	9	26°39'47.16S	28°25'20.58E	Farm Portion
37	MALANSKRAAL	407	12	26°40'25.12S	28°26'48.34E	Farm Portion
38	MALANSKRAAL	407	13	26°41'50.33S	28°26'52.66E	Farm Portion
39	MALANSKRAAL	407	15	26°40'41.08S	28°25'48.32E	Farm Portion
40	MALANSKRAAL	407	20	26°41'27.3S	28°26'56.56E	Farm Portion
41	MALANSKRAAL	407	5	26°41'55.85S	28°27'9.72E	Farm Portion
42	MALANSKRAAL	407	6	26°41'34.92S	28°23'48.32E	Farm Portion
43	MALANSKRAAL	407	3	26°41'40.56S	28°25'25.4E	Farm Portion
44	MALANSKRAAL	407	16	26°41'34.58S	28°24'25.97E	Farm Portion
45	MALANSKRAAL	407	2	26°41'11.33S	28°26'34.08E	Farm Portion
46	MALANSKRAAL	407	17	26°40'35.88S	28°24'48.46E	Farm Portion
47	MALANSKRAAL	407	23	26°42'32.91S	28°24'17.85E	Farm Portion
48	MALANSKRAAL	407	18	26°42'22.84S	28°24'25.52E	Farm Portion
49	MODDERFONTEIN	410	7	26°41'51.06S	28°22'37.72E	Farm Portion
50	MODDERFONTEIN	410	1	26°40'25.94S	28°23'16.78E	Farm Portion
51	MODDERFONTEIN	410	10	26°40'26.39S	28°23'37.39E	Farm Portion
52	MODDERFONTEIN	410	2	26°39'10.11S	28°23'40.44E	Farm Portion
53	DE HOEK	411	15	26°37'39.89S	28°23'6.74E	Farm Portion
54	DE HOEK	411	19	26°38'18.54S	28°22'52.66E	Farm Portion
55	DE HOEK	411	11	26°37'35.59S	28°23'14.11E	Farm Portion
56	DE HOEK	411	1	26°36'24.38S	28°22'36.65E	Farm Portion
57	DE HOEK	411	4	26°37'26.13S	28°22'59.54E	Farm Portion
58	DE HOEK	411	13	26°37'34.85S	28°22'24.47E	Farm Portion
59	DE HOEK	411	10	26°37'36.71S	28°22'53.71E	Farm Portion
60	DE HOEK	411	18	26°37'39.48S	28°22'51.96E	Farm Portion
61	DE HOEK	411	16	26°37'46.29S	28°22'56.09E	Farm Portion
62	ORION	413	0	26°38'39.41S	28°24'44.97E	Farm Portion
63	KLEINFONTEIN	446	1	26°43'31.46S	28°23'2.11E	Farm Portion
64	VLAKFONTEIN	448	19	26°43'54.94S	28°24'30.59E	Farm Portion
65	VLAKFONTEIN	448	28	26°43'34.07S	28°24'53.64E	Farm Portion
66	VLAKFONTEIN	448	29	26°43'24.16S	28°24'49.64E	Farm Portion
67	VLAKFONTEIN	448	20	26°43'18.2S	28°25'23.73E	Farm Portion
68	VLAKFONTEIN	448	20	26°43'18.2S	28°25'23.73E	Farm Portion
69	VLAKFONTEIN	448	37	26°43'28.63S	28°25'3.19E	Farm Portion
70	WELTEVREDEN	449	0	26°42'22.85S	28°27'18.19E	Farm Portion
71	WELTEVREDEN	449	1	26°42'20.99S	28°27'49.1E	Farm Portion
72	WELTEVREDEN	449	2	26°42'57.98S	28°27'53.14E	Farm Portion
73	KLIPFONTEIN	450	2	26°42'28.18S	28°28'26.71E	Farm Portion
74	ZANDHOEK	451	0	26°41'47.92S	28°27'33.68E	Farm Portion
75	WILDEBEESTFONTEIN	559	11	26°38'51.05S	28°30'5.23E	Farm Portion
76	TWEEFONTEIN	560	1	26°39'55.49S	28°29'31.32E	Farm Portion
77	TWEEFONTEIN	560	7	26°41'53.65S	28°28'29.16E	Farm Portion
78	POTGIETERSRUS	693	0	26°40'36.52S	28°28'24.13E	Farm Portion

Development footprint[1] vertices:

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Disclaimer applies

No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2060	Solar PV	Approved	3.7

Environmental Management Frameworks relevant to the application

Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental

sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Utilities Infrastructure|Electricity|Generation|Renewable|Wind**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Air Quality-Vaal Triangle Airshed Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Final_VTAPA_AQMP_20090408_-15_April_2009.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Strategic Gas Pipeline Corridors-Phase 3: Richards Bay to Gauteng	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Avian (Wind) Theme				X
Bats (Wind) Theme		X		
Civil Aviation (Wind) Theme			X	
Defence (Wind) Theme			X	
Flicker Theme	X			
Landscape (Wind) Theme	X			
Paleontology Theme	X			
Noise Theme	X			
Plant Species Theme			X	
RFI (Wind) Theme		X		
Terrestrial Biodiversity Theme	X			
Vulture Species Theme			X	

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Avian Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Avifauna_Assessment_Protocols.pdf
8	Civil Aviation Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf
9	Defense Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf
10	RFI Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
12	Flicker Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
15	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
16	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf

Disclaimer applies

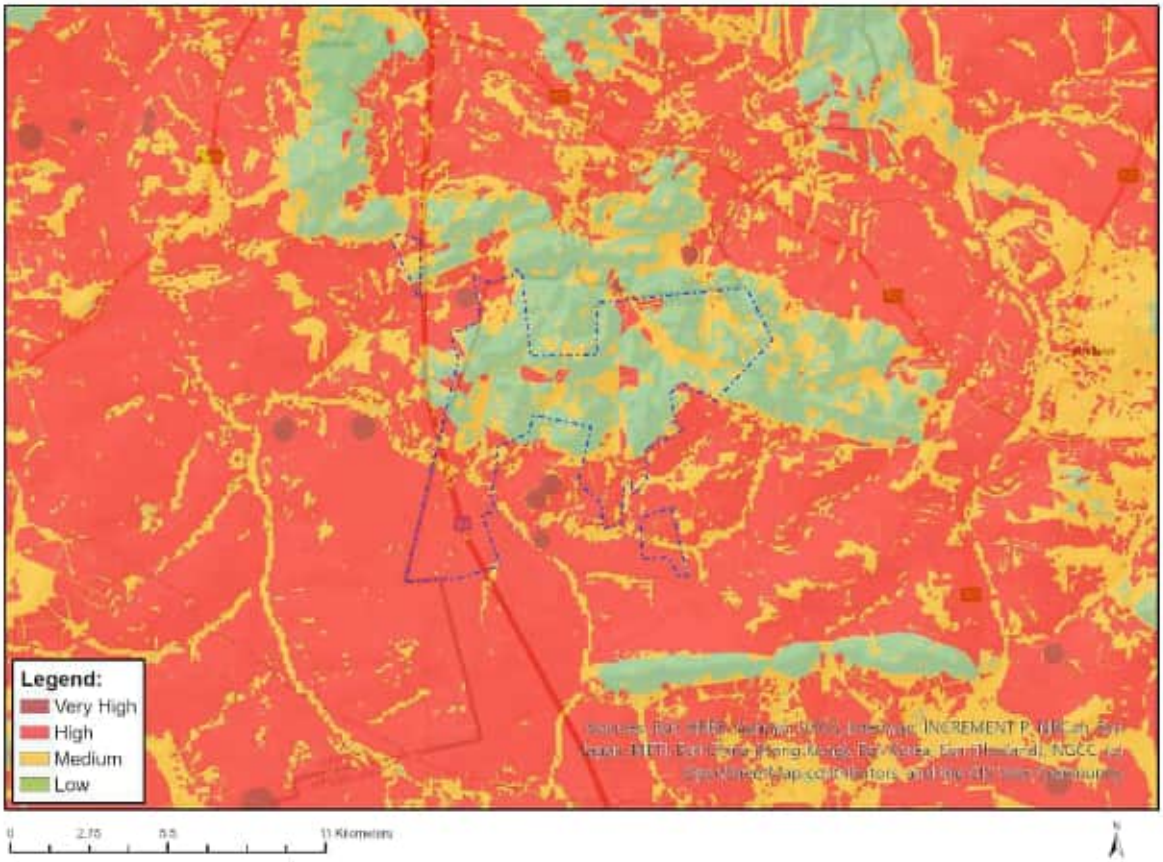
17	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

OFFICIAL

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



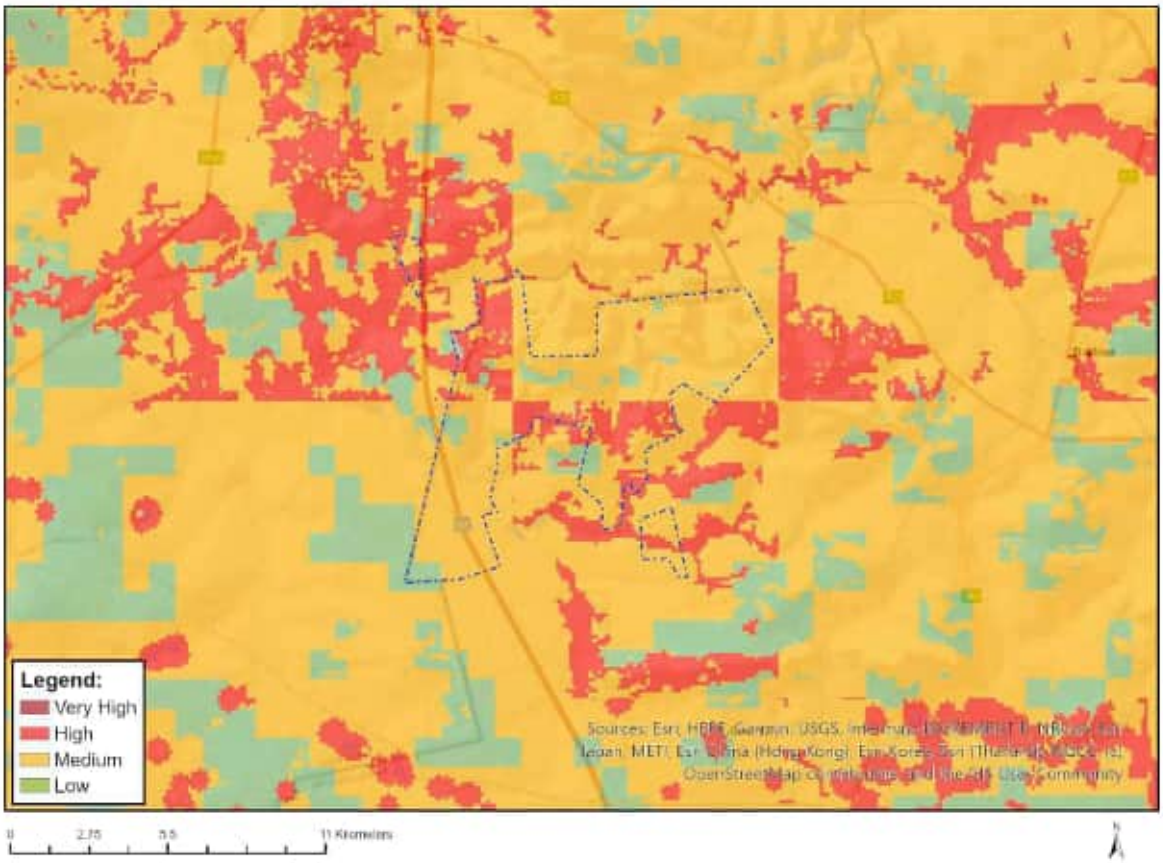
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Old Fields;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low

Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Sagittarius serpentarius
Low	Subject to confirmation
Medium	Aves-Circus ranivorus
Medium	Aves-Hydroprogne caspia
Medium	Aves-Sagittarius serpentarius
Medium	Aves-Eupodotis senegalensis
Medium	Insecta-Chrysoritis aureus
Medium	Insecta-Lepidochrysops procera
Medium	Insecta-Orachrysops mijburghi

Disclaimer applies

Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Hydrictis maculicollis
Medium	Mammalia-Ourebia ourebi ourebi

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

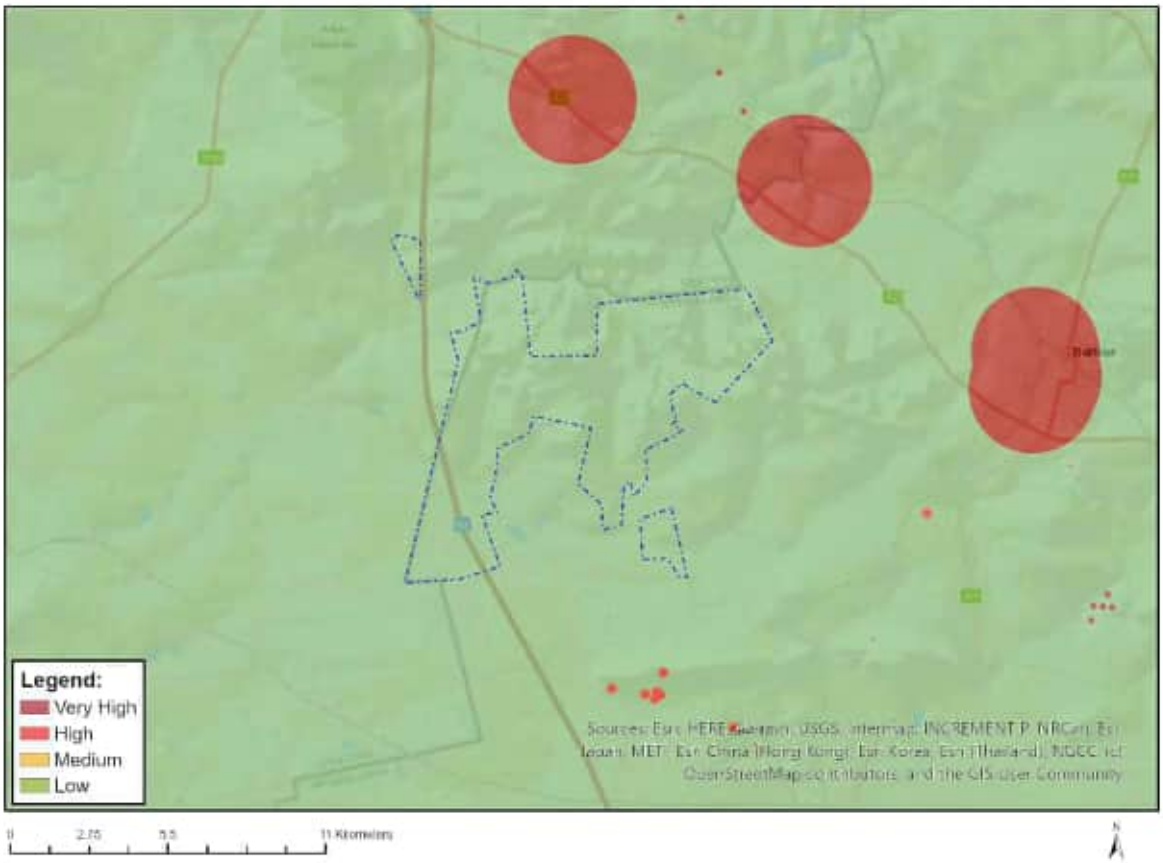
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	CBA: Wetlands
Very High	ESA: Wetlands
Very High	Rivers_C
Very High	Rivers_Z
Very High	Wetlands_(River)
Very High	Wetlands_Central Bushveld Bioregion (Seep)
Very High	Wetlands_Central Bushveld Bioregion (Valley-bottom)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Depression)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Floodplain)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Seep)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Valley-bottom)

Disclaimer applies

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

Disclaimer applies
06/11/2024

MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY

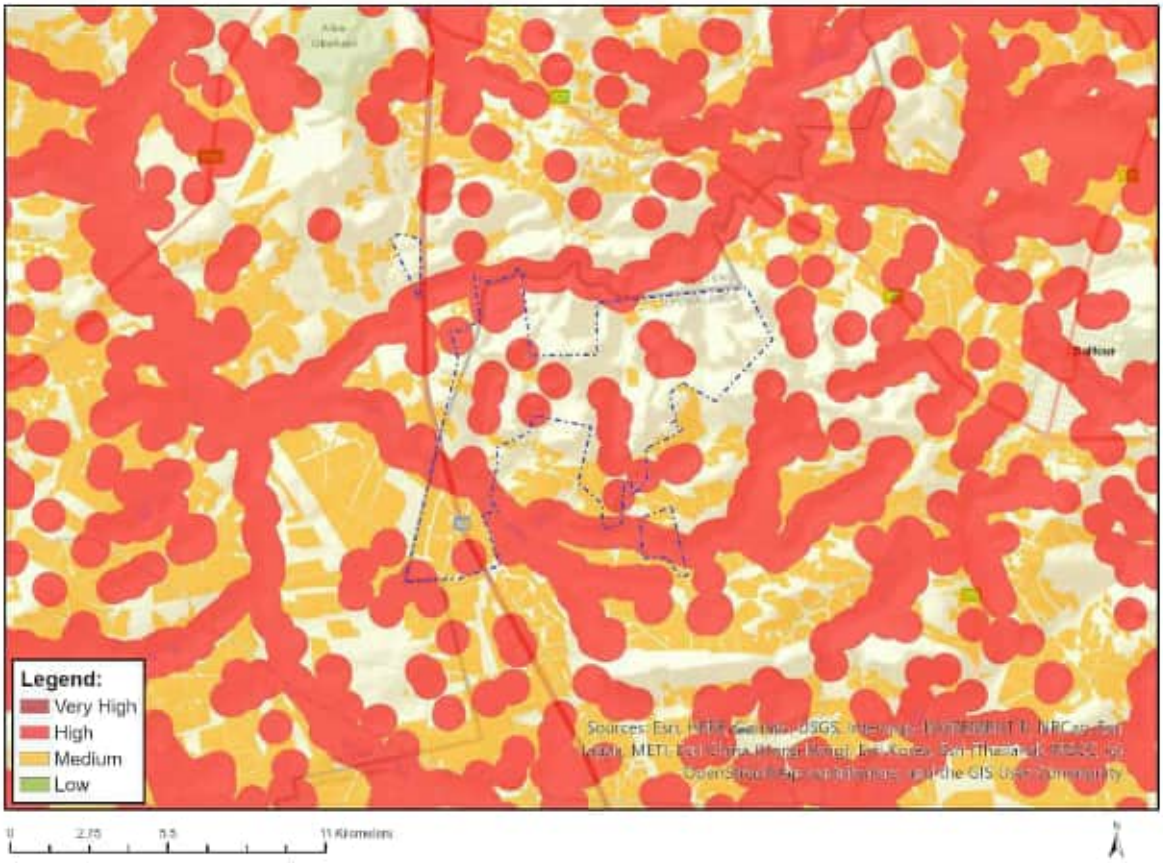
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area Outside Sensitivities

Disclaimer applies
06/11/2024

MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY



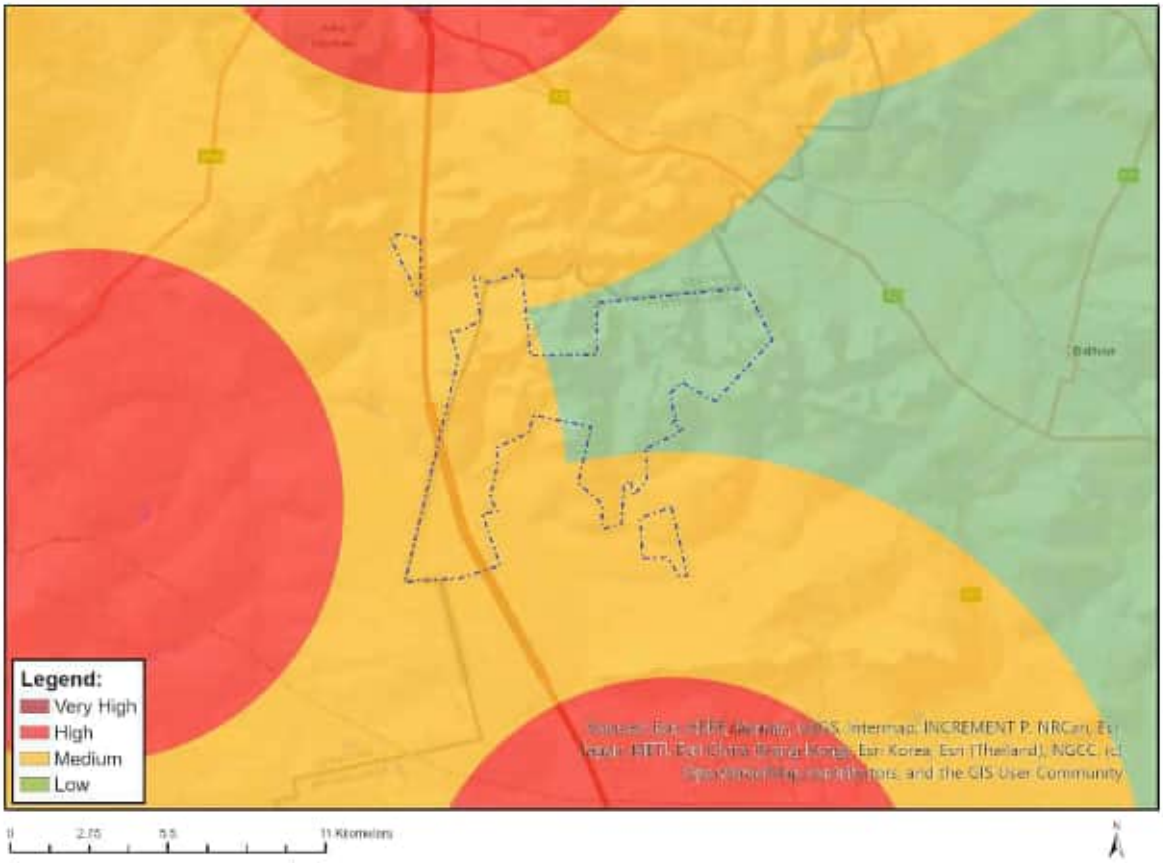
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 500 m of a river
High	Wetland
High	Within 500 m of a wetland
Medium	Croplands

Disclaimer applies

MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY



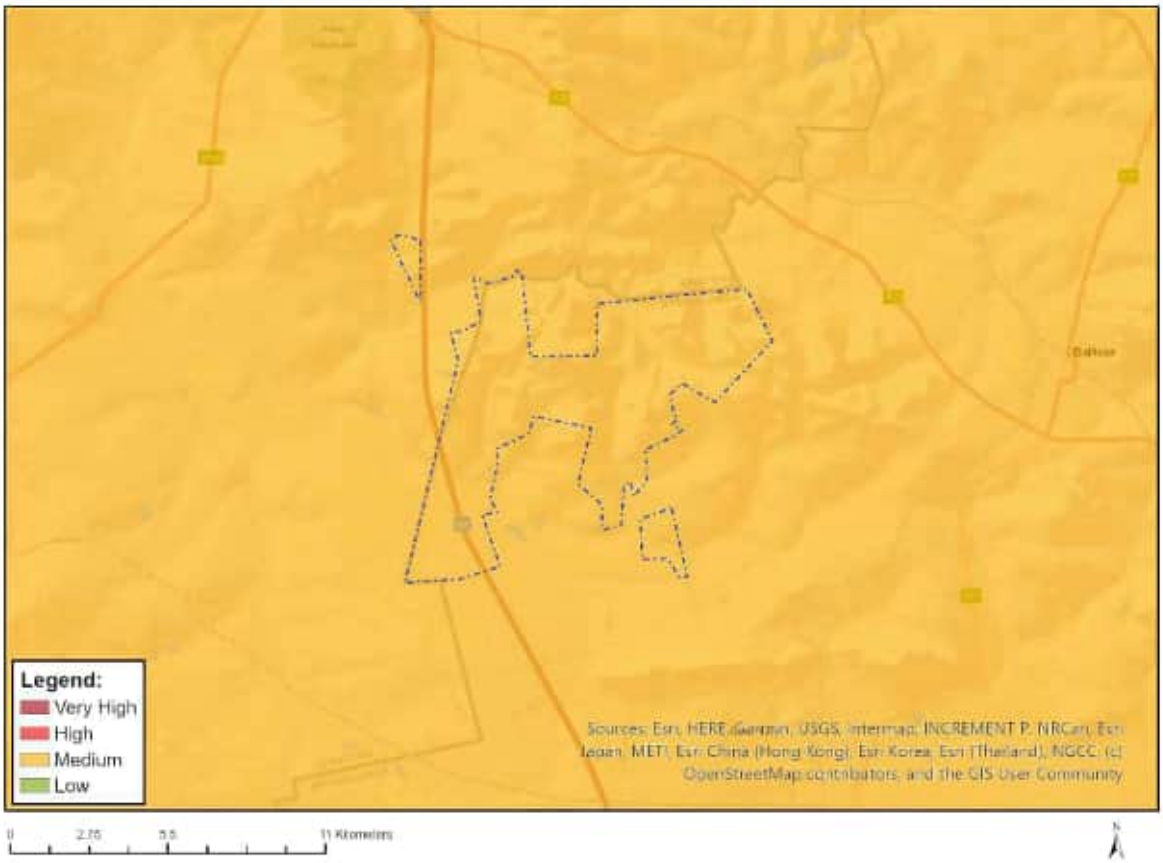
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Medium	Between 8 and 15 km of other civil aviation aerodrome

Disclaimer applies
06/11/2024

MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY



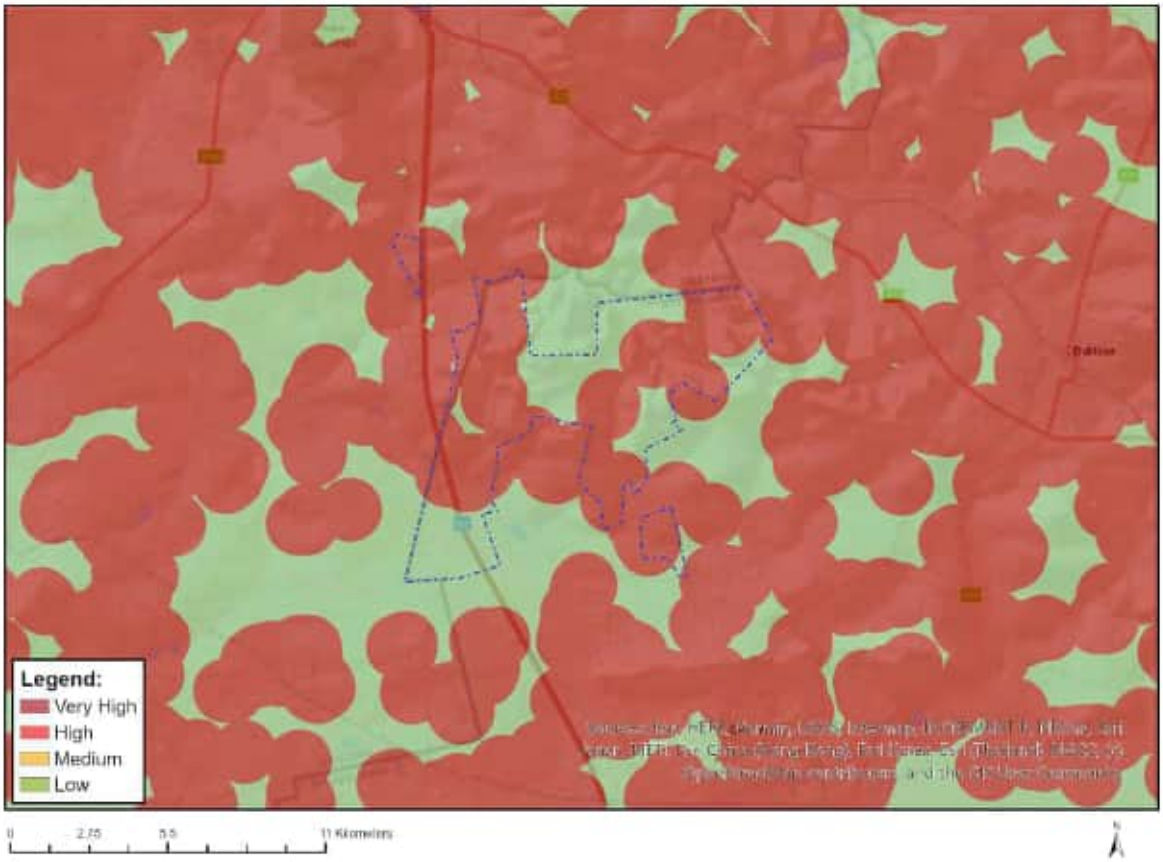
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Defence Site

Disclaimer applies
06/11/2024

MAP OF RELATIVE FLICKER THEME SENSITIVITY



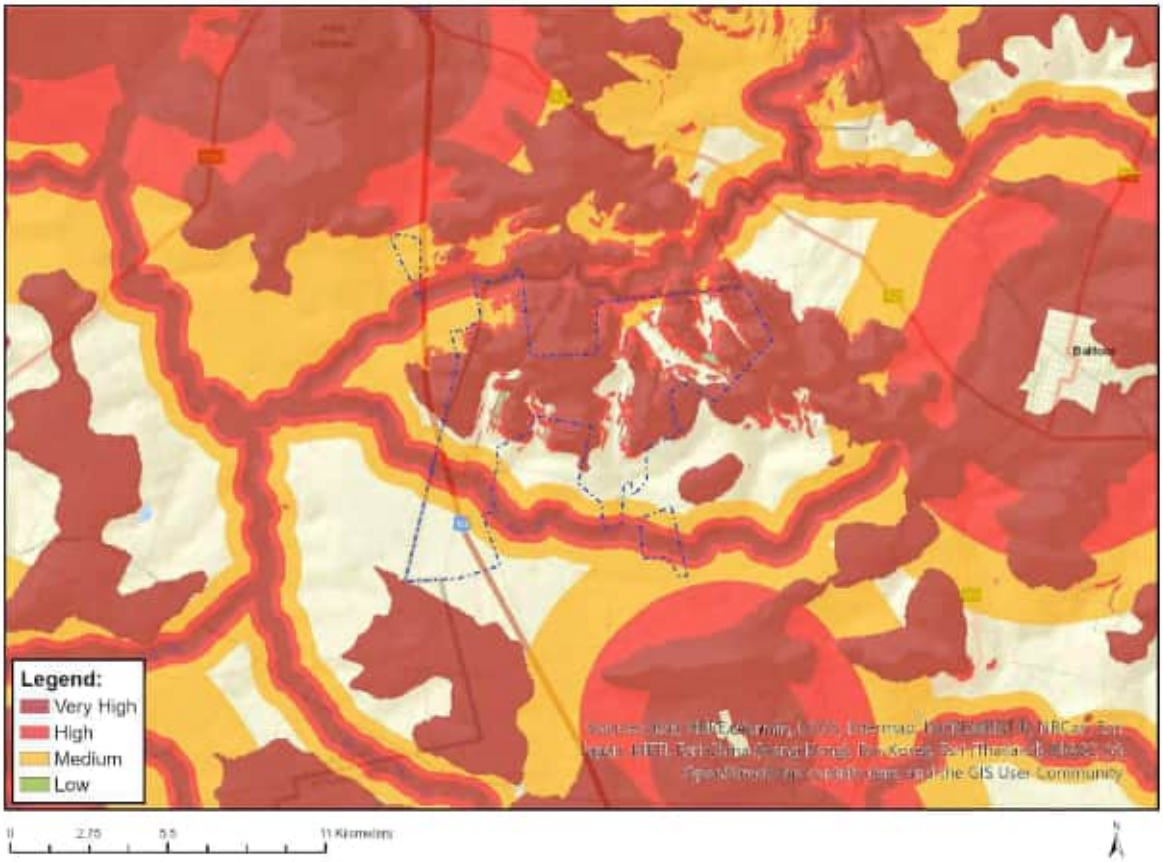
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
High	Slope between 1:4 and 1:10
High	Within 500 m of a river
Low	Slope less than 1:10
Medium	Between 4 and 6 km of a town or village
Medium	Between 5 and 10 km of a nature reserve, botanical garden or other protected area
Medium	Within 1000 m of a wetland
Very High	Mountain tops and high ridges
Very High	Slope more than 1:4
Very High	Within 250 m of a river

Disclaimer applies
06/11/2024

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

Unable to obtain map image.

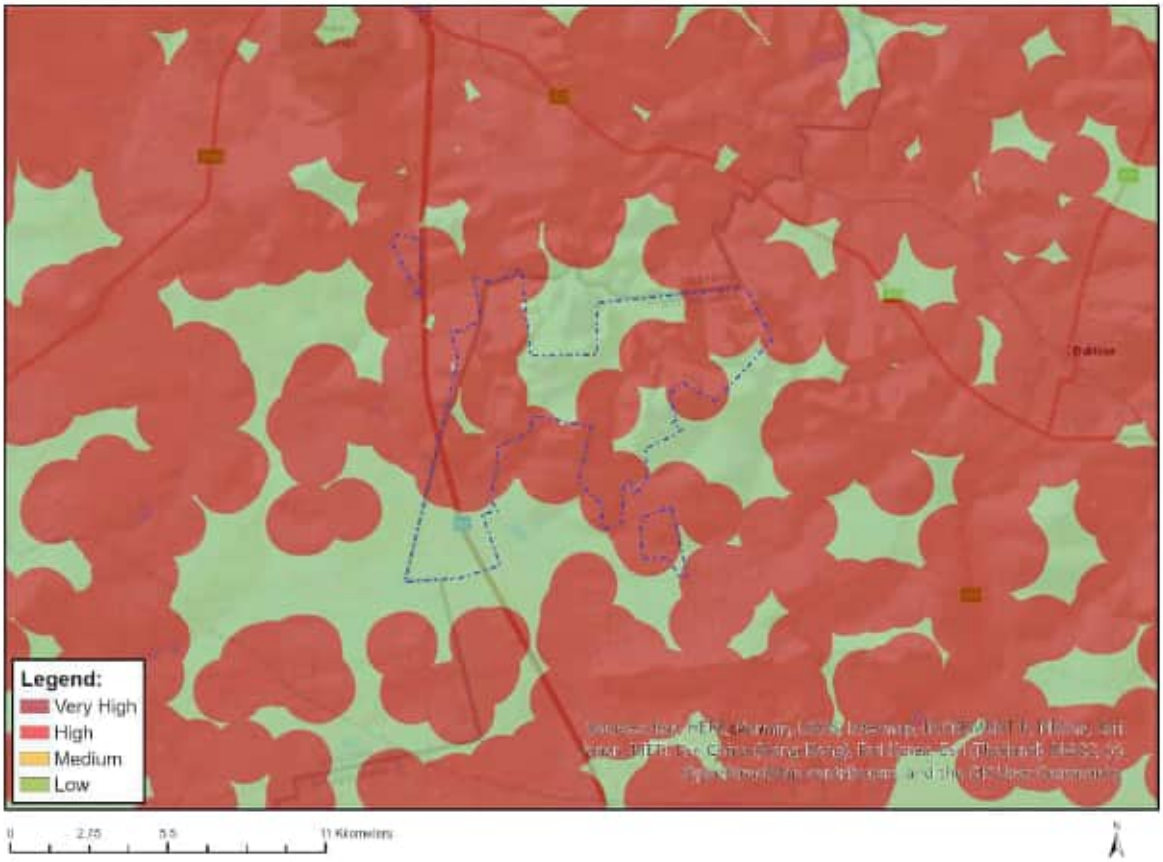
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity
Very High	Features with a Very High paleontological sensitivity

OFFICIAL

MAP OF RELATIVE NOISE THEME SENSITIVITY



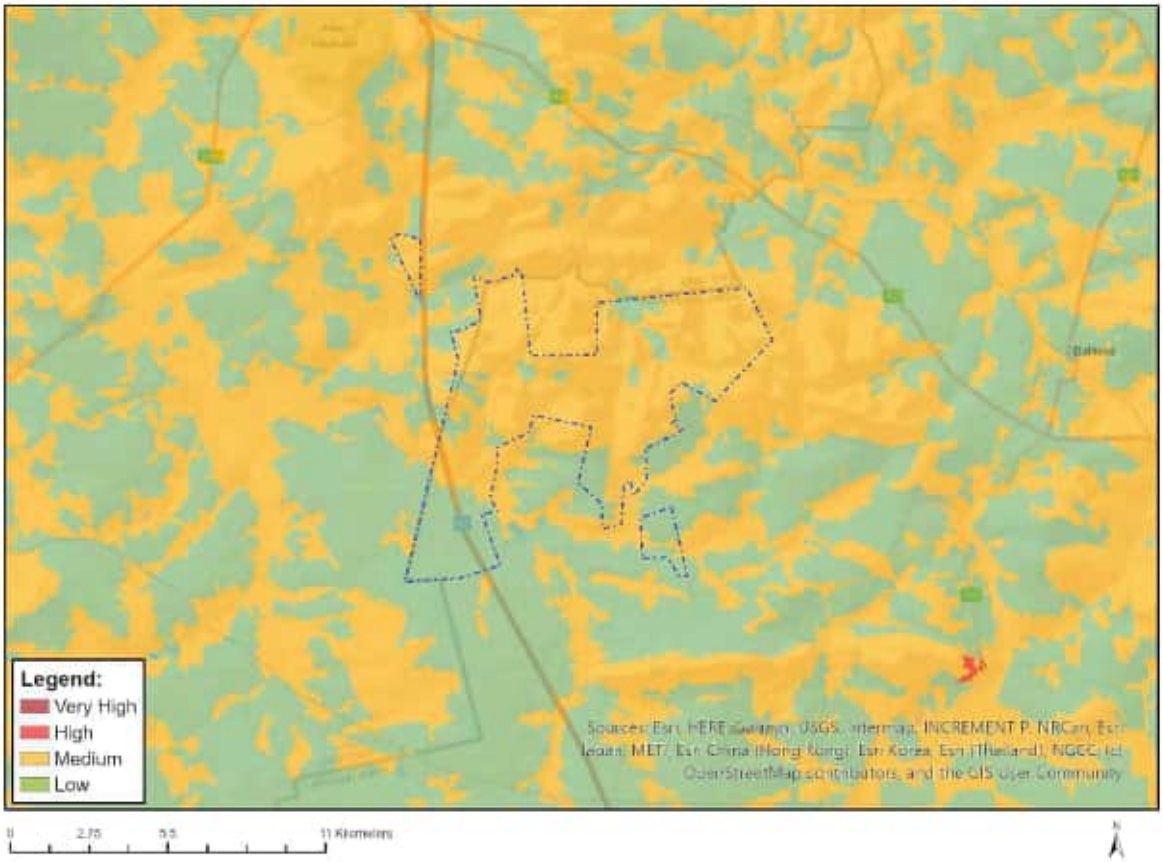
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



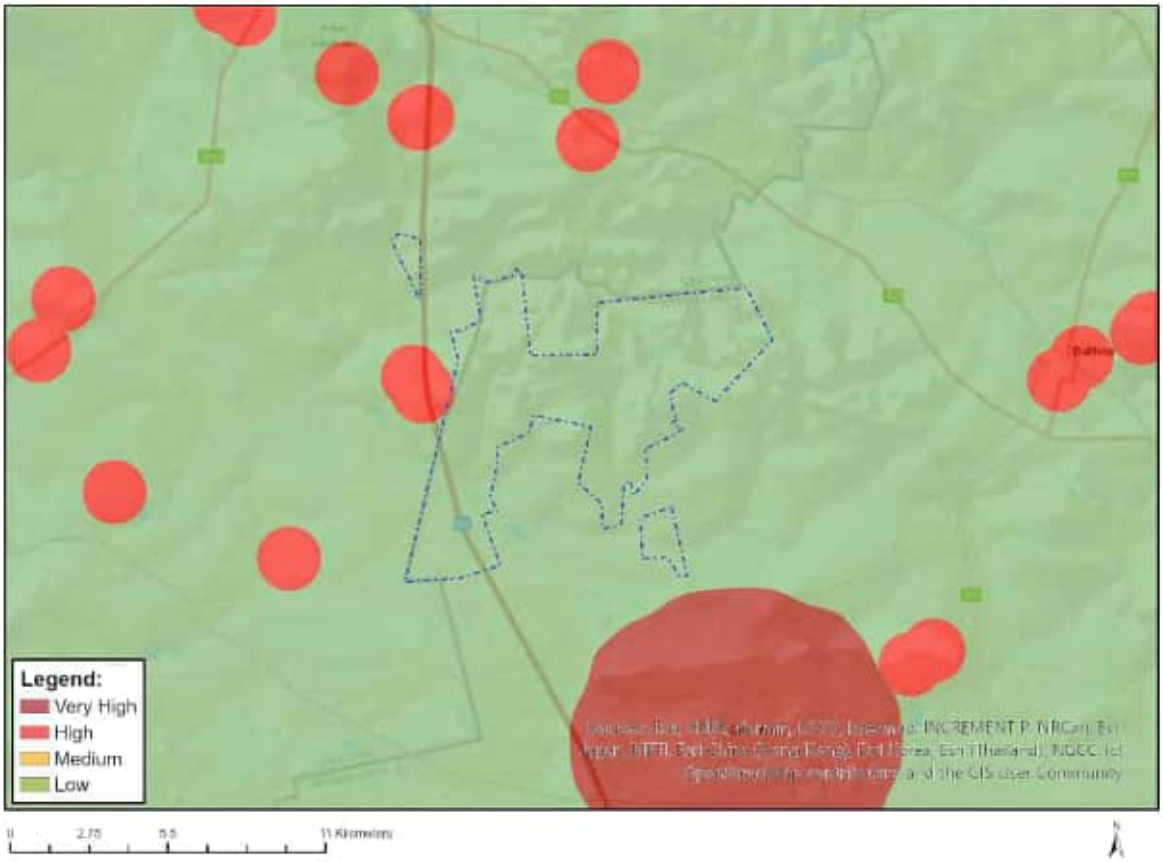
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Delosperma macellum
Medium	Cineraria longipes
Medium	Sensitive species 691
Medium	Brachycorythis conica subsp. transvaalensis
Medium	Sensitive species 1248
Medium	Prunus africana

MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY



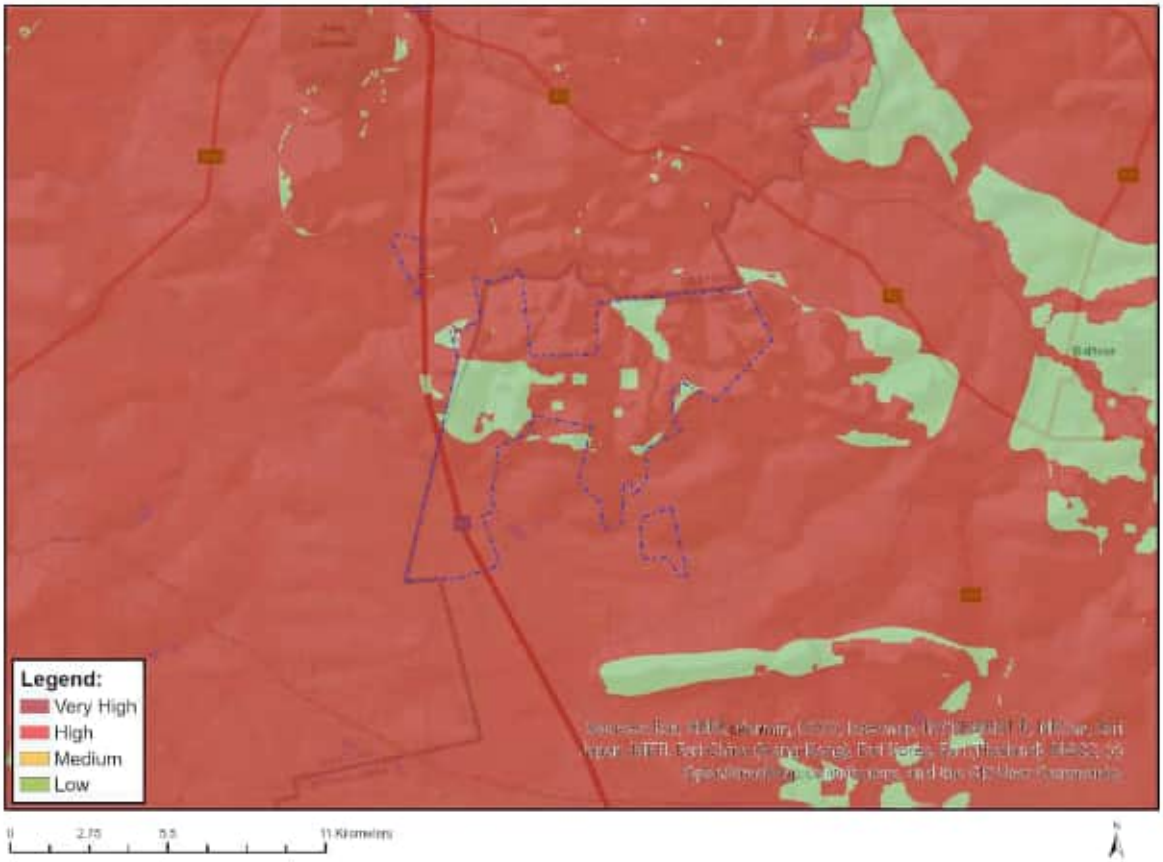
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 1 km of a telecommunication facility;None;More than 60 km from a Weather Radar installation
Low	Low sensitivity for telecommunications;None;More than 60 km from a Weather Radar installation

Disclaimer applies
06/11/2024

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



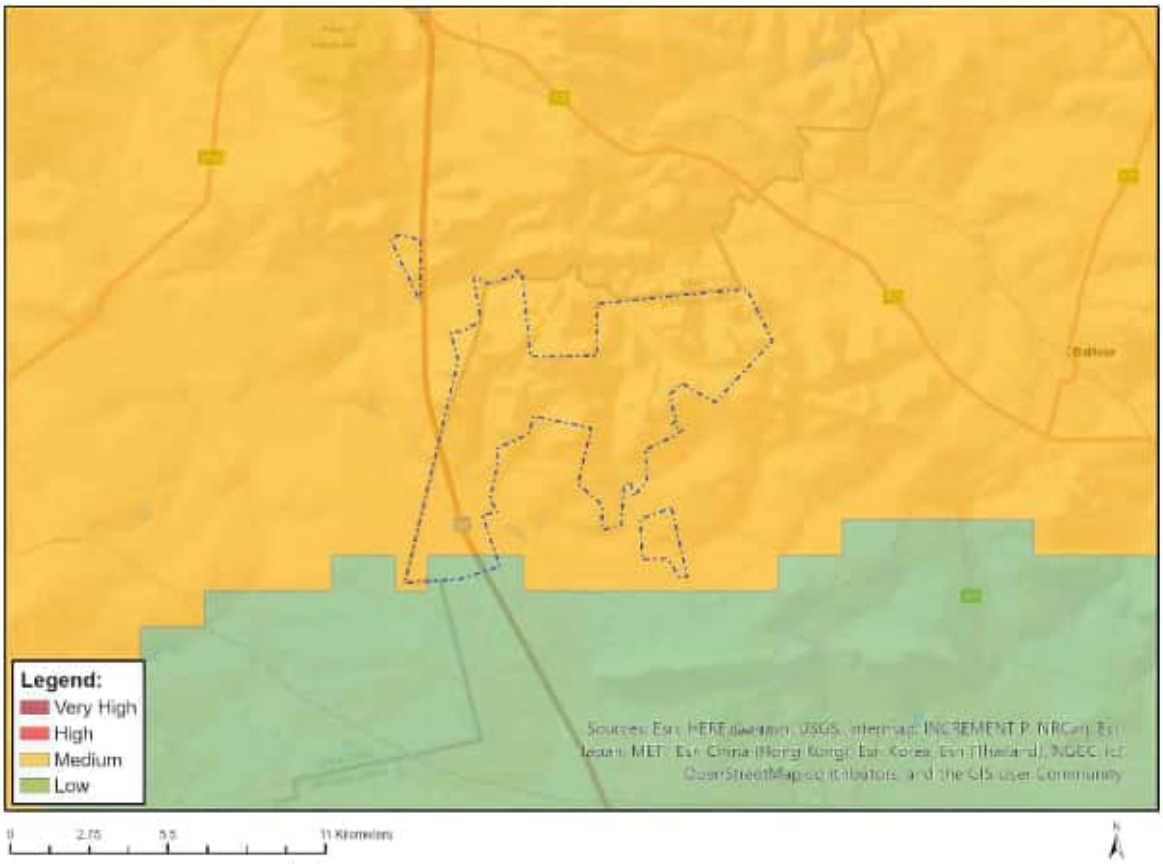
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	CBA 1
Very High	CBA 2
Very High	ESA 1
Very High	ESA 2
Very High	ESA: Landscape corridor
Very High	ESA: Local corridor
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	VU_Soweto Highveld Grassland
Very High	EN_Tsakane Clay Grassland

Disclaimer applies
06/11/2024

MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	affecting an area <1% of the population
Medium	affecting an area between 5% - 10% of the population

Disclaimer applies

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: TBC

Project name: ABO Uvemvane Wind Energy Facility

Project title: ABO Uvemvane Wind Energy Facility

Date screening report generated: 06/11/2024 10:18:57

Applicant: ABO Wind Renewable Energies (Pty) Ltd

Compiler: WSP Group Africa (Pty) Ltd

Compiler signature:

.....

Application Category: Utilities Infrastructure|Electricity|Generation|Renewable|Wind

OFFICIAL

Table of Contents

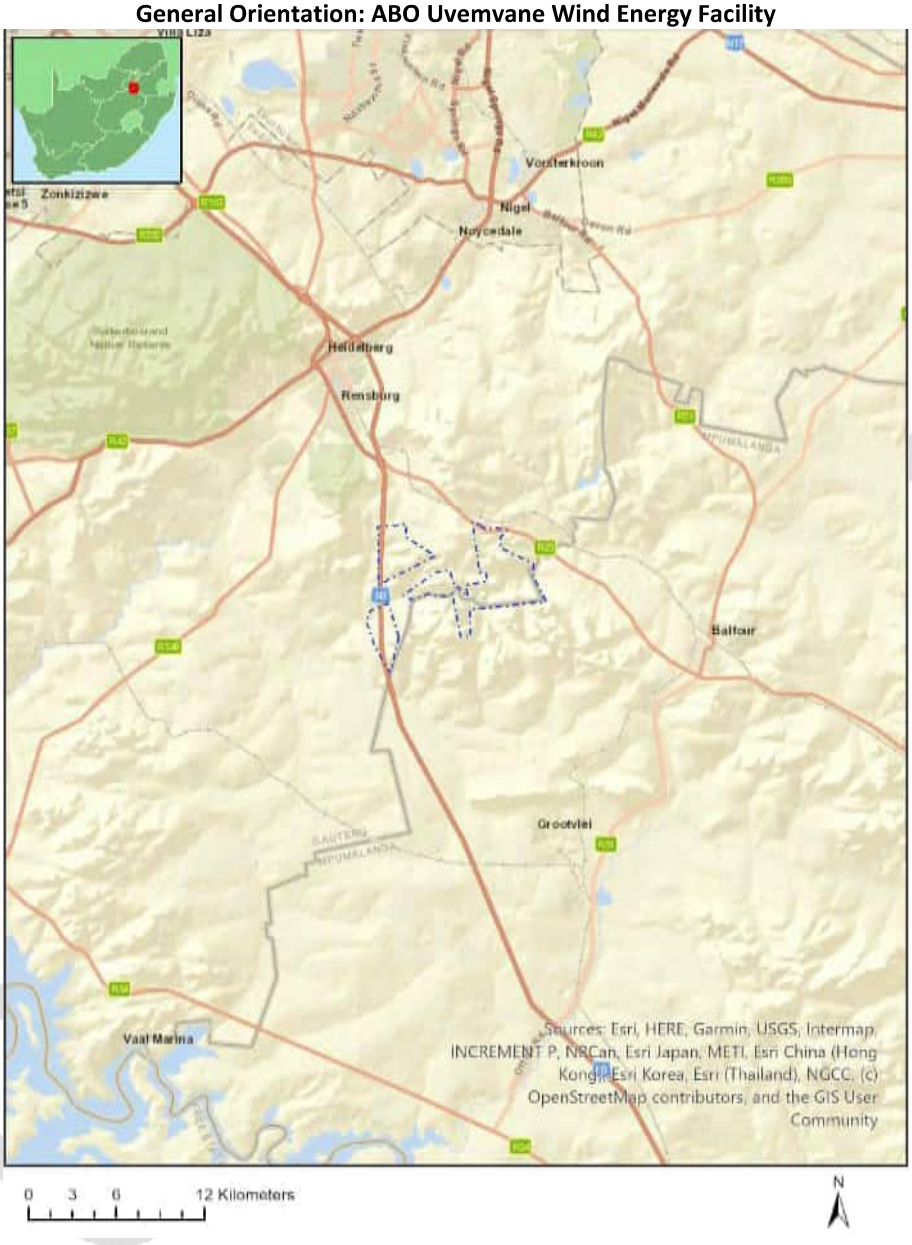
Proposed Project Location 3
Orientation map 1: General location 3
Map of proposed site and relevant area(s) 4
Cadastral details of the proposed site 4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area 5
Environmental Management Frameworks relevant to the application 6
Environmental screening results and assessment outcomes 6
Relevant development incentives, restrictions, exclusions or prohibitions 6
Proposed Development Area Environmental Sensitivity 7
Specialist assessments identified 7
Results of the environmental sensitivity of the proposed area. 9
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY 9
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY 10
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY 11
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY 12
MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY 13
MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY 14
MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY 15
MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY 16
MAP OF RELATIVE FLICKER THEME SENSITIVITY 17
MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY 18
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY 19
MAP OF RELATIVE NOISE THEME SENSITIVITY 20
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY 21
MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY 22
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 23
MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY 24

OFFICIAL

Proposed Project Location

Orientation map 1: General location

General Orientation: ABO Uvemvane Wind Energy Facility



Map of proposed site and relevant area(s)

Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	WAVESIDE	2	0	26°36'20.61S	28°25'35.17E	Erven
2	DRIEFONTEIN	405	0	26°39'11.56S	28°28'2.7E	Farm
3	ORION	413	0	26°38'42.3S	28°24'46.15E	Farm
4	LAGERSPOORT	406	0	26°36'54.64S	28°24'33.42E	Farm
5	STEYNSKRAAL	399	0	26°37'18.75S	28°27'54.29E	Farm
6	WILDEBEESTFONTEIN	559	0	26°38'0.67S	28°30'34.98E	Farm
7	DE HOEK	411	0	26°37'39.87S	28°21'57.62E	Farm
8	HOUTPOORT	392	0	26°33'35.58S	28°23'24.04E	Farm
9	MALANSKRAAL	407	0	26°41'7.49S	28°25'9.68E	Farm
10	MODDERFONTEIN	410	0	26°40'34.55S	28°22'22.58E	Farm
11	HOUTPOORT	392	62	26°35'24.29S	28°23'40.59E	Farm Portion
12	HOUTPOORT	392	66	26°35'29S	28°24'13.04E	Farm Portion
13	STEYNSKRAAL	399	10	26°35'35.02S	28°27'19.39E	Farm Portion
14	STEYNSKRAAL	399	0	26°36'43.29S	28°28'52.26E	Farm Portion
15	STEYNSKRAAL	399	1	26°37'39.02S	28°27'32.72E	Farm Portion
16	STEYNSKRAAL	399	6	26°37'12.43S	28°27'37.32E	Farm Portion
17	STEYNSKRAAL	399	12	26°37'21.15S	28°26'52.21E	Farm Portion
18	STEYNSKRAAL	399	14	26°35'48.71S	28°27'23.98E	Farm Portion
19	STEYNSKRAAL	399	25	26°38'12.5S	28°26'44.78E	Farm Portion
20	STEYNSKRAAL	399	15	26°36'2.78S	28°28'18.43E	Farm Portion
21	STEYNSKRAAL	399	16	26°36'28.11S	28°28'25.47E	Farm Portion
22	STEYNSKRAAL	399	24	26°36'21S	28°26'58.02E	Farm Portion
23	STEYNSKRAAL	399	11	26°37'53S	28°28'22.21E	Farm Portion
24	STEYNSKRAAL	399	17	26°35'28.3S	28°26'49.5E	Farm Portion
25	STEYNSKRAAL	399	4	26°36'38.25S	28°27'26.21E	Farm Portion
26	DRIEFONTEIN	405	1	26°38'52.61S	28°27'52.28E	Farm Portion
27	DRIEFONTEIN	405	7	26°38'54.16S	28°26'52.9E	Farm Portion

Disclaimer applies

28	DRIEFONTEIN	405	5	26°38'43.16S	28°29'0.04E	Farm Portion
29	LAGERSPOORT	406	8	26°38'26.48S	28°24'0.84E	Farm Portion
30	LAGERSPOORT	406	43	26°37'60S	28°23'30.69E	Farm Portion
31	LAGERSPOORT	406	5	26°38'39.88S	28°25'42.6E	Farm Portion
32	LAGERSPOORT	406	32	26°38'25.05S	28°26'19.28E	Farm Portion
33	LAGERSPOORT	406	15	26°37'30.76S	28°25'49.38E	Farm Portion
34	LAGERSPOORT	406	17	26°36'33.57S	28°24'37.7E	Farm Portion
35	LAGERSPOORT	406	19	26°35'42.16S	28°24'37.49E	Farm Portion
36	LAGERSPOORT	406	35	26°37'34.04S	28°25'30.17E	Farm Portion
37	LAGERSPOORT	406	11	26°37'33.74S	28°25'7.94E	Farm Portion
38	LAGERSPOORT	406	12	26°37'2.22S	28°25'45.84E	Farm Portion
39	LAGERSPOORT	406	13	26°37'20.06S	28°26'0.42E	Farm Portion
40	LAGERSPOORT	406	14	26°37'16.74S	28°26'7.12E	Farm Portion
41	LAGERSPOORT	406	6	26°37'32.73S	28°26'20.51E	Farm Portion
42	LAGERSPOORT	406	7	26°37'48.71S	28°24'39.05E	Farm Portion
43	LAGERSPOORT	406	45	26°37'32.82S	28°24'10.22E	Farm Portion
44	LAGERSPOORT	406	42	26°36'14.82S	28°25'13.9E	Farm Portion
45	LAGERSPOORT	406	2	26°36'27.1S	28°23'46.99E	Farm Portion
46	LAGERSPOORT	406	40	26°36'9.46S	28°23'21.31E	Farm Portion
47	MALANSKRAAL	407	9	26°39'47.16S	28°25'20.58E	Farm Portion
48	MODDERFONTEIN	410	3	26°39'44.08S	28°22'45.91E	Farm Portion
49	MODDERFONTEIN	410	1	26°40'25.94S	28°23'16.78E	Farm Portion
50	MODDERFONTEIN	410	10	26°40'26.39S	28°23'37.39E	Farm Portion
51	MODDERFONTEIN	410	9	26°39'14.06S	28°23'22.69E	Farm Portion
52	MODDERFONTEIN	410	2	26°39'10.11S	28°23'40.44E	Farm Portion
53	DE HOEK	411	19	26°38'18.54S	28°22'52.66E	Farm Portion
54	ORION	413	0	26°38'39.41S	28°24'44.97E	Farm Portion
55	WILDEBEESTFONTEIN	559	2	26°37'48.44S	28°29'26.99E	Farm Portion
56	WILDEBEESTFONTEIN	559	15	26°37'6.69S	28°29'5.69E	Farm Portion

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2060	Solar PV	Approved	9.1

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Disclaimer applies

Environmental Management Frameworks relevant to the application

Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Utilities Infrastructure|Electricity|Generation|Renewable|Wind**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Air Quality-Vaal Triangle Airshed Priority Area	https://screening.environment.gov.za/ScreeningDownloads/Developmen

	tZones/Final_VTAPA_AQMP_20090408_-15_April_2009.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Strategic Gas Pipeline Corridors-Phase 3: Richards Bay to Gauteng	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
Gauteng EMF-Urban development zone 1	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone1_2021.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme	X			
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Avian (Wind) Theme				X
Bats (Wind) Theme		X		
Civil Aviation (Wind) Theme			X	
Defence (Wind) Theme			X	
Flicker Theme	X			
Landscape (Wind) Theme	X			
Paleontology Theme			X	
Noise Theme	X			
Plant Species Theme			X	
RFI (Wind) Theme		X		
Terrestrial Biodiversity Theme	X			
Vulture Species Theme			X	

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

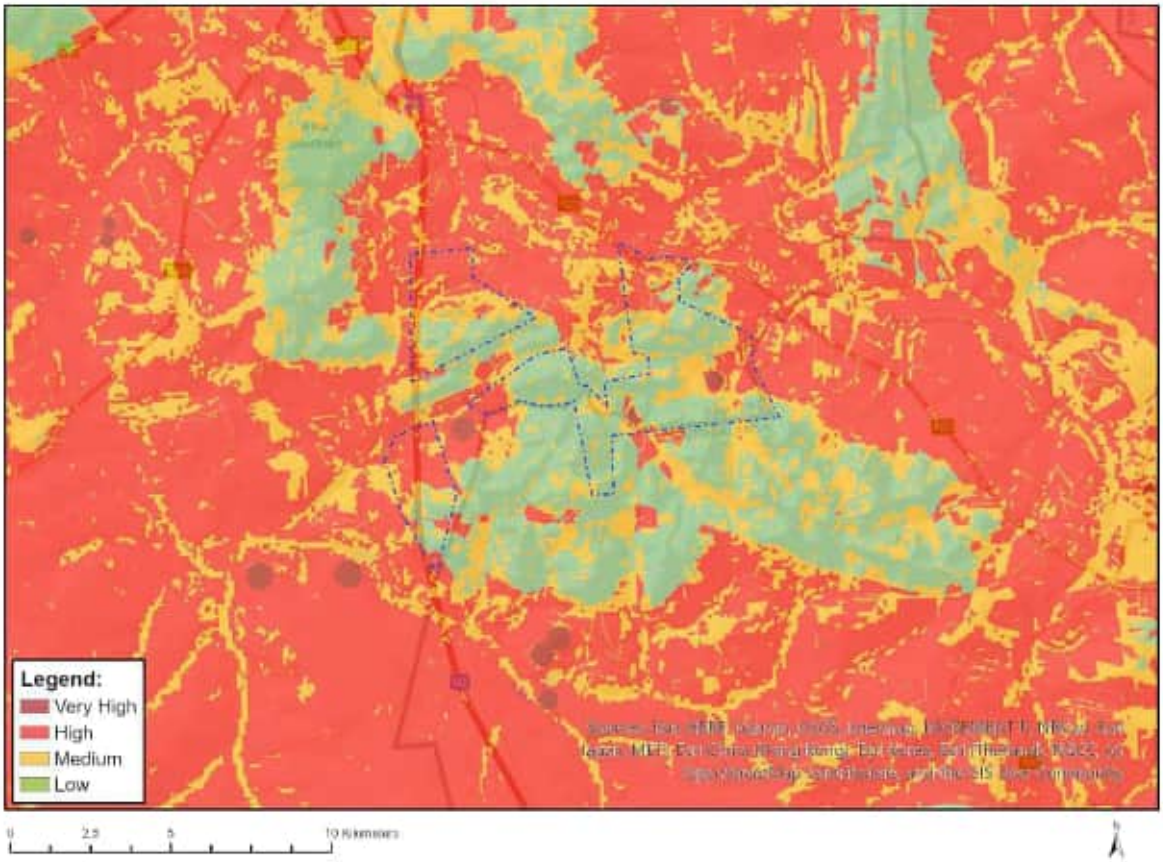
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Avian Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Avifauna_Assessment_Protocols.pdf
8	Civil Aviation Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf
9	Defense Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf
10	RFI Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
12	Flicker Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
15	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
16	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
17	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

OFFICIAL

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

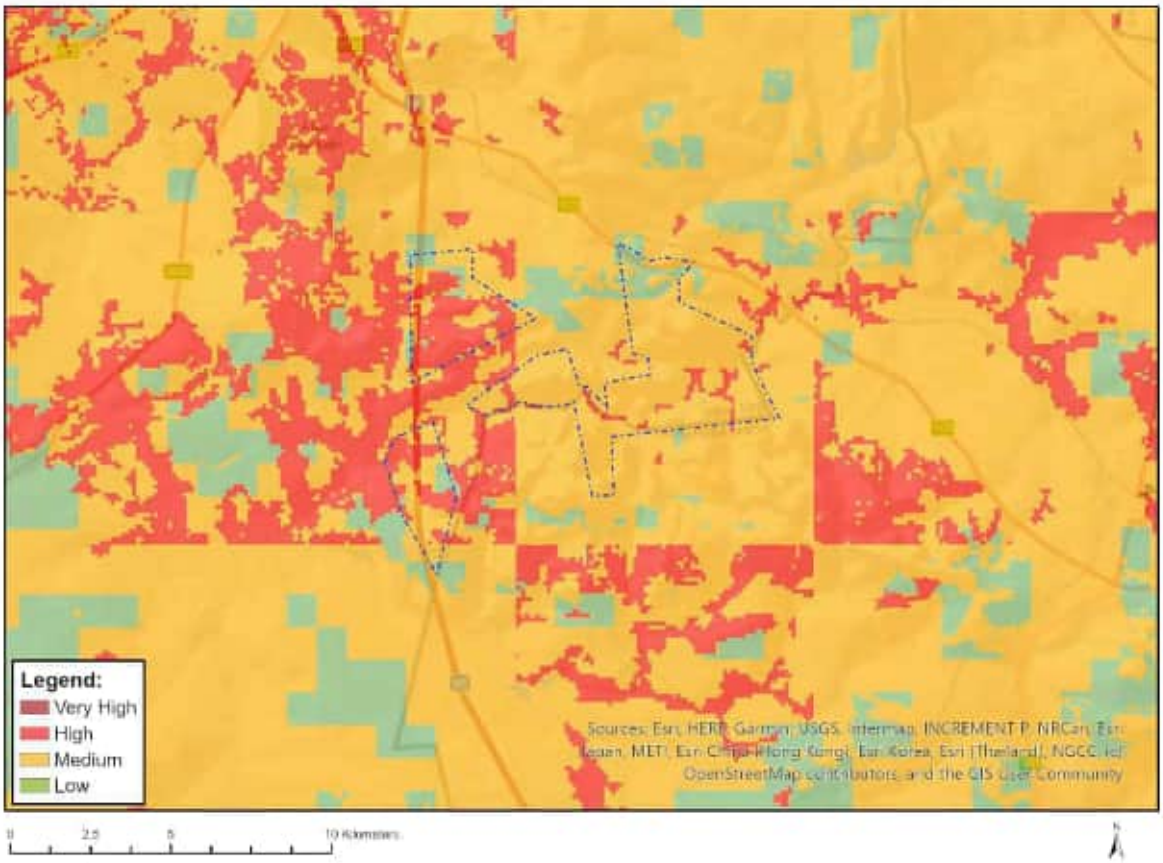
Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Very High	Pivot Irrigation;Land capability;09. Moderate-High/10. Moderate-High

Disclaimer applies

Very High	Pivot Irrigation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Very High	Pivot Irrigation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Sagittarius serpentarius
High	Aves-Mycteria ibis
Low	Subject to confirmation
Medium	Aves-Hydroprogne caspia
Medium	Aves-Sagittarius serpentarius
Medium	Aves-Eupodotis senegalensis
Medium	Aves-Circus ranivorus
Medium	Insecta-Chrysoritis aureus
Medium	Insecta-Lepidochrysops procera

Disclaimer applies

Medium	Insecta-Orachrysops mijburghi
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Hydrictis maculicollis
Medium	Mammalia-Ourebia ourebi ourebi

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

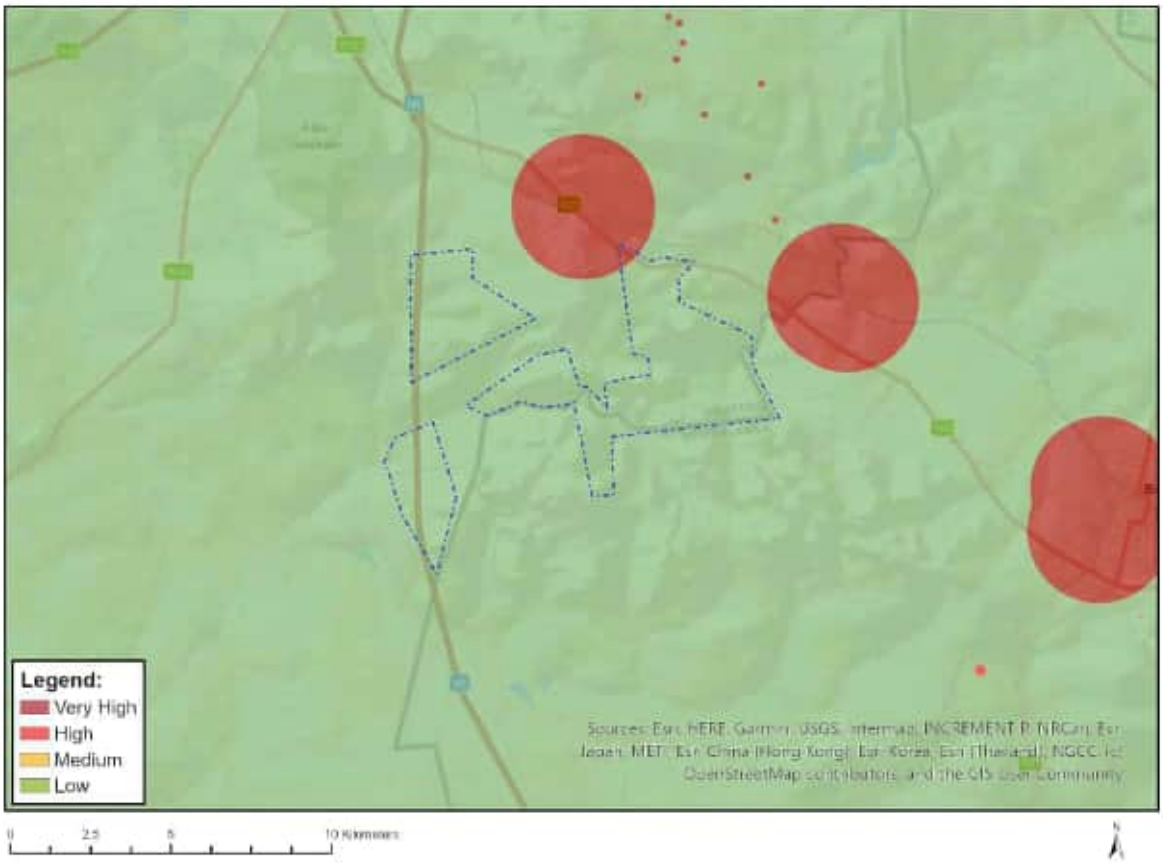
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Rivers_C
Very High	Wetlands_(River)
Very High	Wetlands_Central Bushveld Bioregion (Seep)
Very High	Wetlands_Central Bushveld Bioregion (Valley-bottom)

Disclaimer applies
06/11/2024

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Within 2km of a Grade II Heritage site

Disclaimer applies

MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY

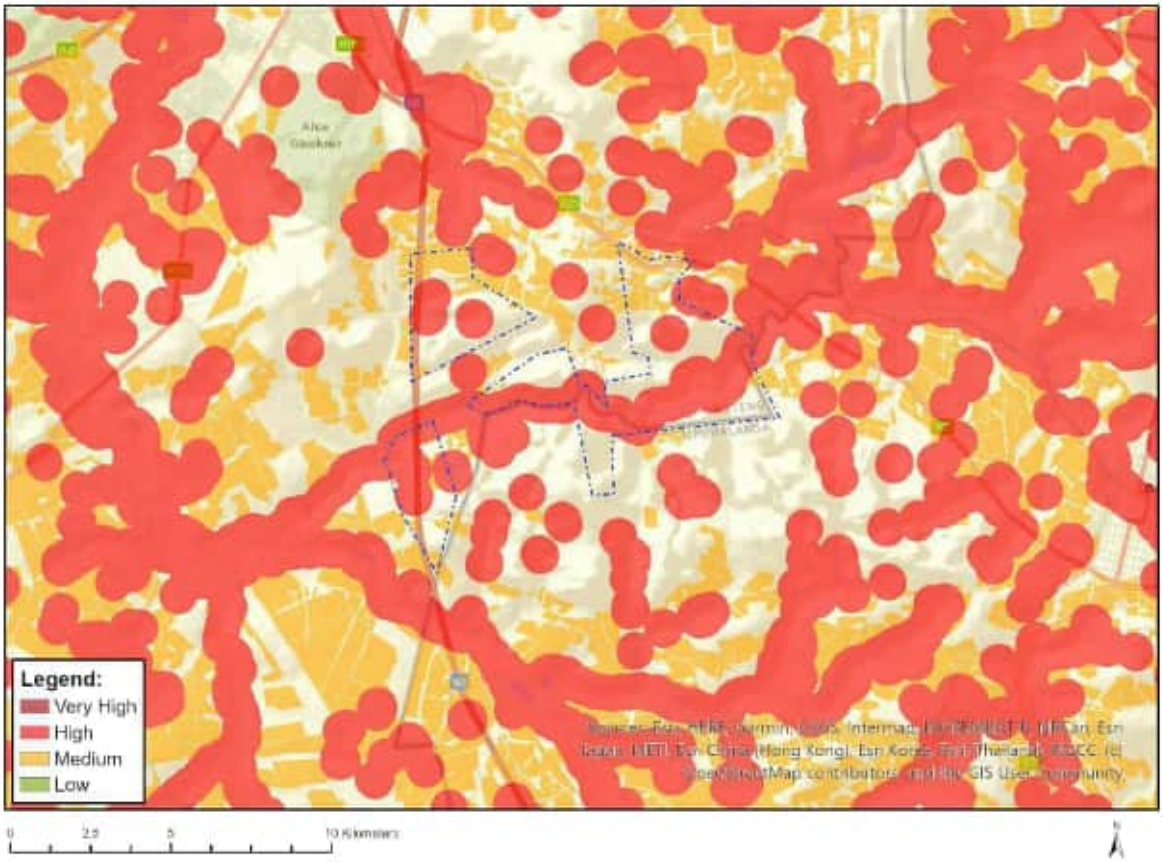
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area Outside Sensitivities

Disclaimer applies

MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY



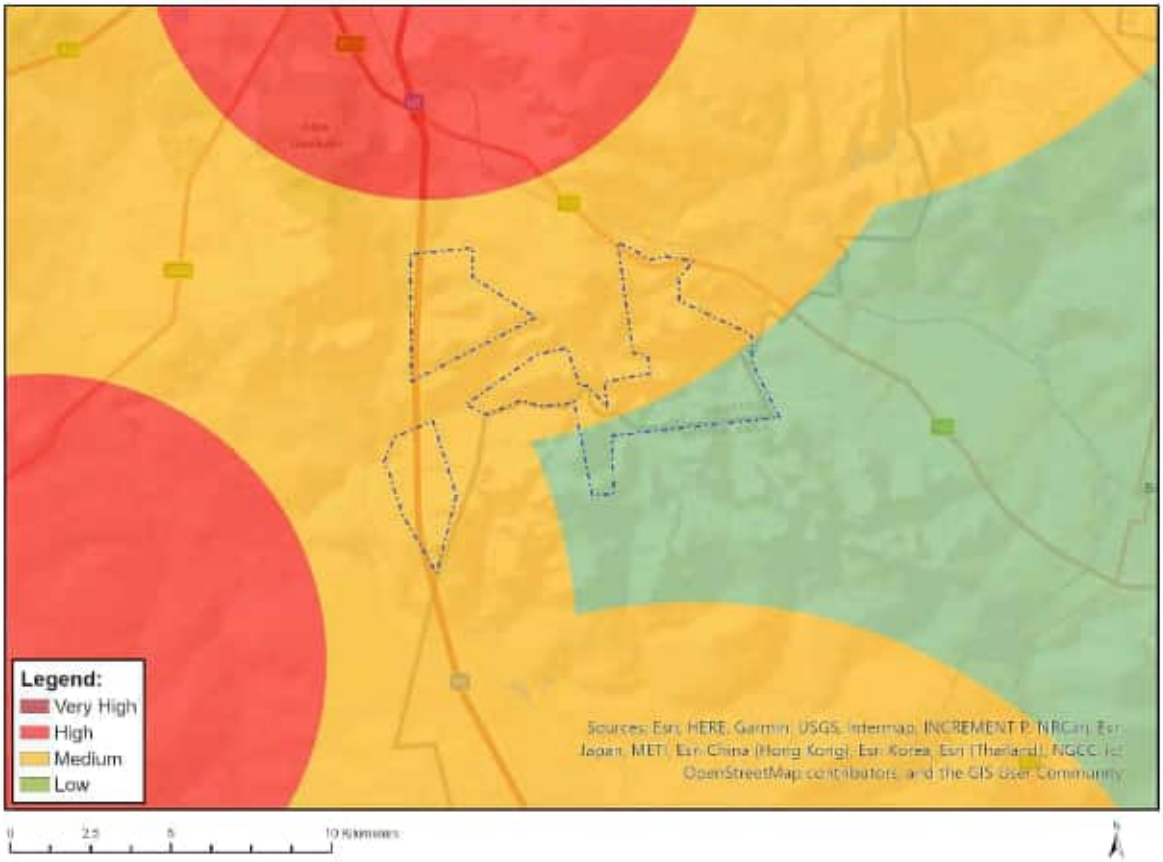
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 500 m of a river
High	Wetland
High	Within 500 m of a wetland
Medium	Croplands

Disclaimer applies

MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY



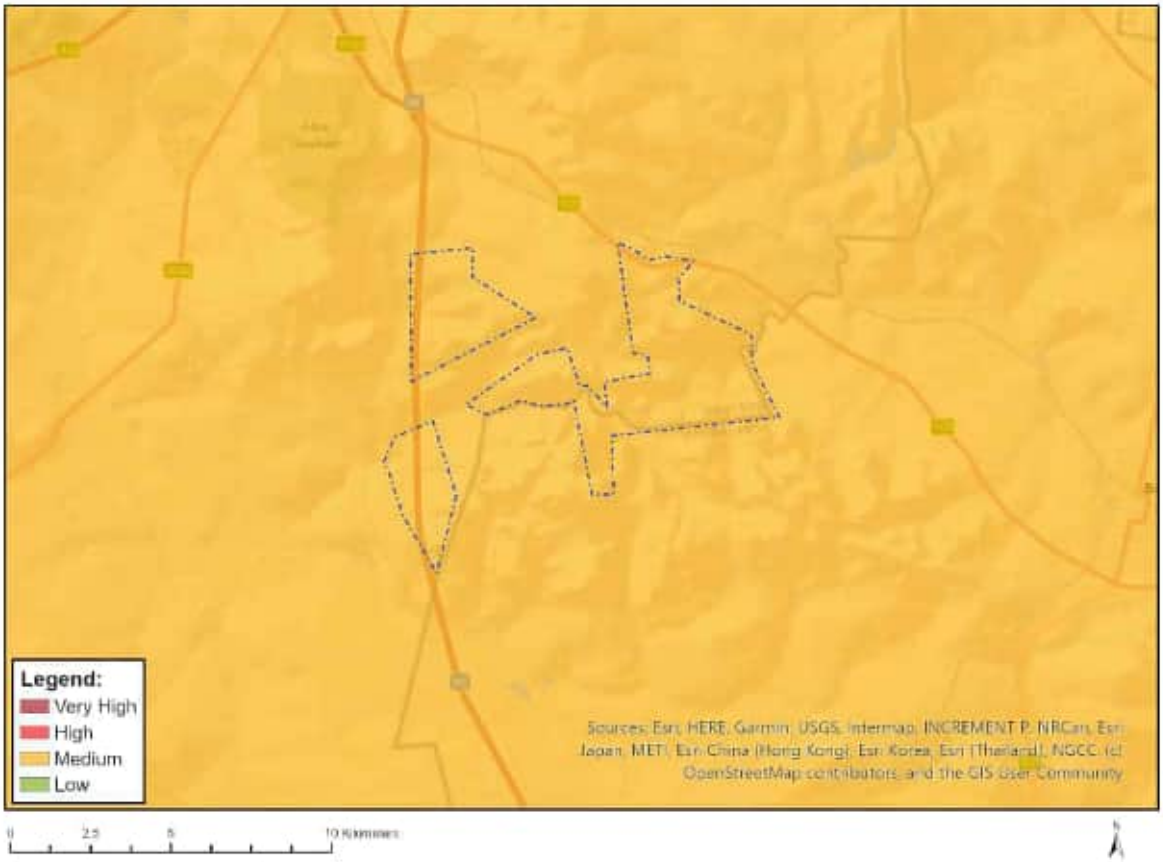
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Medium	Between 8 and 15 km of other civil aviation aerodrome

Disclaimer applies
06/11/2024

MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY



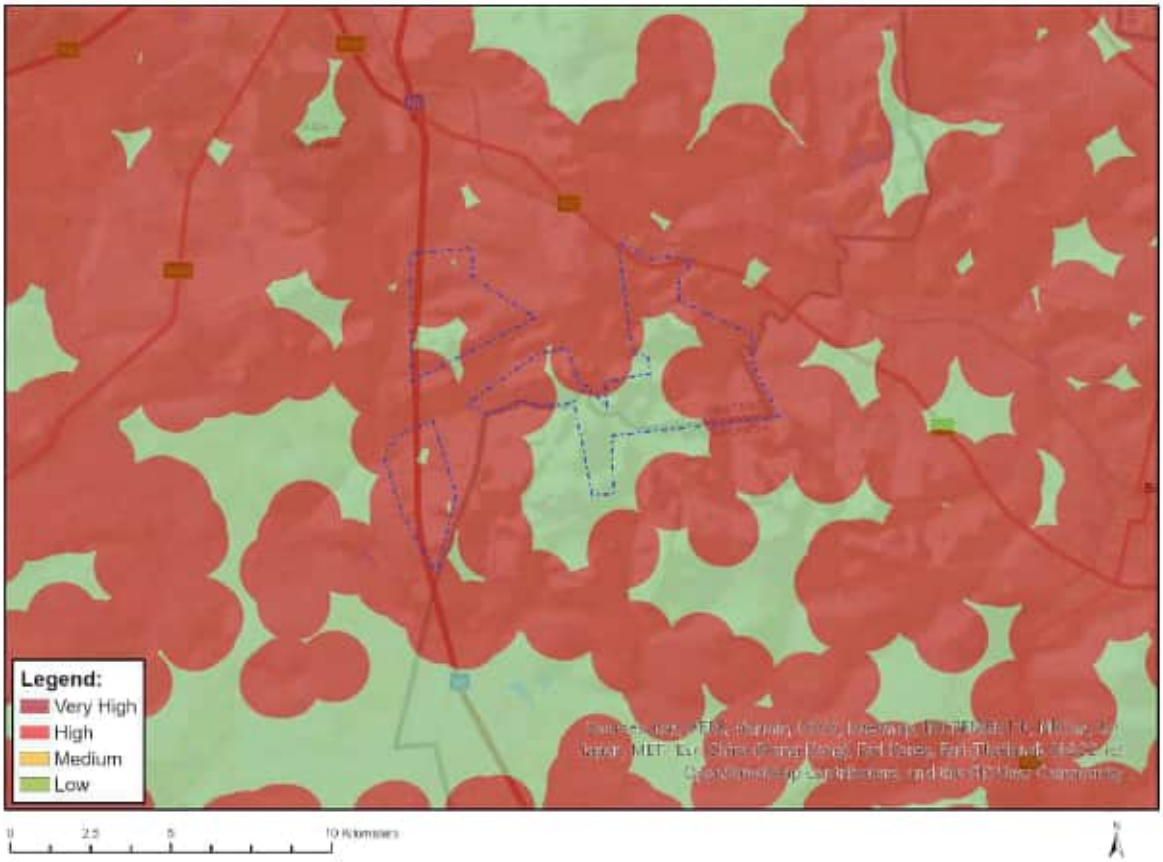
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Defence Site

Disclaimer applies
06/11/2024

MAP OF RELATIVE FLICKER THEME SENSITIVITY



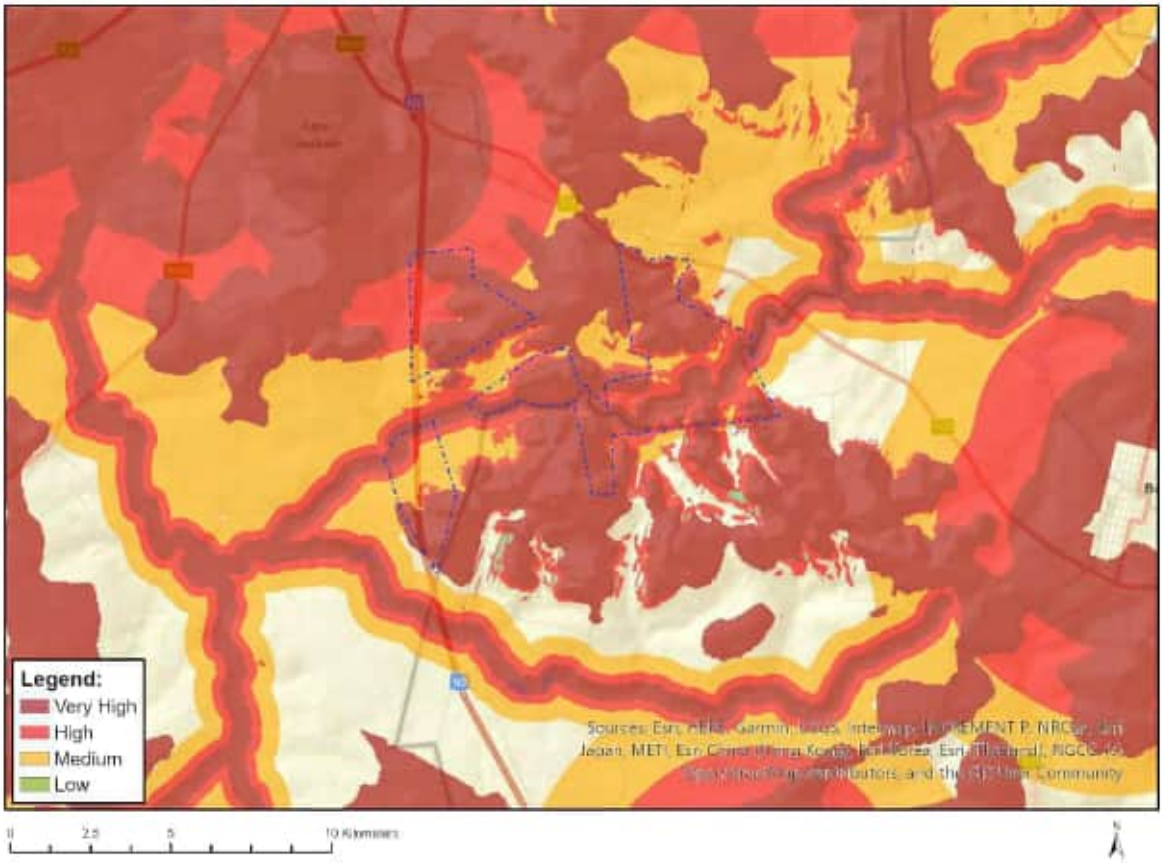
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY



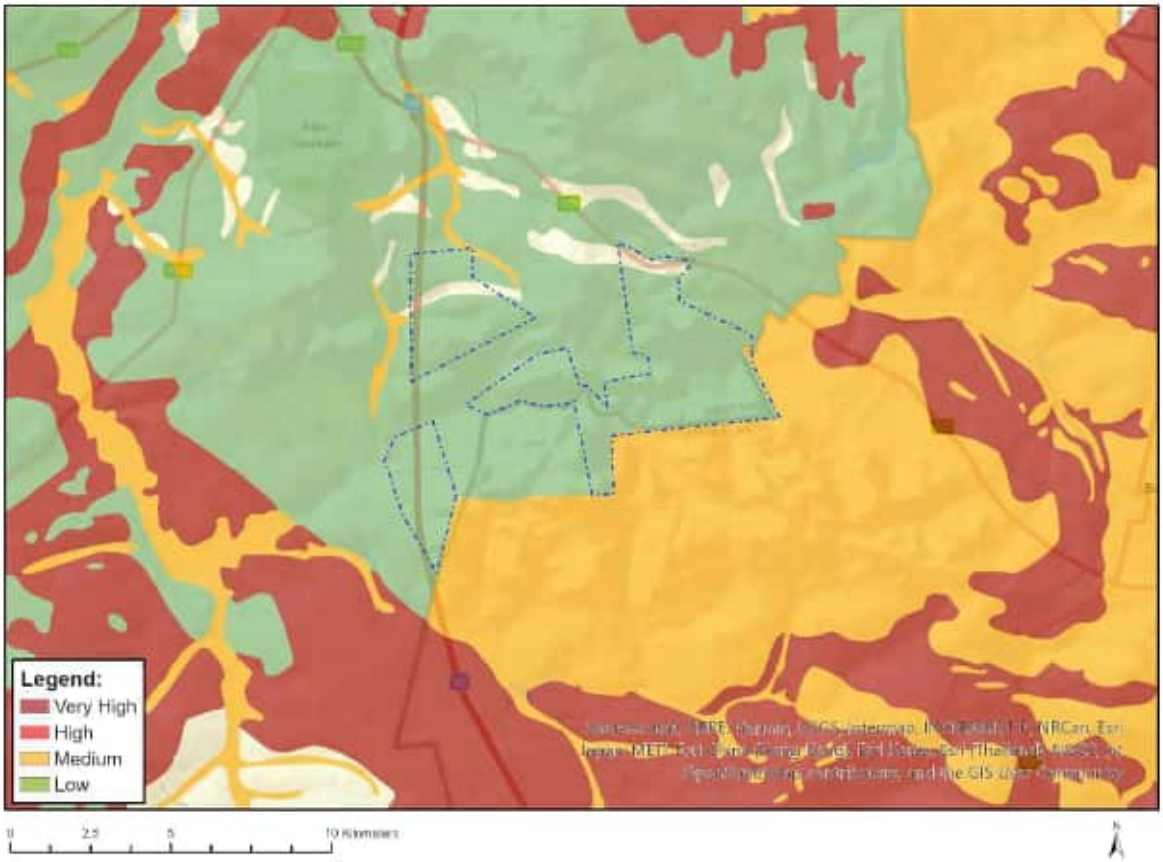
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
High	Slope between 1:4 and 1:10
High	Between 3 and 5 km of a nature reserve, botanical garden or other protected area
High	Within 500 m of a river
Low	Slope less than 1:10
Medium	Between 4 and 6 km of a town or village
Medium	Between 5 and 10 km of a nature reserve, botanical garden or other protected area
Medium	Within 1000 m of a wetland
Very High	Mountain tops and high ridges
Very High	Slope more than 1:4
Very High	Within 3 km of a nature reserve, botanical garden or other protected area
Very High	Within 250 m of a river

Disclaimer applies
06/11/2024

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



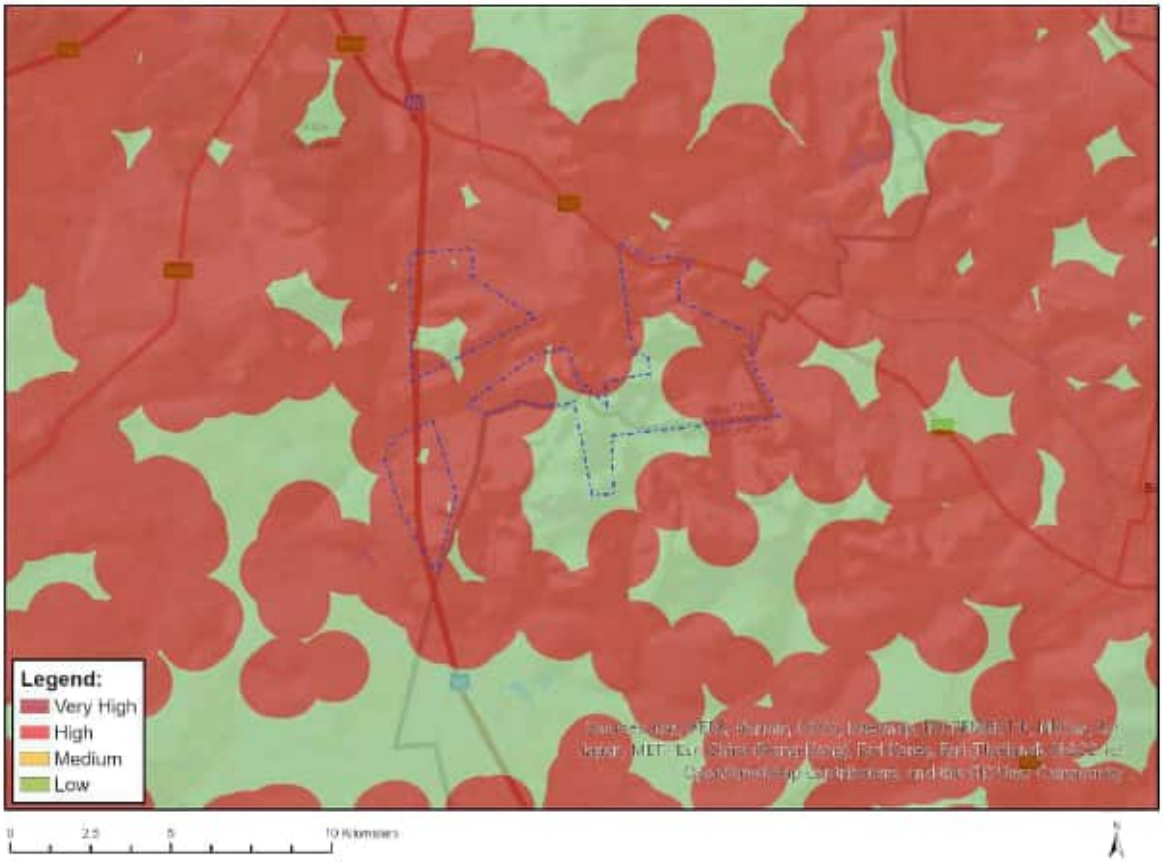
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity

Disclaimer applies
06/11/2024

MAP OF RELATIVE NOISE THEME SENSITIVITY



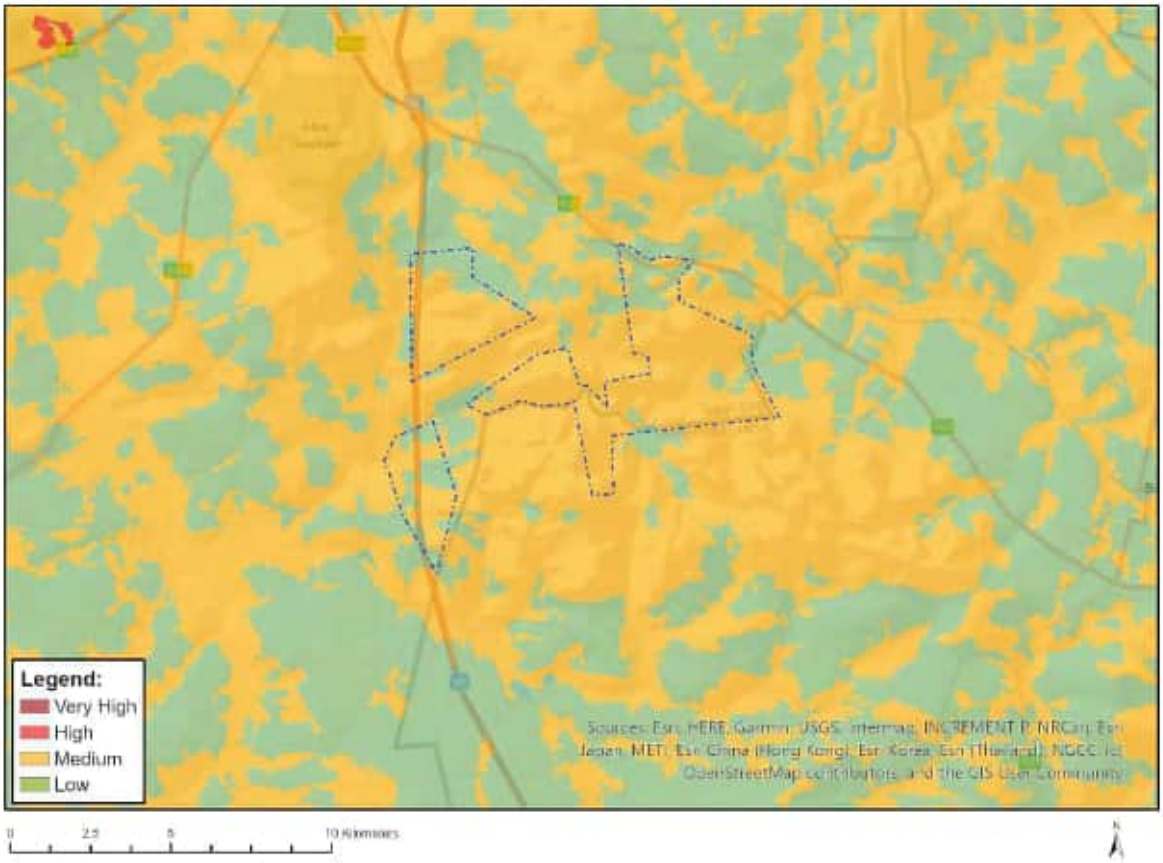
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



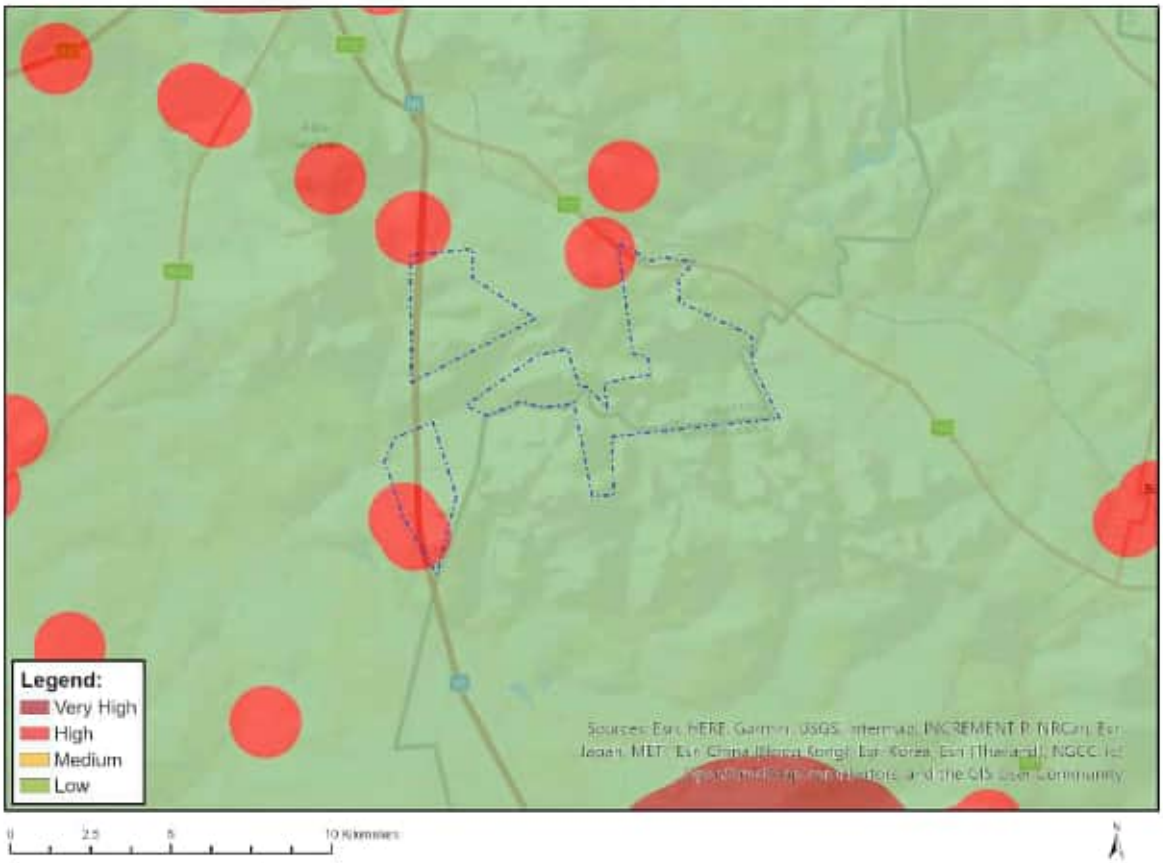
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Delosperma macellum
Medium	Cineraria longipes
Medium	Sensitive species 691
Medium	Brachycorythis conica subsp. transvaalensis
Medium	Sensitive species 1248
Medium	Prunus africana

MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 1 km of a telecommunication facility;None;More than 60 km from a Weather Radar installation
Low	Low sensitivity for telecommunications;None;More than 60 km from a Weather Radar installation

Disclaimer applies
06/11/2024

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	CBA 1
Very High	CBA 2
Very High	ESA 1
Very High	ESA 2
Very High	ESA: Local corridor
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	VU_Soweto Highveld Grassland

Disclaimer applies

MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	affecting an area between 5% - 10% of the population

Disclaimer applies
06/11/2024

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: TBC

Project name: ABO Uvemvane Wind Energy Facility

Project title: ABO Uvemvane Wind Energy Facility

Date screening report generated: 06/11/2024 10:53:24

Applicant: ABO Wind Renewable Energies (Pty) Ltd

Compiler: WSP Group Africa (Pty) Ltd

Compiler signature: Digitally signed by Maharaj, Jashmika (ZAJM05082)

.....

Application Category: Utilities Infrastructure|Electricity|Generation|Renewable|Wind

OFFICIAL

Table of Contents

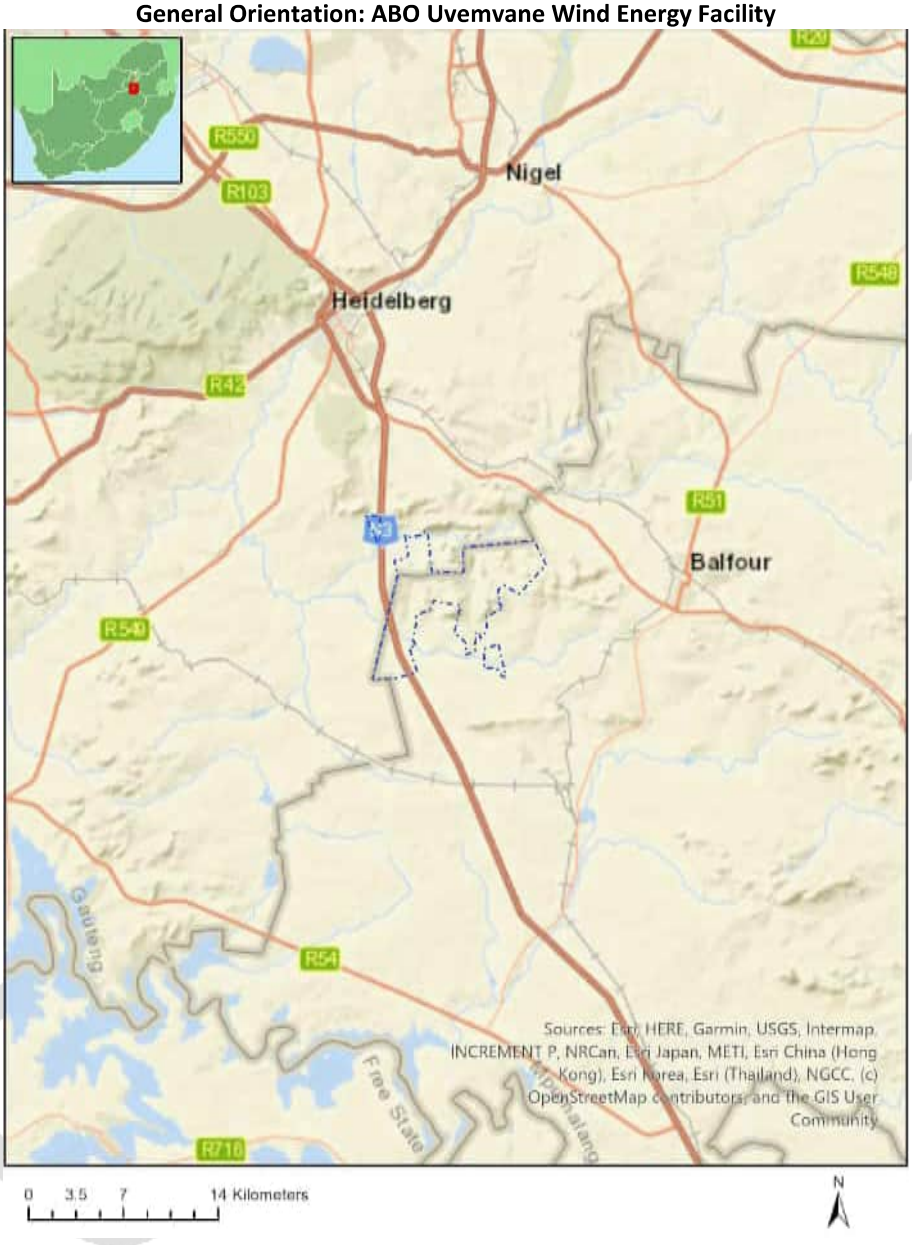
Proposed Project Location 3
Orientation map 1: General location 3
Map of proposed site and relevant area(s) 4
Cadastral details of the proposed site 4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area 6
Environmental Management Frameworks relevant to the application 6
Environmental screening results and assessment outcomes 6
Relevant development incentives, restrictions, exclusions or prohibitions 7
Proposed Development Area Environmental Sensitivity 7
Specialist assessments identified 7
Results of the environmental sensitivity of the proposed area. 10
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY 10
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY 11
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY 12
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY 13
MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY 14
MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY 15
MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY 16
MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY 17
MAP OF RELATIVE FLICKER THEME SENSITIVITY 18
MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY 19
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY 20
MAP OF RELATIVE NOISE THEME SENSITIVITY 21
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY 22
MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY 23
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 24
MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY 25

OFFICIAL

Proposed Project Location

Orientation map 1: General location

General Orientation: ABO Uvemvane Wind Energy Facility



Map of proposed site and relevant area(s)

Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	DRIEFONTEIN	405	0	26°39'11.56S	28°28'2.7E	Farm
2	WELTEVREDEN	449	0	26°42'35.06S	28°27'41.86E	Farm
3	ZANDHOEK	451	0	26°41'47.92S	28°27'33.68E	Farm
4	KLEINFONTEIN	446	0	26°44'11.65S	28°23'24.59E	Farm
5	VLAKFONTEIN	448	0	26°44'27.21S	28°26'22.96E	Farm
6	ORION	413	0	26°38'42.3S	28°24'46.15E	Farm
7	LAGERSPOORT	406	0	26°36'54.64S	28°24'33.42E	Farm
8	KLIPFONTEIN	450	0	26°42'51.21S	28°28'53.36E	Farm
9	STEYNSKRAAL	399	0	26°37'18.75S	28°27'54.29E	Farm
10	WILDEBEESTFONTEIN	559	0	26°38'0.67S	28°30'34.98E	Farm
11	DE HOEK	411	0	26°37'39.87S	28°21'57.62E	Farm
12	POTGIETERSRUS	693	0	26°40'33.18S	28°28'24.2E	Farm
13	TWEEFONTEIN	560	0	26°41'20.76S	28°30'7.01E	Farm
14	MALANSKRAAL	407	0	26°41'7.49S	28°25'9.68E	Farm
15	MODDERFONTEIN	410	0	26°40'34.55S	28°22'22.58E	Farm
16	STEYNSKRAAL	399	11	26°37'53S	28°28'22.21E	Farm Portion
17	DRIEFONTEIN	405	1	26°38'52.61S	28°27'52.28E	Farm Portion
18	DRIEFONTEIN	405	7	26°38'54.16S	28°26'52.9E	Farm Portion
19	DRIEFONTEIN	405	2	26°40'17.12S	28°27'8.35E	Farm Portion
20	DRIEFONTEIN	405	5	26°38'43.16S	28°29'0.04E	Farm Portion
21	DRIEFONTEIN	405	0	26°40'1.45S	28°27'40.66E	Farm Portion
22	DRIEFONTEIN	405	8	26°40'14.6S	28°28'16.67E	Farm Portion
23	LAGERSPOORT	406	39	26°37'36.74S	28°23'15.94E	Farm Portion
24	LAGERSPOORT	406	8	26°38'26.48S	28°24'0.84E	Farm Portion
25	LAGERSPOORT	406	5	26°38'39.88S	28°25'42.6E	Farm Portion
26	LAGERSPOORT	406	32	26°38'25.05S	28°26'19.28E	Farm Portion
27	LAGERSPOORT	406	21	26°38'2.16S	28°23'16.55E	Farm Portion

Disclaimer applies

28	LAGERSPOORT	406	11	26°37'33.74S	28°25'7.94E	Farm Portion
29	LAGERSPOORT	406	7	26°37'48.71S	28°24'39.05E	Farm Portion
30	LAGERSPOORT	406	45	26°37'32.82S	28°24'10.22E	Farm Portion
31	LAGERSPOORT	406	2	26°36'27.1S	28°23'46.99E	Farm Portion
32	LAGERSPOORT	406	40	26°36'9.46S	28°23'21.31E	Farm Portion
33	LAGERSPOORT	406	30	26°37'36.15S	28°23'14.85E	Farm Portion
34	MALANSKRAAL	407	8	26°40'39.54S	28°25'11.66E	Farm Portion
35	MALANSKRAAL	407	4	26°41'20.53S	28°25'5.15E	Farm Portion
36	MALANSKRAAL	407	9	26°39'47.16S	28°25'20.58E	Farm Portion
37	MALANSKRAAL	407	12	26°40'25.12S	28°26'48.34E	Farm Portion
38	MALANSKRAAL	407	13	26°41'50.33S	28°26'52.66E	Farm Portion
39	MALANSKRAAL	407	15	26°40'41.08S	28°25'48.32E	Farm Portion
40	MALANSKRAAL	407	20	26°41'27.3S	28°26'56.56E	Farm Portion
41	MALANSKRAAL	407	5	26°41'55.85S	28°27'9.72E	Farm Portion
42	MALANSKRAAL	407	6	26°41'34.92S	28°23'48.32E	Farm Portion
43	MALANSKRAAL	407	3	26°41'40.56S	28°25'25.4E	Farm Portion
44	MALANSKRAAL	407	16	26°41'34.58S	28°24'25.97E	Farm Portion
45	MALANSKRAAL	407	2	26°41'11.33S	28°26'34.08E	Farm Portion
46	MALANSKRAAL	407	17	26°40'35.88S	28°24'48.46E	Farm Portion
47	MALANSKRAAL	407	23	26°42'32.91S	28°24'17.85E	Farm Portion
48	MALANSKRAAL	407	18	26°42'22.84S	28°24'25.52E	Farm Portion
49	MODDERFONTEIN	410	7	26°41'51.06S	28°22'37.72E	Farm Portion
50	MODDERFONTEIN	410	1	26°40'25.94S	28°23'16.78E	Farm Portion
51	MODDERFONTEIN	410	10	26°40'26.39S	28°23'37.39E	Farm Portion
52	MODDERFONTEIN	410	2	26°39'10.11S	28°23'40.44E	Farm Portion
53	DE HOEK	411	15	26°37'39.89S	28°23'6.74E	Farm Portion
54	DE HOEK	411	19	26°38'18.54S	28°22'52.66E	Farm Portion
55	DE HOEK	411	11	26°37'35.59S	28°23'14.11E	Farm Portion
56	DE HOEK	411	1	26°36'24.38S	28°22'36.65E	Farm Portion
57	DE HOEK	411	4	26°37'26.13S	28°22'59.54E	Farm Portion
58	DE HOEK	411	13	26°37'34.85S	28°22'24.47E	Farm Portion
59	DE HOEK	411	10	26°37'36.71S	28°22'53.71E	Farm Portion
60	DE HOEK	411	18	26°37'39.48S	28°22'51.96E	Farm Portion
61	DE HOEK	411	16	26°37'46.29S	28°22'56.09E	Farm Portion
62	ORION	413	0	26°38'39.41S	28°24'44.97E	Farm Portion
63	KLEINFONTEIN	446	1	26°43'31.46S	28°23'2.11E	Farm Portion
64	VLAKFONTEIN	448	19	26°43'54.94S	28°24'30.59E	Farm Portion
65	VLAKFONTEIN	448	28	26°43'34.07S	28°24'53.64E	Farm Portion
66	VLAKFONTEIN	448	29	26°43'24.16S	28°24'49.64E	Farm Portion
67	VLAKFONTEIN	448	20	26°43'18.2S	28°25'23.73E	Farm Portion
68	VLAKFONTEIN	448	20	26°43'18.2S	28°25'23.73E	Farm Portion
69	VLAKFONTEIN	448	37	26°43'28.63S	28°25'3.19E	Farm Portion
70	WELTEVREDEN	449	0	26°42'22.85S	28°27'18.19E	Farm Portion
71	WELTEVREDEN	449	1	26°42'20.99S	28°27'49.1E	Farm Portion
72	WELTEVREDEN	449	2	26°42'57.98S	28°27'53.14E	Farm Portion
73	KLIPFONTEIN	450	2	26°42'28.18S	28°28'26.71E	Farm Portion
74	ZANDHOEK	451	0	26°41'47.92S	28°27'33.68E	Farm Portion
75	WILDEBEESTFONTEIN	559	11	26°38'51.05S	28°30'5.23E	Farm Portion
76	TWEEFONTEIN	560	1	26°39'55.49S	28°29'31.32E	Farm Portion
77	TWEEFONTEIN	560	7	26°41'53.65S	28°28'29.16E	Farm Portion
78	POTGIETERSRUS	693	0	26°40'36.52S	28°28'24.13E	Farm Portion

Development footprint[1] vertices:

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Disclaimer applies

No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2060	Solar PV	Approved	3.7

Environmental Management Frameworks relevant to the application

Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental

sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Utilities Infrastructure|Electricity|Generation|Renewable|Wind**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Air Quality-Vaal Triangle Airshed Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Final_VTAPA_AQMP_20090408_-15_April_2009.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Strategic Gas Pipeline Corridors-Phase 3: Richards Bay to Gauteng	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Avian (Wind) Theme				X
Bats (Wind) Theme		X		
Civil Aviation (Wind) Theme			X	
Defence (Wind) Theme			X	
Flicker Theme	X			
Landscape (Wind) Theme	X			
Paleontology Theme	X			
Noise Theme	X			
Plant Species Theme			X	
RFI (Wind) Theme		X		
Terrestrial Biodiversity Theme	X			
Vulture Species Theme			X	

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Avian Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Avifauna_Assessment_Protocols.pdf
8	Civil Aviation Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf
9	Defense Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf
10	RFI Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
12	Flicker Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
15	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
16	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf

Disclaimer applies

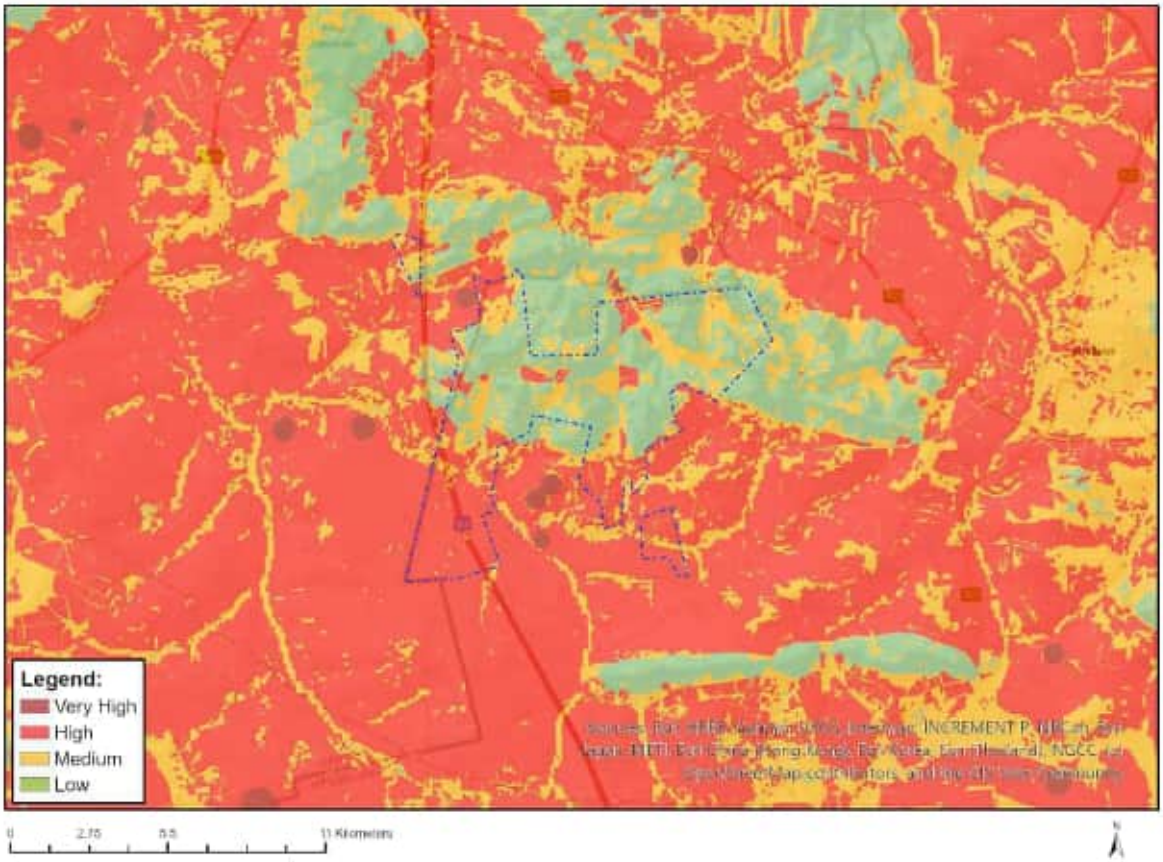
17	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

OFFICIAL

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



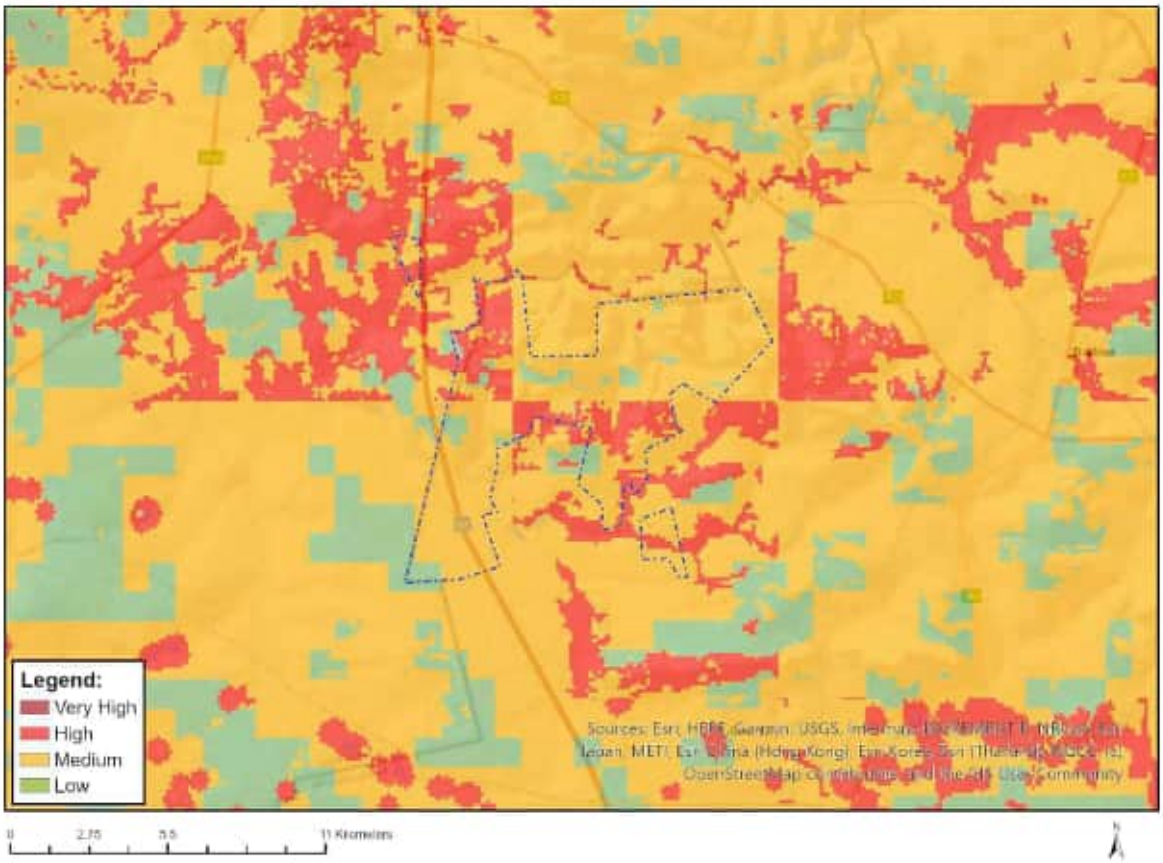
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Old Fields;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low

Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Sagittarius serpentarius
Low	Subject to confirmation
Medium	Aves-Circus ranivorus
Medium	Aves-Hydroprogne caspia
Medium	Aves-Sagittarius serpentarius
Medium	Aves-Eupodotis senegalensis
Medium	Insecta-Chrysoritis aureus
Medium	Insecta-Lepidochrysops procera
Medium	Insecta-Orachrysops mijburghi

Disclaimer applies

Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Hydrictis maculicollis
Medium	Mammalia-Ourebia ourebi ourebi

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

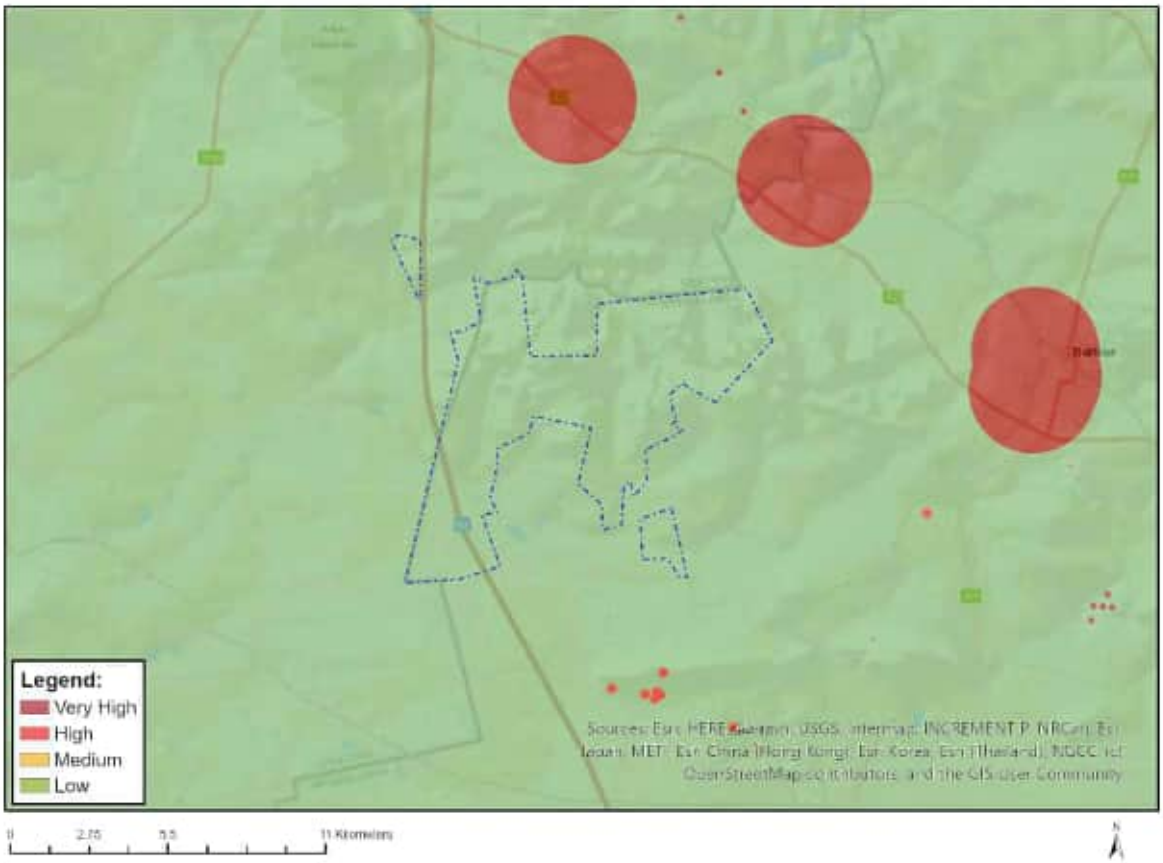
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	CBA: Wetlands
Very High	ESA: Wetlands
Very High	Rivers_C
Very High	Rivers_Z
Very High	Wetlands_(River)
Very High	Wetlands_Central Bushveld Bioregion (Seep)
Very High	Wetlands_Central Bushveld Bioregion (Valley-bottom)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Depression)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Floodplain)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Seep)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Valley-bottom)

Disclaimer applies

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

Disclaimer applies
06/11/2024

MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY

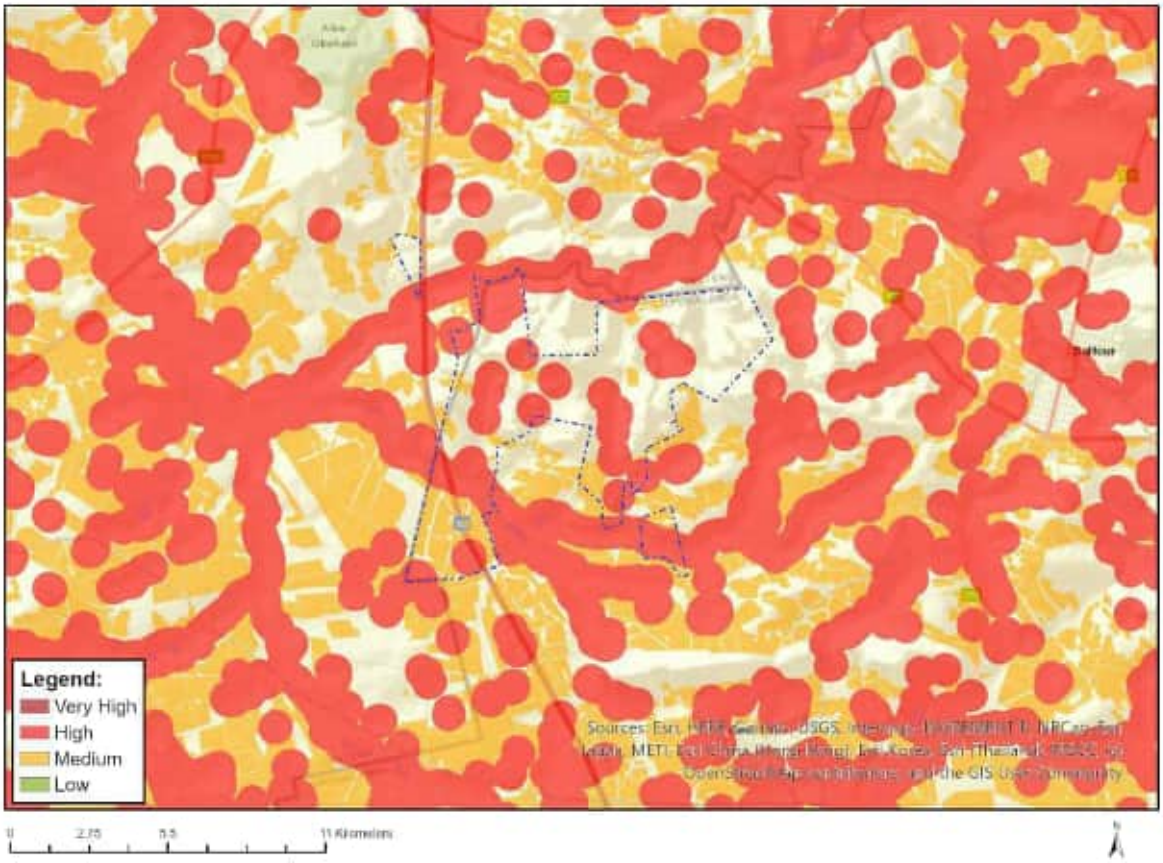
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area Outside Sensitivities

Disclaimer applies
06/11/2024

MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY



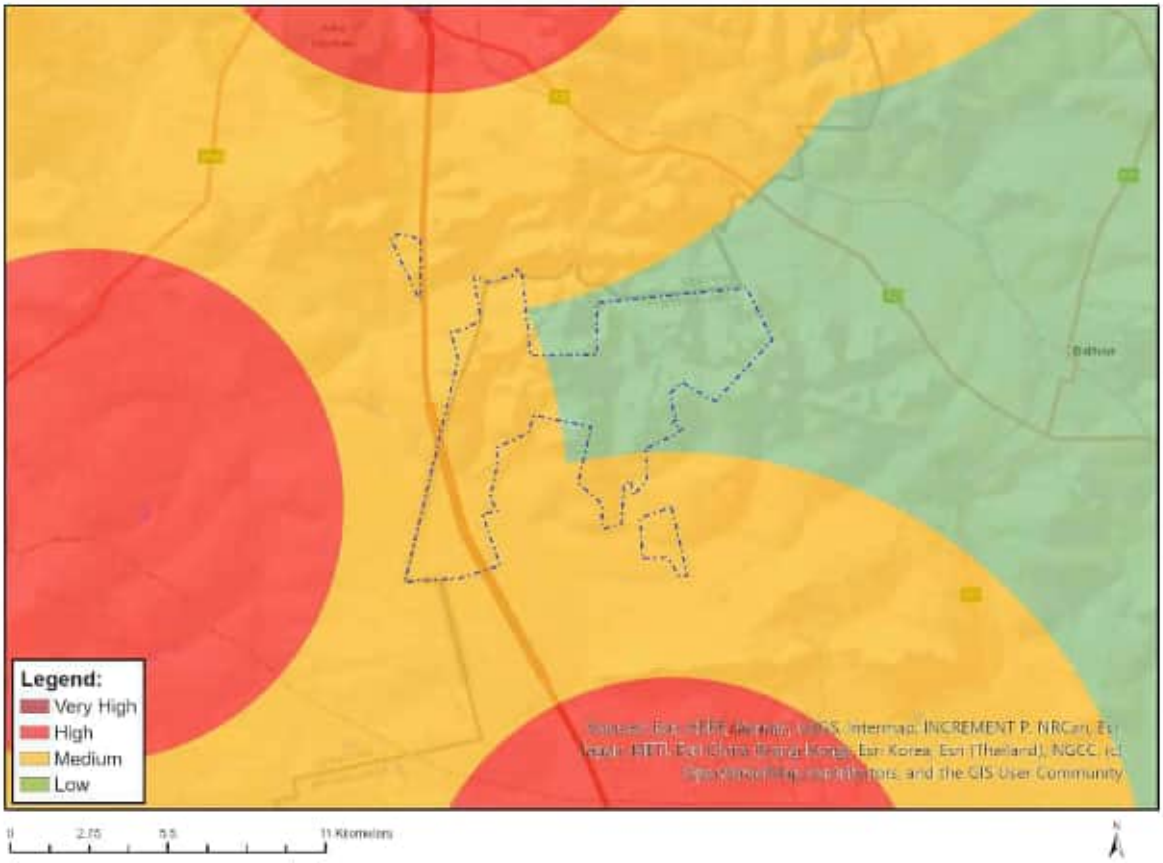
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 500 m of a river
High	Wetland
High	Within 500 m of a wetland
Medium	Croplands

Disclaimer applies

MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY



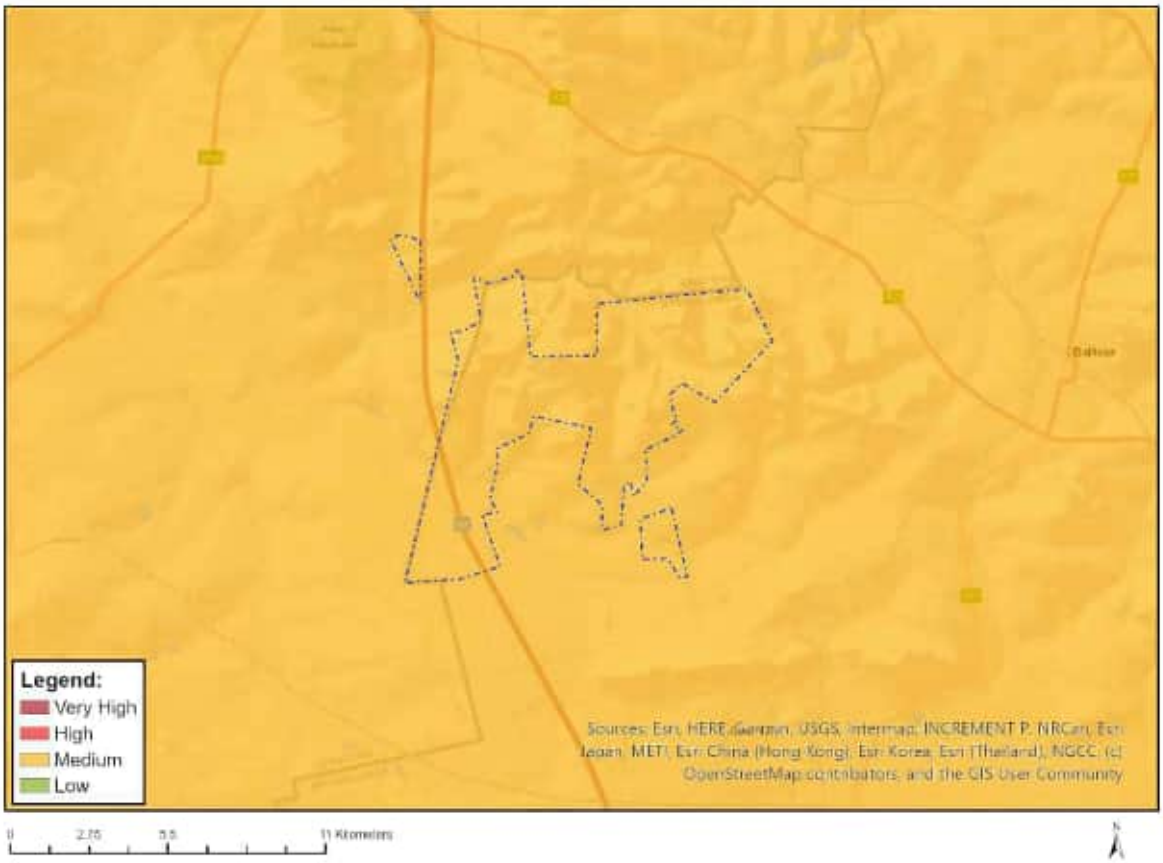
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Medium	Between 8 and 15 km of other civil aviation aerodrome

Disclaimer applies
06/11/2024

MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY



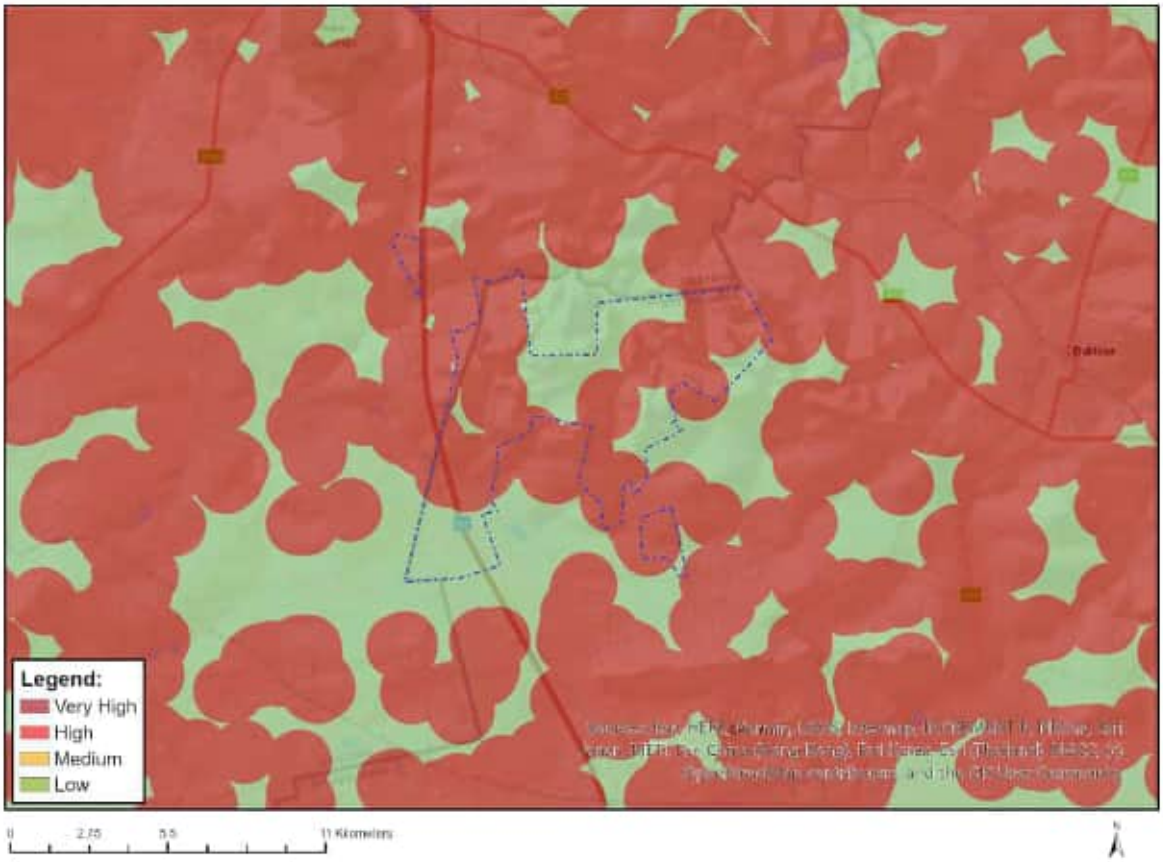
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Defence Site

Disclaimer applies
06/11/2024

MAP OF RELATIVE FLICKER THEME SENSITIVITY



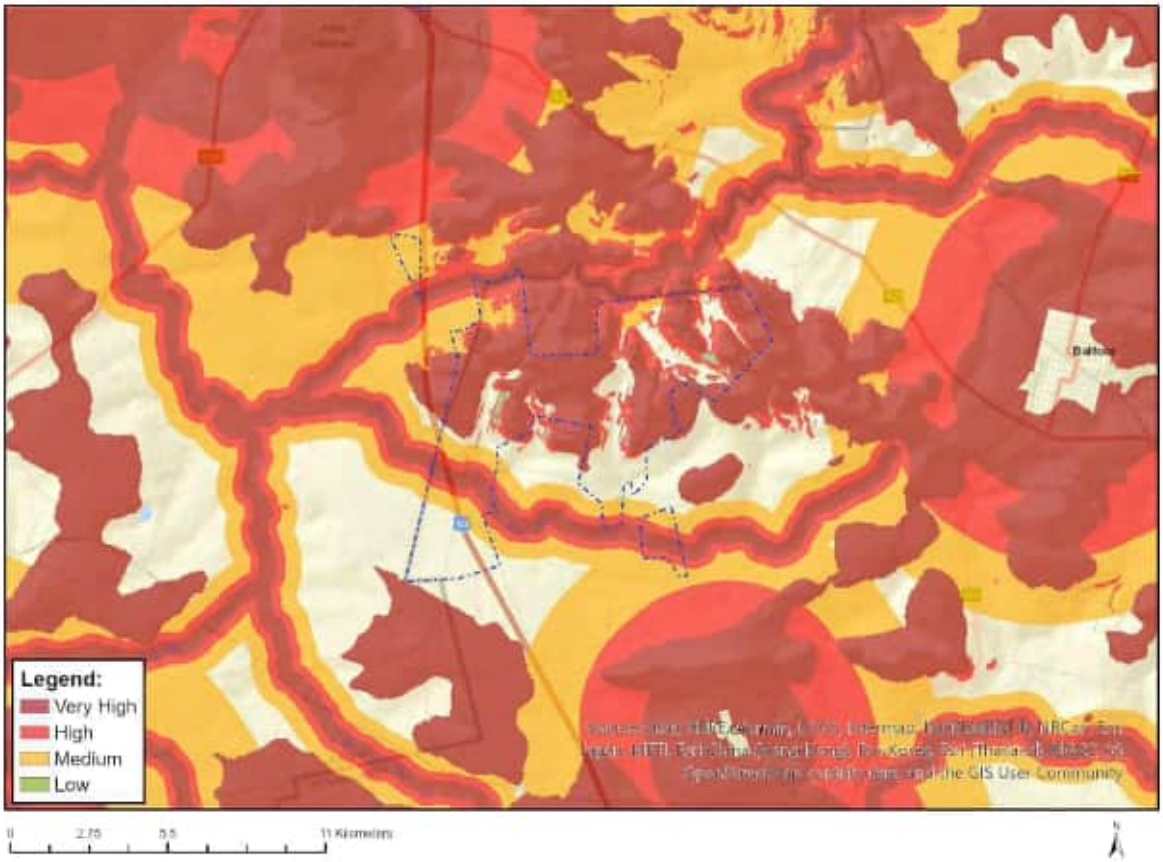
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
High	Slope between 1:4 and 1:10
High	Within 500 m of a river
Low	Slope less than 1:10
Medium	Between 4 and 6 km of a town or village
Medium	Between 5 and 10 km of a nature reserve, botanical garden or other protected area
Medium	Within 1000 m of a wetland
Very High	Mountain tops and high ridges
Very High	Slope more than 1:4
Very High	Within 250 m of a river

Disclaimer applies
06/11/2024

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

Unable to obtain map image.

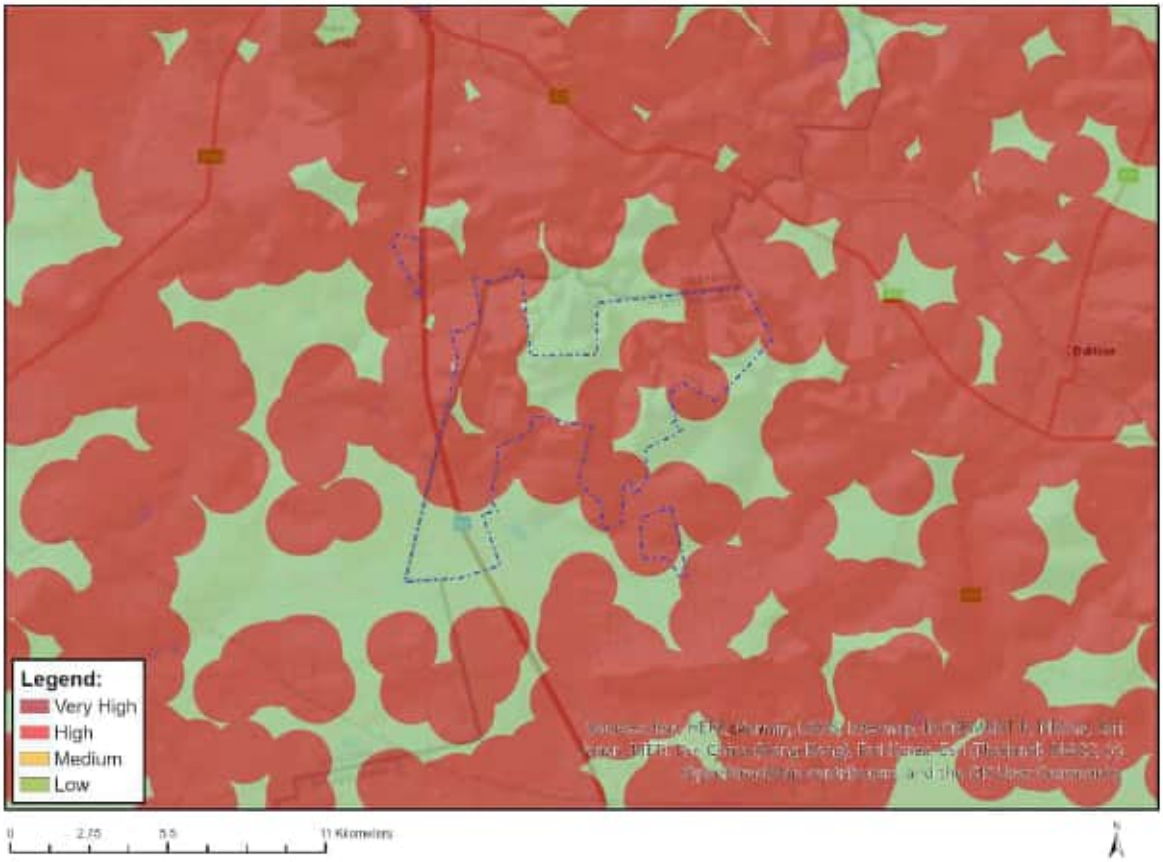
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity
Very High	Features with a Very High paleontological sensitivity

OFFICIAL

MAP OF RELATIVE NOISE THEME SENSITIVITY



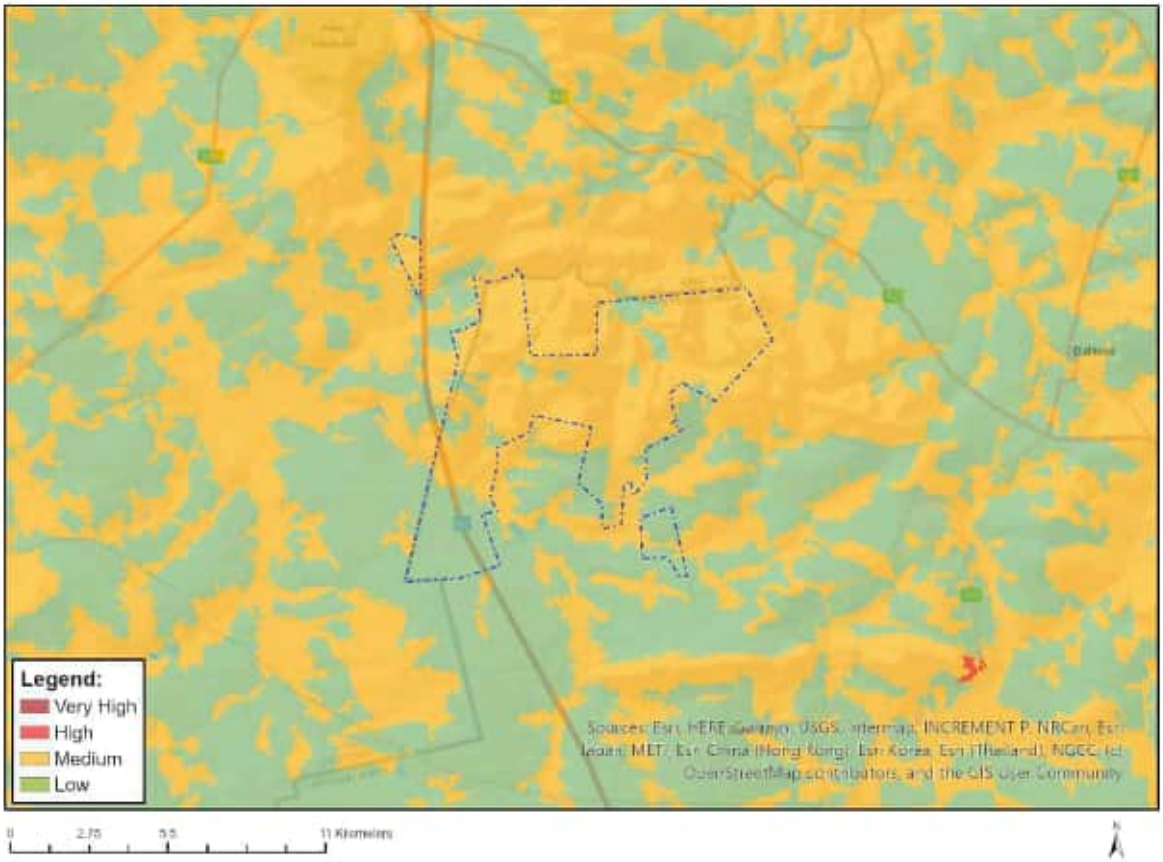
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



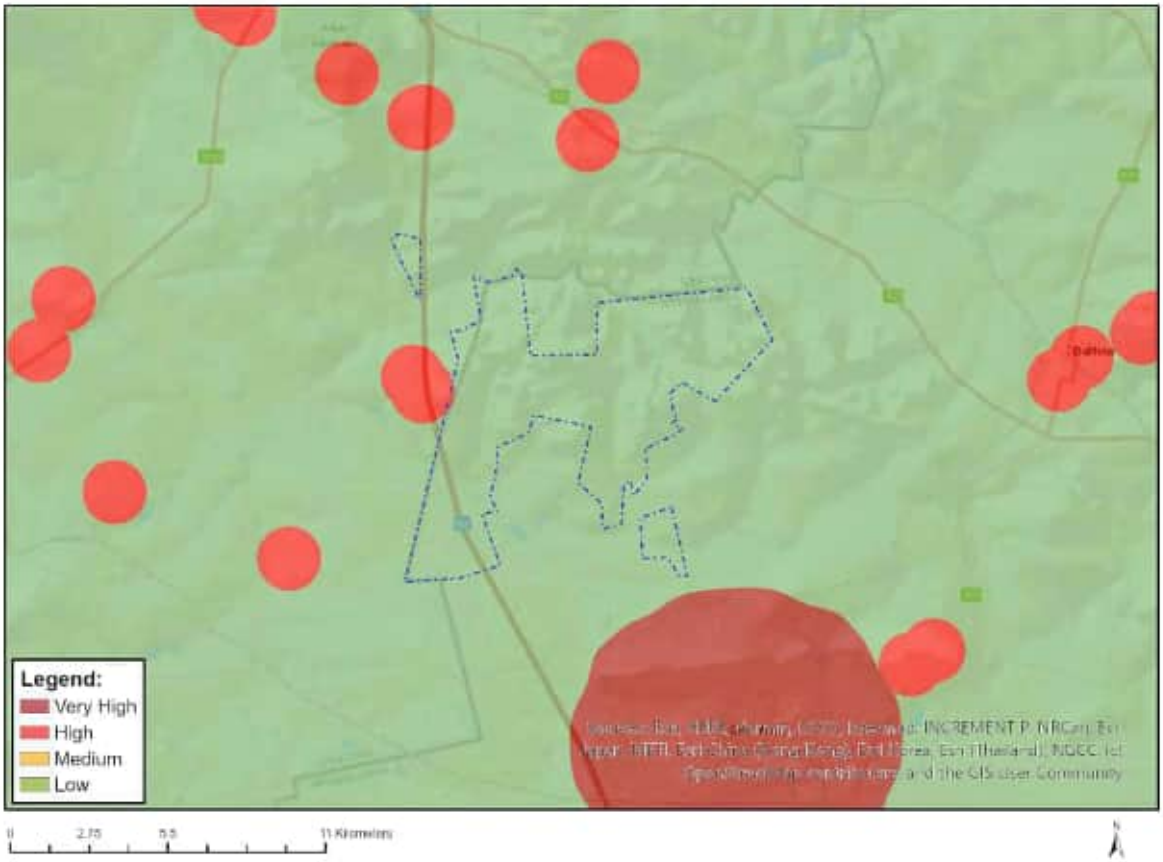
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Delosperma macellum
Medium	Cineraria longipes
Medium	Sensitive species 691
Medium	Brachycorythis conica subsp. transvaalensis
Medium	Sensitive species 1248
Medium	Prunus africana

MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY



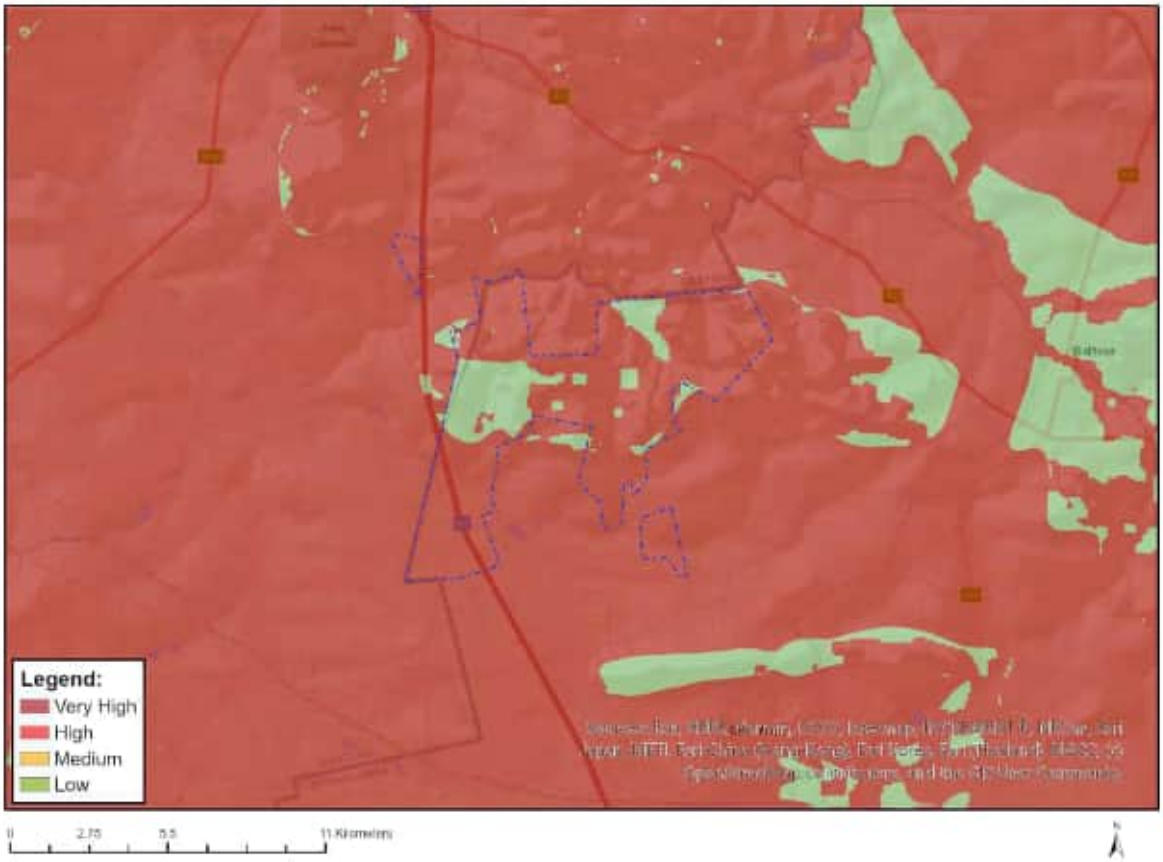
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 1 km of a telecommunication facility;None;More than 60 km from a Weather Radar installation
Low	Low sensitivity for telecommunications;None;More than 60 km from a Weather Radar installation

Disclaimer applies
06/11/2024

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



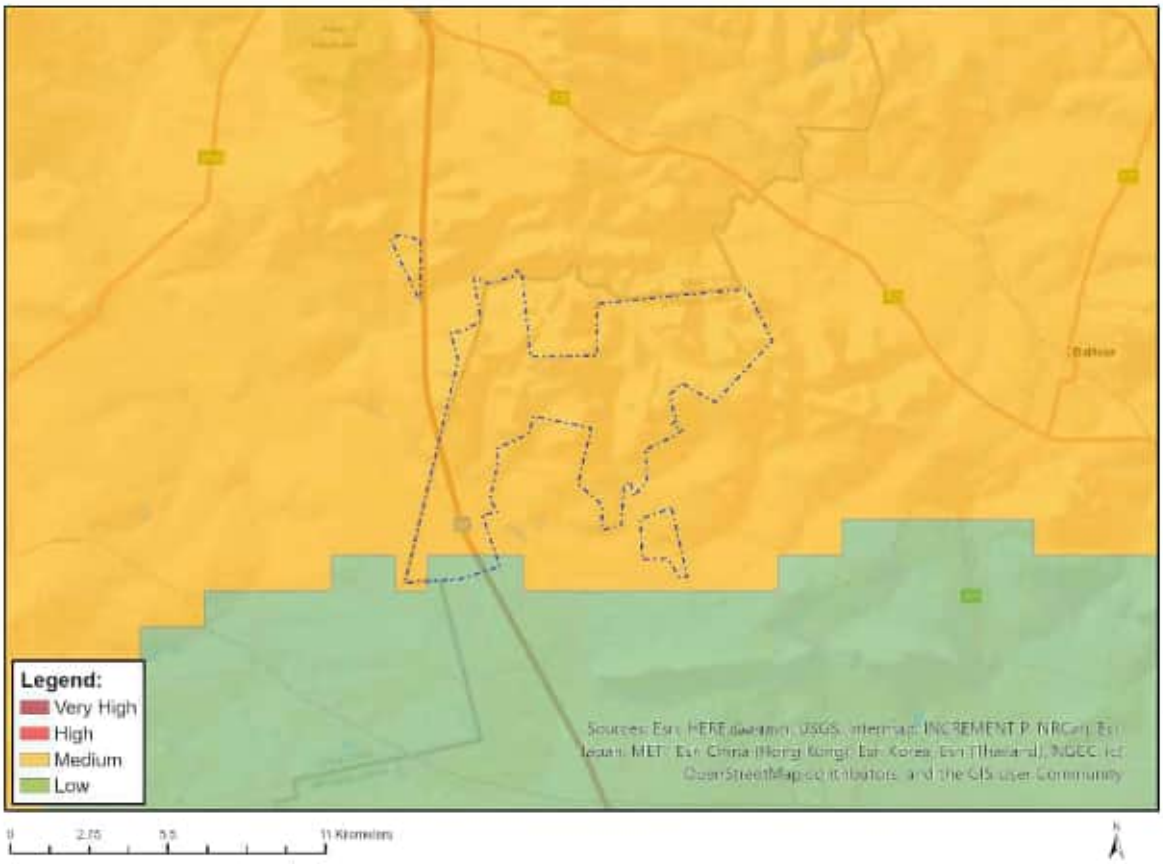
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	CBA 1
Very High	CBA 2
Very High	ESA 1
Very High	ESA 2
Very High	ESA: Landscape corridor
Very High	ESA: Local corridor
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	VU_Soweto Highveld Grassland
Very High	EN_Tsakane Clay Grassland

Disclaimer applies
06/11/2024

MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	affecting an area <1% of the population
Medium	affecting an area between 5% - 10% of the population

Disclaimer applies

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: TBC

Project name: ABO Uvemvane Wind Energy Facility

Project title: ABO Uvemvane Wind Energy Facility

Date screening report generated: 06/11/2024 10:18:57

Applicant: ABO Wind Renewable Energies (Pty) Ltd

Compiler: WSP Group Africa (Pty) Ltd

Compiler signature:

.....

Application Category: Utilities Infrastructure|Electricity|Generation|Renewable|Wind

OFFICIAL

Table of Contents

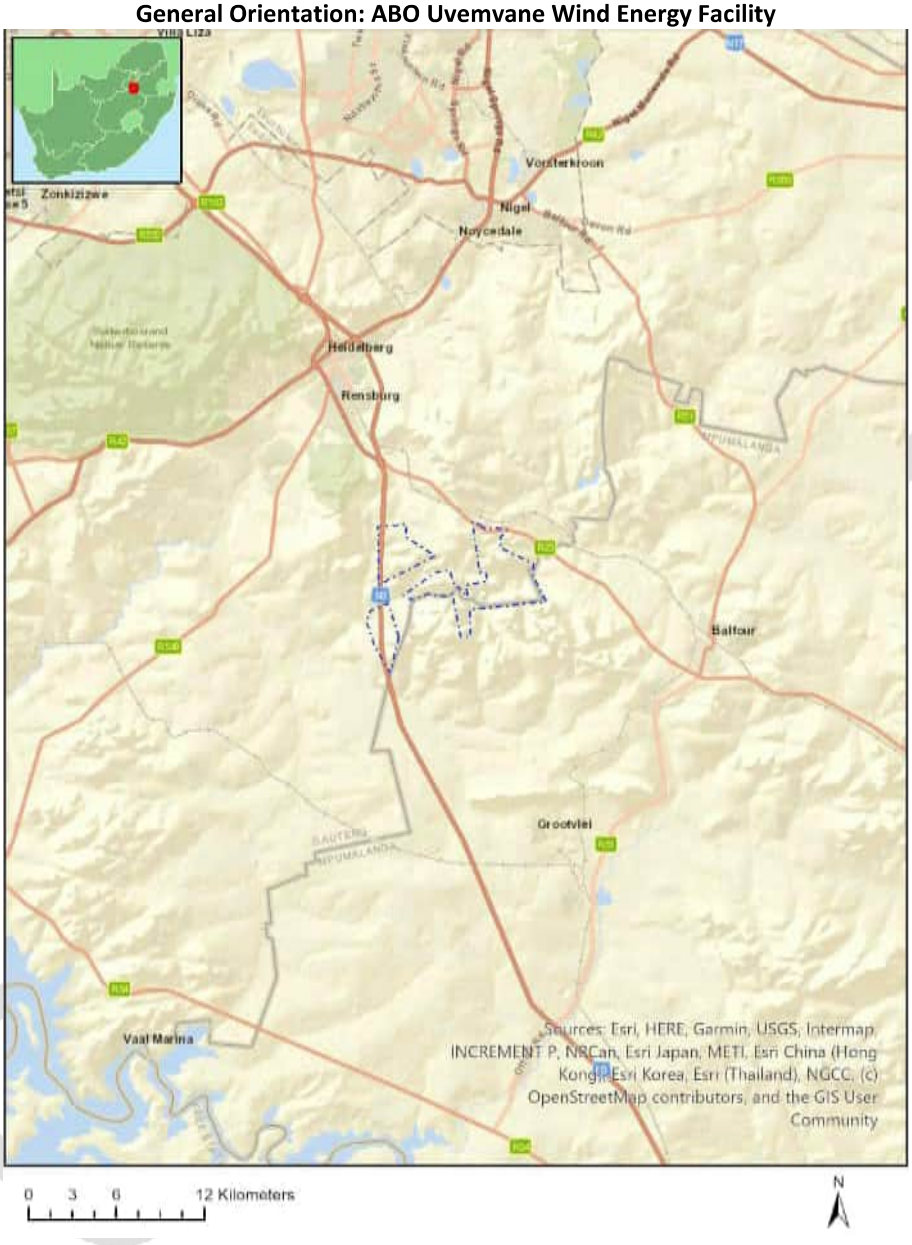
Proposed Project Location 3
Orientation map 1: General location 3
Map of proposed site and relevant area(s) 4
Cadastral details of the proposed site 4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area 5
Environmental Management Frameworks relevant to the application 6
Environmental screening results and assessment outcomes 6
Relevant development incentives, restrictions, exclusions or prohibitions 6
Proposed Development Area Environmental Sensitivity 7
Specialist assessments identified 7
Results of the environmental sensitivity of the proposed area. 9
MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY 9
MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY 10
MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY 11
MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY 12
MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY 13
MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY 14
MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY 15
MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY 16
MAP OF RELATIVE FLICKER THEME SENSITIVITY 17
MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY 18
MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY 19
MAP OF RELATIVE NOISE THEME SENSITIVITY 20
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY 21
MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY 22
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 23
MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY 24

OFFICIAL

Proposed Project Location

Orientation map 1: General location

General Orientation: ABO Uvemvane Wind Energy Facility



Map of proposed site and relevant area(s)

Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	WAVESIDE	2	0	26°36'20.61S	28°25'35.17E	Erven
2	DRIEFONTEIN	405	0	26°39'11.56S	28°28'2.7E	Farm
3	ORION	413	0	26°38'42.3S	28°24'46.15E	Farm
4	LAGERSPOORT	406	0	26°36'54.64S	28°24'33.42E	Farm
5	STEYNSKRAAL	399	0	26°37'18.75S	28°27'54.29E	Farm
6	WILDEBEESTFONTEIN	559	0	26°38'0.67S	28°30'34.98E	Farm
7	DE HOEK	411	0	26°37'39.87S	28°21'57.62E	Farm
8	HOUTPOORT	392	0	26°33'35.58S	28°23'24.04E	Farm
9	MALANSKRAAL	407	0	26°41'7.49S	28°25'9.68E	Farm
10	MODDERFONTEIN	410	0	26°40'34.55S	28°22'22.58E	Farm
11	HOUTPOORT	392	62	26°35'24.29S	28°23'40.59E	Farm Portion
12	HOUTPOORT	392	66	26°35'29S	28°24'13.04E	Farm Portion
13	STEYNSKRAAL	399	10	26°35'35.02S	28°27'19.39E	Farm Portion
14	STEYNSKRAAL	399	0	26°36'43.29S	28°28'52.26E	Farm Portion
15	STEYNSKRAAL	399	1	26°37'39.02S	28°27'32.72E	Farm Portion
16	STEYNSKRAAL	399	6	26°37'12.43S	28°27'37.32E	Farm Portion
17	STEYNSKRAAL	399	12	26°37'21.15S	28°26'52.21E	Farm Portion
18	STEYNSKRAAL	399	14	26°35'48.71S	28°27'23.98E	Farm Portion
19	STEYNSKRAAL	399	25	26°38'12.5S	28°26'44.78E	Farm Portion
20	STEYNSKRAAL	399	15	26°36'2.78S	28°28'18.43E	Farm Portion
21	STEYNSKRAAL	399	16	26°36'28.11S	28°28'25.47E	Farm Portion
22	STEYNSKRAAL	399	24	26°36'21S	28°26'58.02E	Farm Portion
23	STEYNSKRAAL	399	11	26°37'53S	28°28'22.21E	Farm Portion
24	STEYNSKRAAL	399	17	26°35'28.3S	28°26'49.5E	Farm Portion
25	STEYNSKRAAL	399	4	26°36'38.25S	28°27'26.21E	Farm Portion
26	DRIEFONTEIN	405	1	26°38'52.61S	28°27'52.28E	Farm Portion
27	DRIEFONTEIN	405	7	26°38'54.16S	28°26'52.9E	Farm Portion

Disclaimer applies

28	DRIEFONTEIN	405	5	26°38'43.16S	28°29'0.04E	Farm Portion
29	LAGERSPOORT	406	8	26°38'26.48S	28°24'0.84E	Farm Portion
30	LAGERSPOORT	406	43	26°37'60S	28°23'30.69E	Farm Portion
31	LAGERSPOORT	406	5	26°38'39.88S	28°25'42.6E	Farm Portion
32	LAGERSPOORT	406	32	26°38'25.05S	28°26'19.28E	Farm Portion
33	LAGERSPOORT	406	15	26°37'30.76S	28°25'49.38E	Farm Portion
34	LAGERSPOORT	406	17	26°36'33.57S	28°24'37.7E	Farm Portion
35	LAGERSPOORT	406	19	26°35'42.16S	28°24'37.49E	Farm Portion
36	LAGERSPOORT	406	35	26°37'34.04S	28°25'30.17E	Farm Portion
37	LAGERSPOORT	406	11	26°37'33.74S	28°25'7.94E	Farm Portion
38	LAGERSPOORT	406	12	26°37'2.22S	28°25'45.84E	Farm Portion
39	LAGERSPOORT	406	13	26°37'20.06S	28°26'0.42E	Farm Portion
40	LAGERSPOORT	406	14	26°37'16.74S	28°26'7.12E	Farm Portion
41	LAGERSPOORT	406	6	26°37'32.73S	28°26'20.51E	Farm Portion
42	LAGERSPOORT	406	7	26°37'48.71S	28°24'39.05E	Farm Portion
43	LAGERSPOORT	406	45	26°37'32.82S	28°24'10.22E	Farm Portion
44	LAGERSPOORT	406	42	26°36'14.82S	28°25'13.9E	Farm Portion
45	LAGERSPOORT	406	2	26°36'27.1S	28°23'46.99E	Farm Portion
46	LAGERSPOORT	406	40	26°36'9.46S	28°23'21.31E	Farm Portion
47	MALANSKRAAL	407	9	26°39'47.16S	28°25'20.58E	Farm Portion
48	MODDERFONTEIN	410	3	26°39'44.08S	28°22'45.91E	Farm Portion
49	MODDERFONTEIN	410	1	26°40'25.94S	28°23'16.78E	Farm Portion
50	MODDERFONTEIN	410	10	26°40'26.39S	28°23'37.39E	Farm Portion
51	MODDERFONTEIN	410	9	26°39'14.06S	28°23'22.69E	Farm Portion
52	MODDERFONTEIN	410	2	26°39'10.11S	28°23'40.44E	Farm Portion
53	DE HOEK	411	19	26°38'18.54S	28°22'52.66E	Farm Portion
54	ORION	413	0	26°38'39.41S	28°24'44.97E	Farm Portion
55	WILDEBEESTFONTEIN	559	2	26°37'48.44S	28°29'26.99E	Farm Portion
56	WILDEBEESTFONTEIN	559	15	26°37'6.69S	28°29'5.69E	Farm Portion

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2060	Solar PV	Approved	9.1

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Disclaimer applies

Environmental Management Frameworks relevant to the application

Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Utilities Infrastructure|Electricity|Generation|Renewable|Wind**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Air Quality-Vaal Triangle Airshed Priority Area	https://screening.environment.gov.za/ScreeningDownloads/Developmen

	tZones/Final_VTAPA_AQMP_20090408_-15_April_2009.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Strategic Gas Pipeline Corridors-Phase 3: Richards Bay to Gauteng	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
Gauteng EMF-Urban development zone 1	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone1_2021.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme	X			
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Avian (Wind) Theme				X
Bats (Wind) Theme		X		
Civil Aviation (Wind) Theme			X	
Defence (Wind) Theme			X	
Flicker Theme	X			
Landscape (Wind) Theme	X			
Paleontology Theme			X	
Noise Theme	X			
Plant Species Theme			X	
RFI (Wind) Theme		X		
Terrestrial Biodiversity Theme	X			
Vulture Species Theme			X	

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

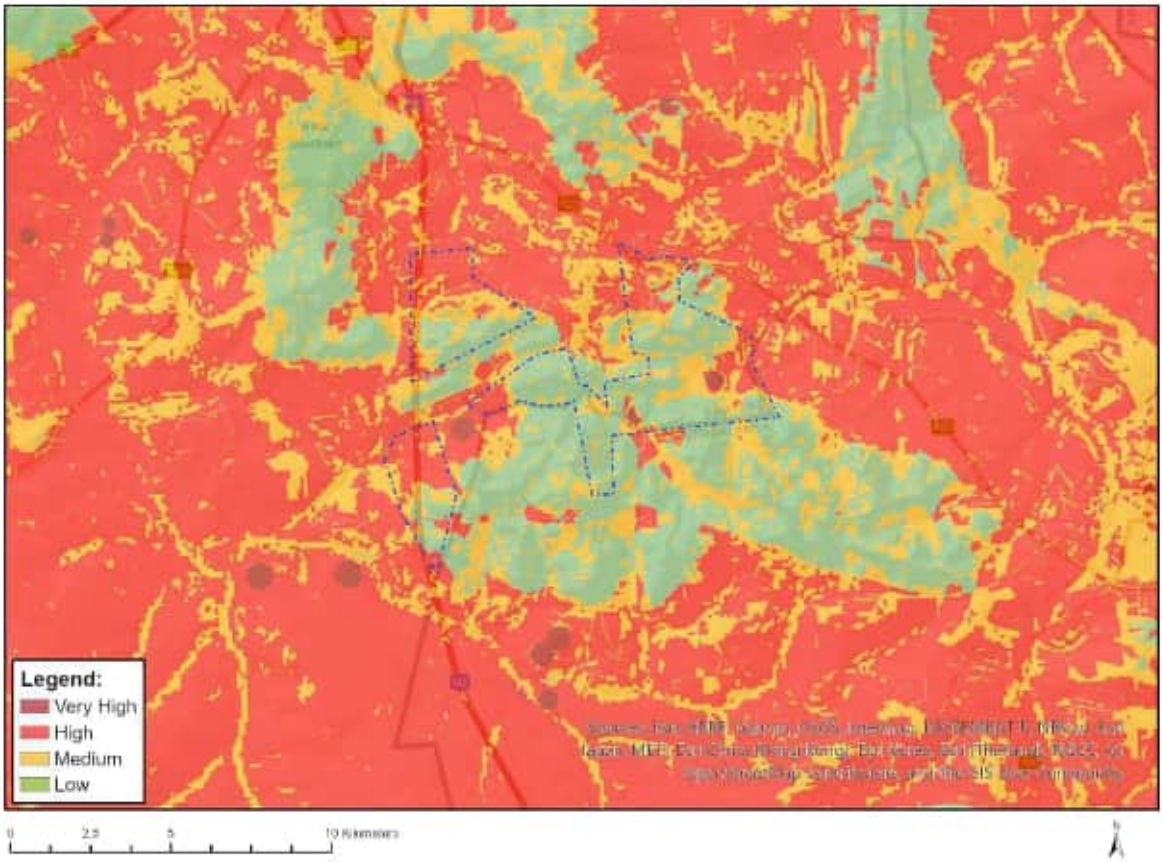
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Avian Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Avifauna_Assessment_Protocols.pdf
8	Civil Aviation Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf
9	Defense Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf
10	RFI Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
12	Flicker Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
15	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
16	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
17	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

OFFICIAL

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

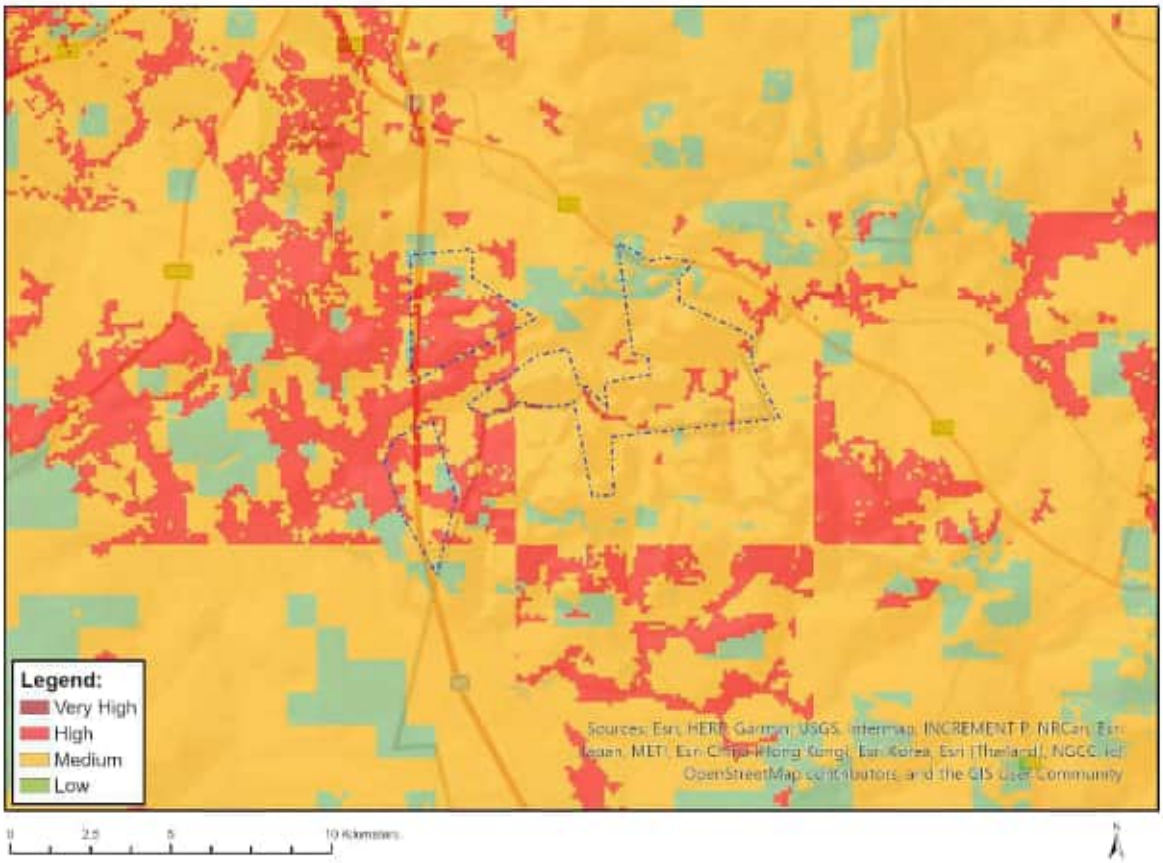
Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Very High	Pivot Irrigation;Land capability;09. Moderate-High/10. Moderate-High

Disclaimer applies

Very High	Pivot Irrigation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Very High	Pivot Irrigation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Sagittarius serpentarius
High	Aves-Mycteria ibis
Low	Subject to confirmation
Medium	Aves-Hydroprogne caspia
Medium	Aves-Sagittarius serpentarius
Medium	Aves-Eupodotis senegalensis
Medium	Aves-Circus ranivorus
Medium	Insecta-Chrysoritis aureus
Medium	Insecta-Lepidochrysops procera

Disclaimer applies

Medium	Insecta-Orachrysops mijburghi
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Hydrictis maculicollis
Medium	Mammalia-Ourebia ourebi ourebi

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

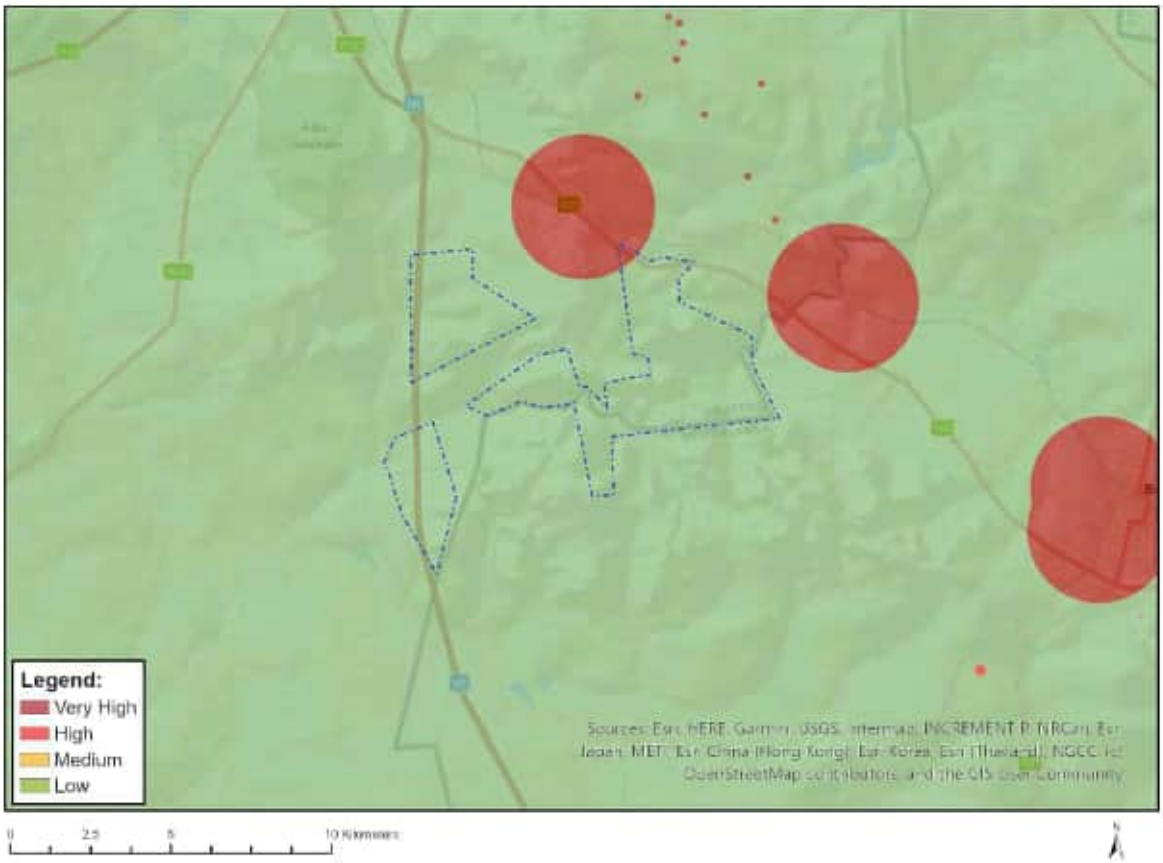
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Rivers_C
Very High	Wetlands_(River)
Very High	Wetlands_Central Bushveld Bioregion (Seep)
Very High	Wetlands_Central Bushveld Bioregion (Valley-bottom)

Disclaimer applies
06/11/2024

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Within 2km of a Grade II Heritage site

Disclaimer applies

MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY

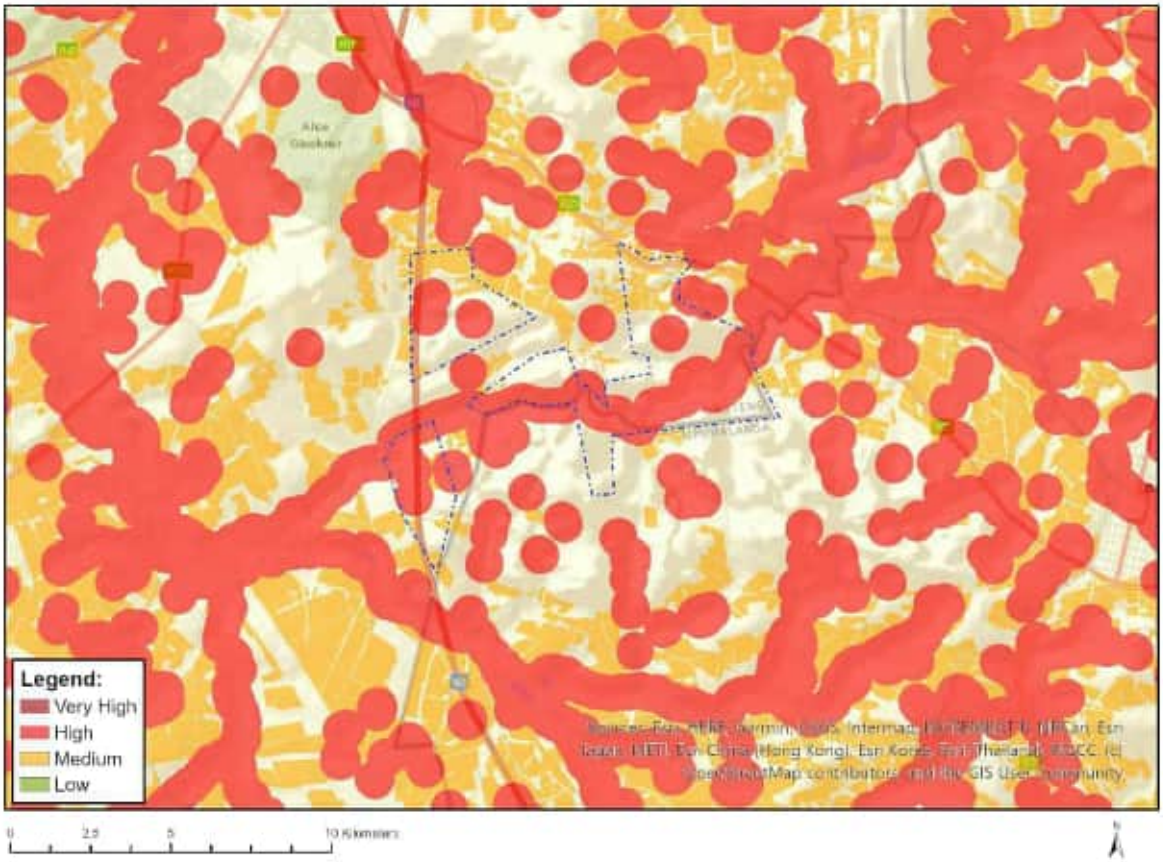
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area Outside Sensitivities

Disclaimer applies

MAP OF RELATIVE BATS (WIND) THEME SENSITIVITY



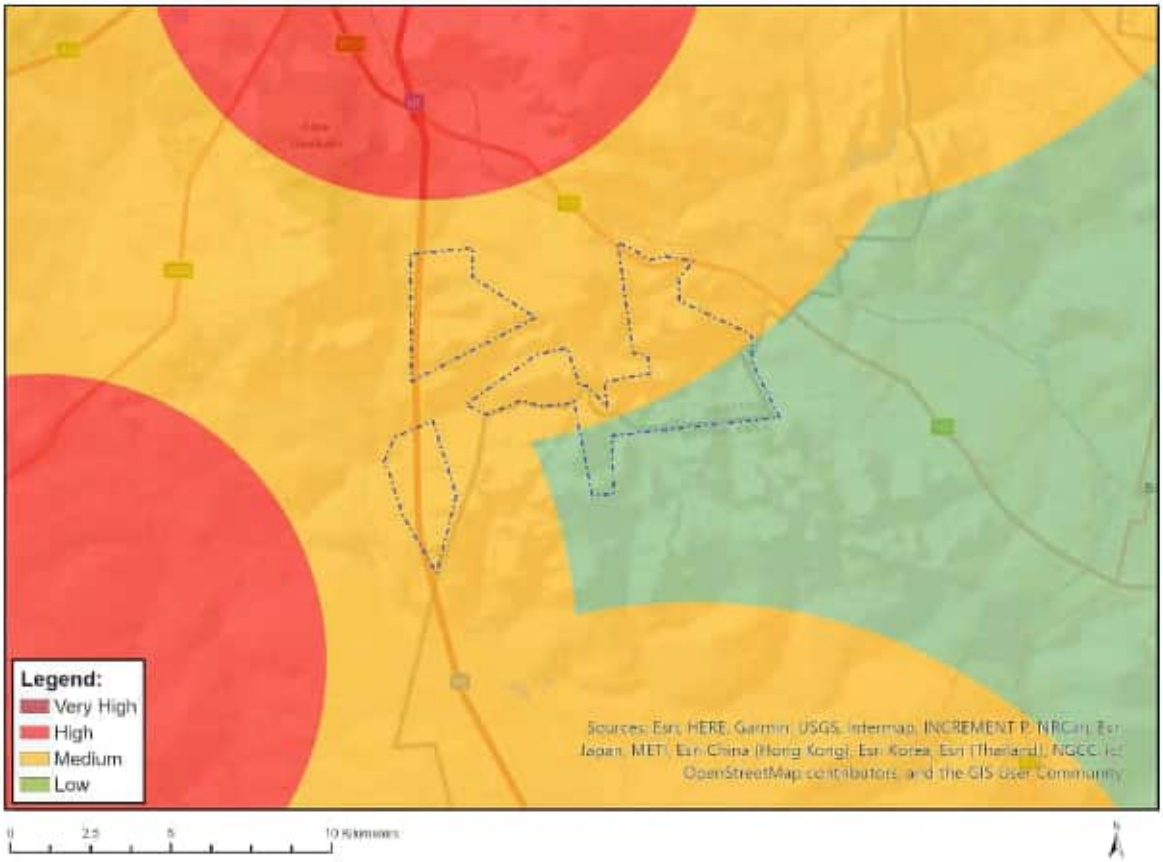
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 500 m of a river
High	Wetland
High	Within 500 m of a wetland
Medium	Croplands

Disclaimer applies

MAP OF RELATIVE CIVIL AVIATION (WIND) THEME SENSITIVITY



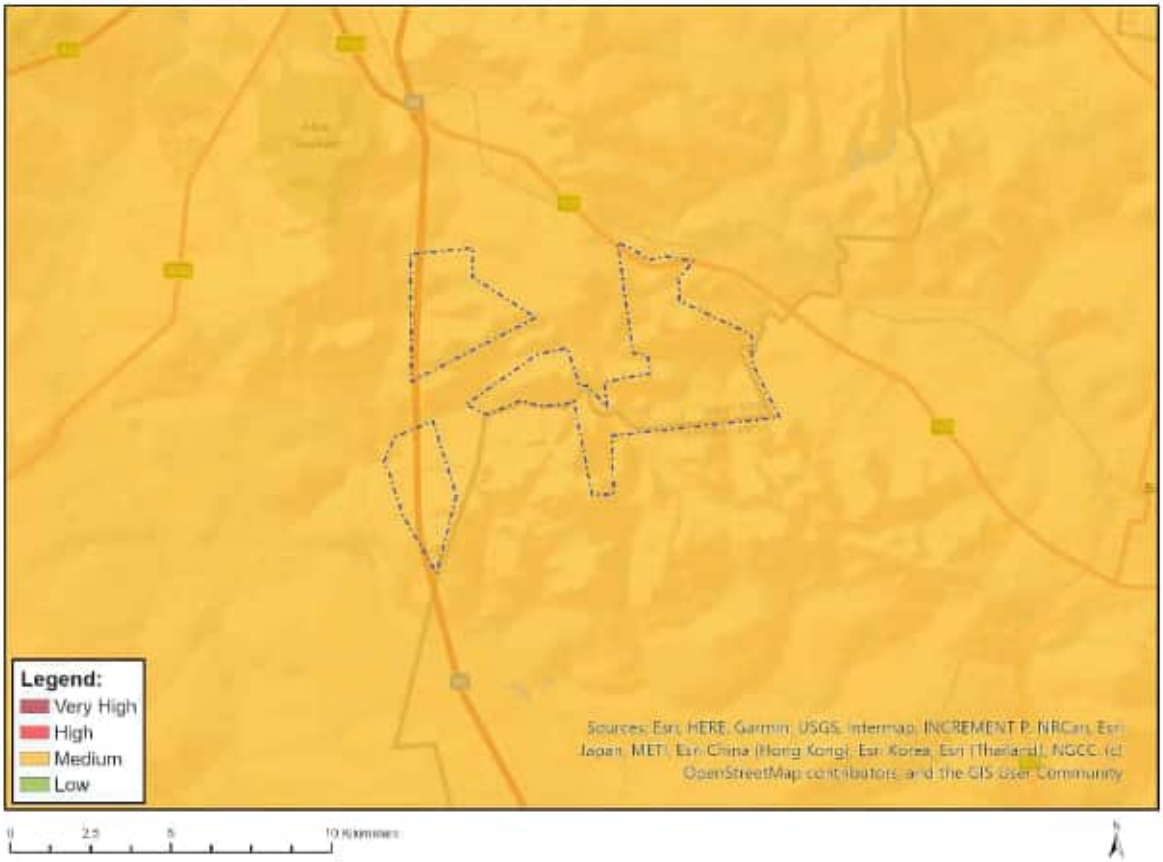
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Medium	Between 8 and 15 km of other civil aviation aerodrome

Disclaimer applies
06/11/2024

MAP OF RELATIVE DEFENCE (WIND) THEME SENSITIVITY



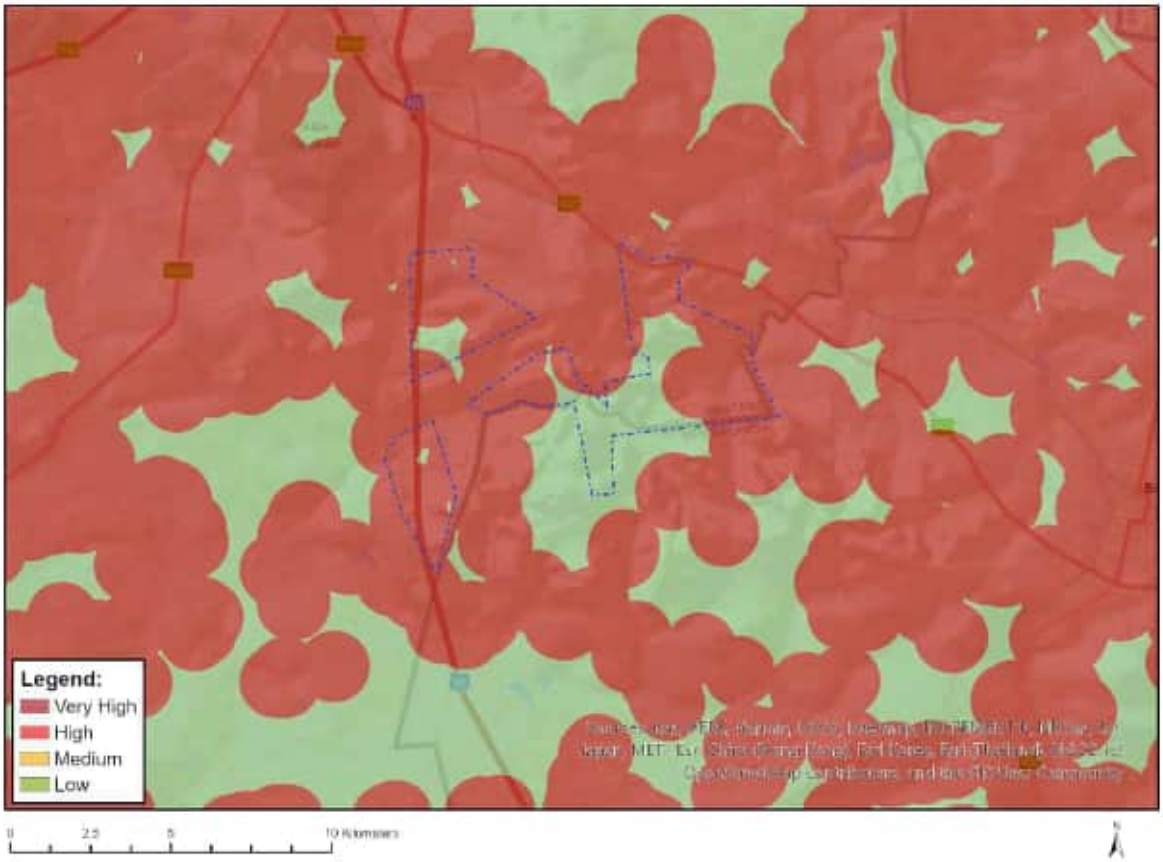
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Defence Site

Disclaimer applies
06/11/2024

MAP OF RELATIVE FLICKER THEME SENSITIVITY



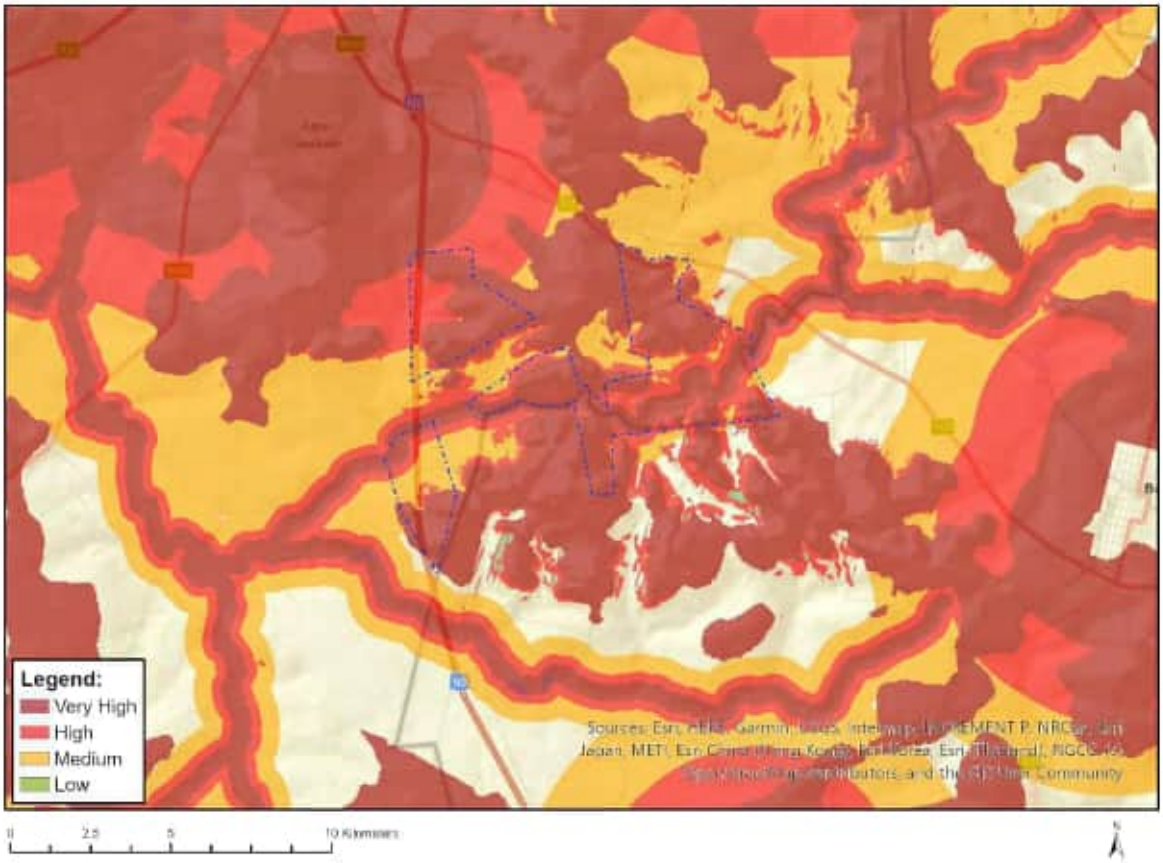
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE LANDSCAPE (WIND) THEME SENSITIVITY



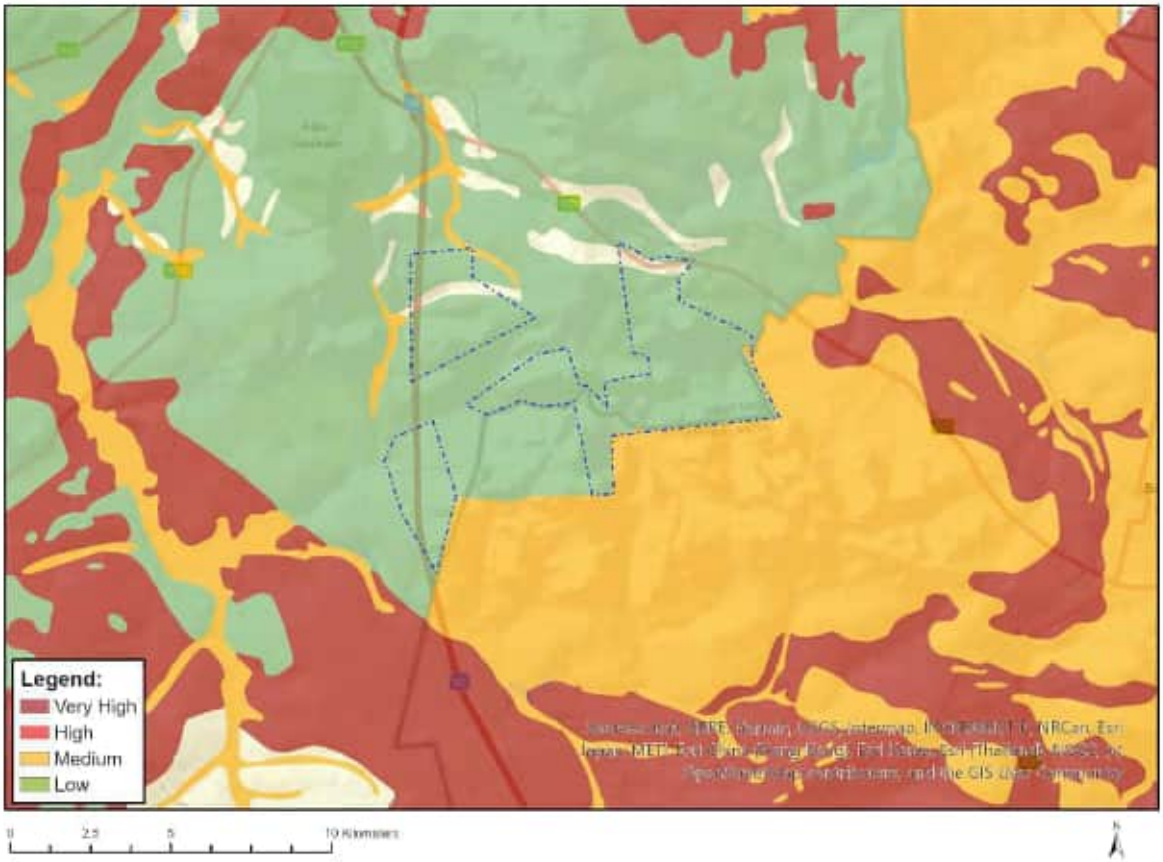
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
High	Slope between 1:4 and 1:10
High	Between 3 and 5 km of a nature reserve, botanical garden or other protected area
High	Within 500 m of a river
Low	Slope less than 1:10
Medium	Between 4 and 6 km of a town or village
Medium	Between 5 and 10 km of a nature reserve, botanical garden or other protected area
Medium	Within 1000 m of a wetland
Very High	Mountain tops and high ridges
Very High	Slope more than 1:4
Very High	Within 3 km of a nature reserve, botanical garden or other protected area
Very High	Within 250 m of a river

Disclaimer applies
06/11/2024

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



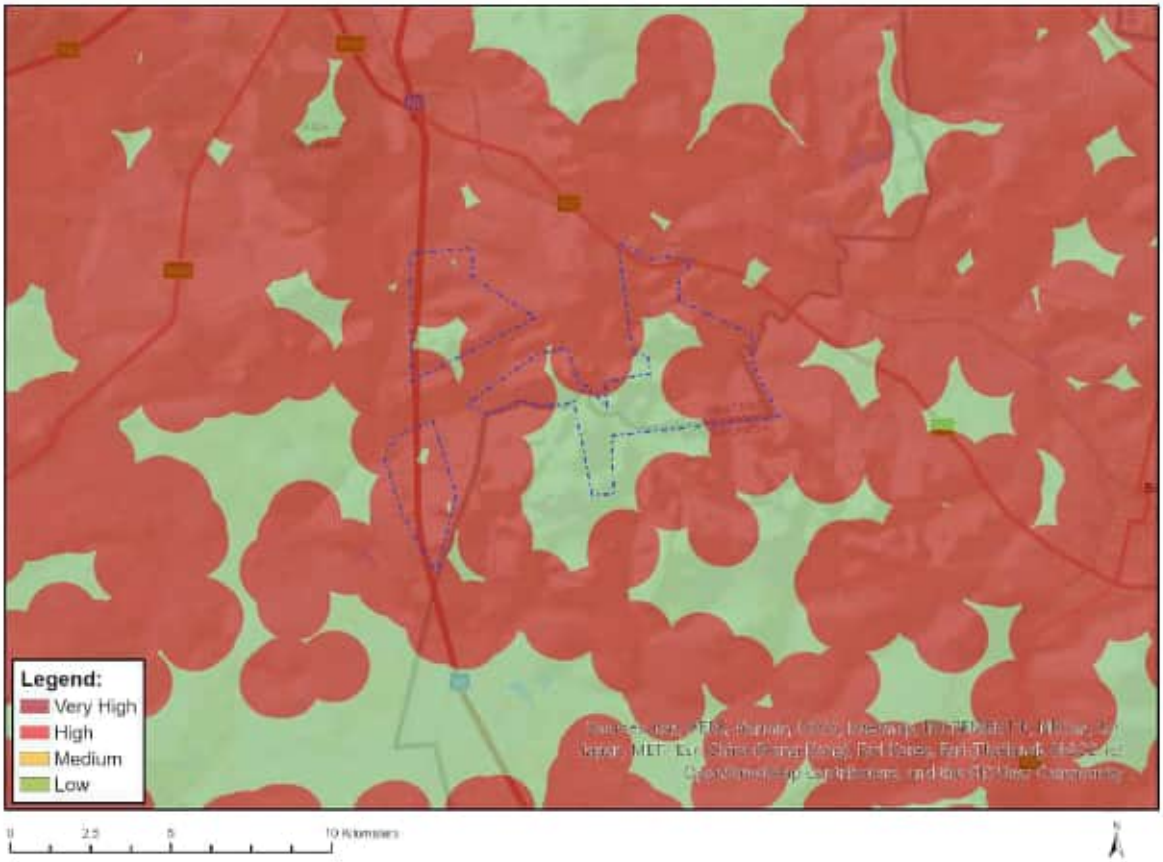
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity

Disclaimer applies
06/11/2024

MAP OF RELATIVE NOISE THEME SENSITIVITY



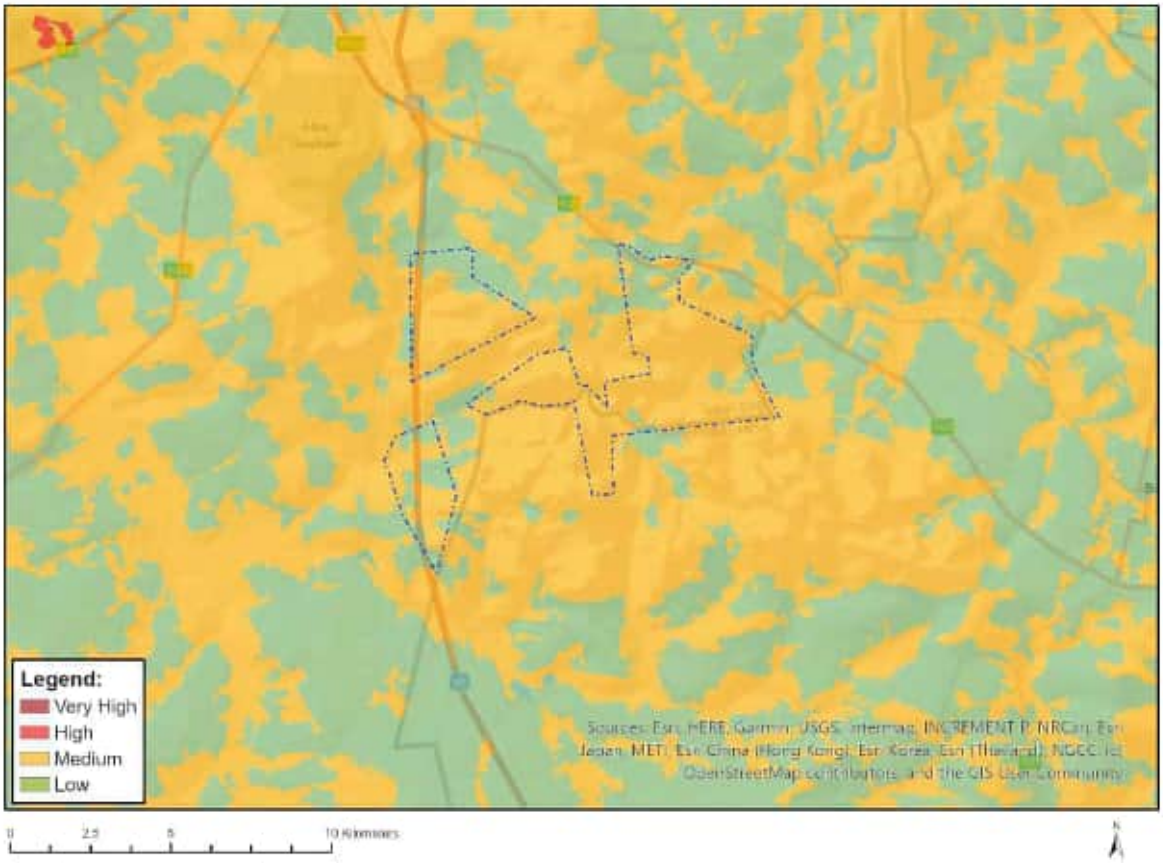
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity
Very High	Potential temporarily or permanently inhabited residence

Disclaimer applies
06/11/2024

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



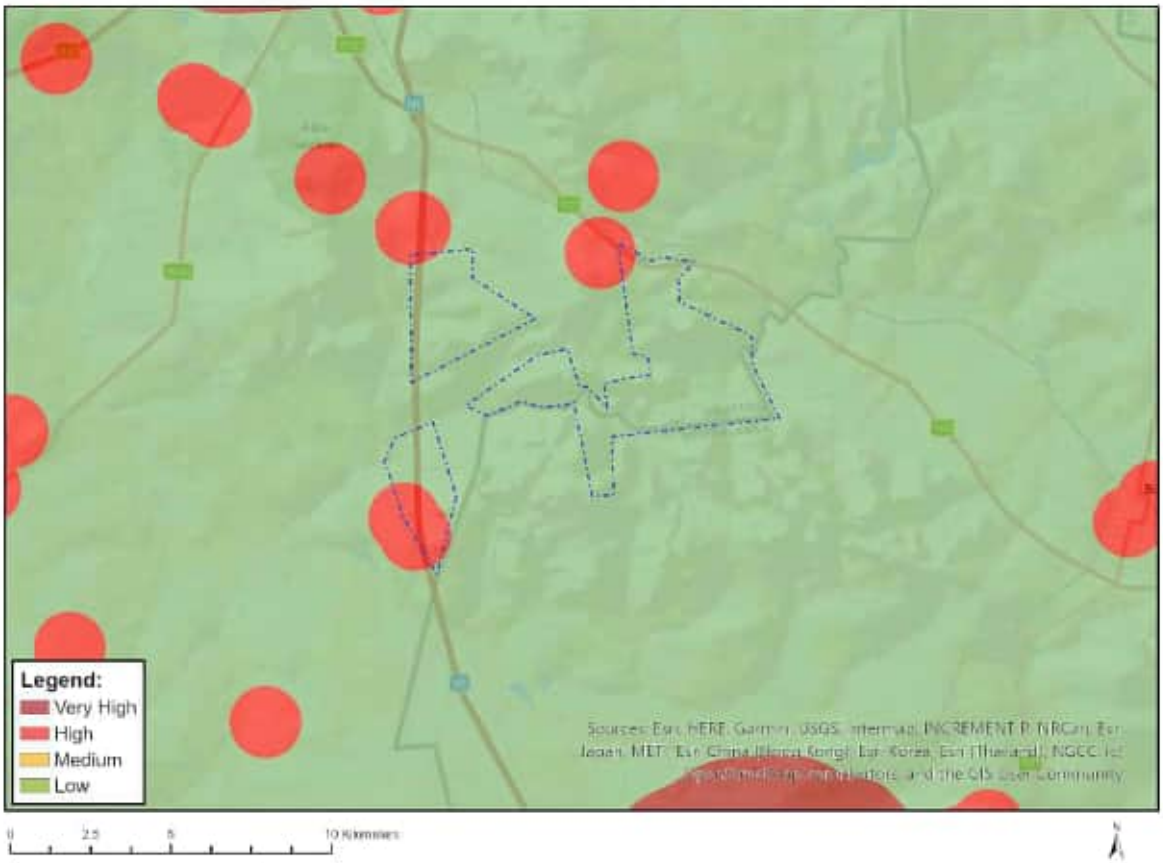
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Delosperma macellum
Medium	Cineraria longipes
Medium	Sensitive species 691
Medium	Brachycorythis conica subsp. transvaalensis
Medium	Sensitive species 1248
Medium	Prunus africana

MAP OF RELATIVE RFI (WIND) THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 1 km of a telecommunication facility;None;More than 60 km from a Weather Radar installation
Low	Low sensitivity for telecommunications;None;More than 60 km from a Weather Radar installation

Disclaimer applies
06/11/2024

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	CBA 1
Very High	CBA 2
Very High	ESA 1
Very High	ESA 2
Very High	ESA: Local corridor
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	VU_Soweto Highveld Grassland

Disclaimer applies

MAP OF RELATIVE VULTURE SPECIES THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	affecting an area between 5% - 10% of the population

Disclaimer applies
06/11/2024

Appendix B

EAP CV

Public

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

CAREER SUMMARY

Ashlea is a Principal Associate with 19 years' experience in the environmental field. She currently provides technical and strategic expertise on a diverse range project in the environmental management field, including environmental scoping and impact assessment studies, environmental management plans, waste and water management, as well as the provision of environmental management solutions and mitigation measures. Ashlea has been involved in the management of a number of large EIAs specifically within the energy sector such as the Medupi Power Station, and Pebble-Bed Modular Reactor (PBMR) and numerous Renewable Energy Developments and Transmission Powerlines. She also has significant environmental auditing experience and expertise having undertaken over 70 compliance audits. Ashlea holds a Masters in Environmental Management; a BTech (Nature Conservation), and a National Diploma (Nature Conservation). She is also a Registered Environmental Assessment Practitioner.

Countries of experience gained include South Africa, Mozambique, Zimbabwe and Zambia.

9 years with WSP

19 years of experience

Area of expertise

Auditing

ESIR

Energy

Infrastructure

Mining

Training

Waste Management

Language

English – Fluent

Afrikaans - Fluent

EDUCATION

Masters in Environmental Management, University of the Free State, South Africa	2006
B Tech, Nature Conservation, Technikon SA, South Africa	2001
National Diploma in Nature Conservation, Technikon SA, South Africa	1999

ADDITIONAL TRAINING

Conduct outcomes-based assessment (NQF Level 5), South African Qualifications Authority (SAQA)	2009

PROFESSIONAL MEMBERSHIPS

Registered Environmental Assessment Practitioner (Registration Number: 2019/1005)	2020

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

PROFESSIONAL HISTORY

WSP Group Africa (Pty) Ltd	May 2013 - present
Lidwala Consulting Engineers	April 2010 – April 2013
GIBB	January 2009 – March 2010
Bohlweki Environmental	August 2004 – December 2008
Vuka Environmental	August 2003 – July 2002

PROFESSIONAL EXPERIENCE

Energy Sector

G7 Renewable Energies, Karreebosch Wind Energy Facility Project, Matjiesfontein, Western Cape.
2022-2023
Project Manager
Undertaking of a Part 2 Amendment Process as well as the Amendment of the Environmental Management Programme for a 140MW Wind Energy Facility

G7 Renewable Energies, Karreebosch to Komsberg 132kV Powerline Project, Matjiesfontein, Western Cape.
2022-2023
Project Manager
Compilation of a Basic Assessment and Environmental Management Programme for the 132kV Powerline

Enertrag, Camden Renewable Energy Complex, Ermelo, Mpumalanga.
2021-2023
Project Manager
Compilation of four Environmental Impact Assessments, three Basic Assessments and associated Environmental Management Programmes for the Camden Renewable Energy Complex, including two wind energy facilities, a solar energy facility, one 400kV Gird Connection and three 132kV grid Connections.

Enertrag, Dalmanutha Renewable Energy Complex, Belfast, Mpumalanga.
2022-2023
Project Manager
Compilation of one Environmental Impact Assessment, four Basic Assessments and associated Environmental Management Programmes for the Dalmanutha Renewable Energy Complex, including two wind energy facilities and associated Grid Connections

Enertrag, Mukondeleli and Impumelelo Wind Energy Facilities, Secunda, Mpumalanga.
2022-2023
Project Manager
Compilation of two Environmental Impact Assessments, two Basic Assessments and associated Environmental Management Programmes for the Secunda Renewable Energy Complex, including two wind energy facilities and associated Grid Connections

Red Rocket South Africa Limited, Brandvalley Wind Energy Facility Project, Matjiesfontein, Western Cape.
2021-2022
Project Manager
Undertaking of a Part 2 Amendment Process as well as the Amendment of the Environmental Management Programme for a 140MW Wind Energy Facility

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Red Rocket South Africa Limited, Bon Espirange to Komsberg 132kV Powerline Project, Matjiesfontein, Western Cape.
2021-2022
Project Manager
Compilation of a Basic Assessment and Environmental Management Programme for the 132kV Powerline

Red Rocket South Africa Limited, Rietkloof Wind Energy Facility Project, Matjiesfontein, Western Cape.
2021-2022
Project Manager
Undertaking of a Part 2 Amendment Process as well as the Amendment of the Environmental Management Programme for a 140MW Wind Energy Facility

Calodex (Pty) Ltd., 100MW Solar Photovoltatic (PV) Plant, Springs in Gauteng, South Africa
2021
Project Director
This project involved the compilation of a Basic Assessment and Environmental Management Plan for a 100MW Solar PV Plant.

Eskom Holdings SOC Limited, Erica 400kV Loop-in-Loop-out (LILO) Powerline, Cape Town, Western Cape, South Africa.
2020
Compilation of an environmental screening assessment for the Erica 400kV LILO Powerline.

BioTherm Energy, Maralla East and West Wind Energy Facilities, Sutherland in the Northern and Western Cape, South Africa.
2019
Project Manager
Compilation of two Part 2 Amendment Process for the changes in technical scope of the Wind Energy Facilities.

Eskom Holdings SOC Limited, Ruigtevallei 132kV Powerline, Gariep in the Free State, South Africa
2019
Project Manager
Compilation of a Part 2 Amendment Process for the deviation of the Ruigtevallei – Dreunberg 132 kV powerline.

Globeleq, Nakonde and Mpika Wind Energy Projects, Zambia
2018
Project Manager
Compilation of two Environmental Project Briefs for the establishment of meteorological masts.

G7 Renewable Energies, Rietkloof Wind Energy Facility Project, Matjiesfontein, Western Cape.
2018
Project Director
Compilation of a Basic Assessment and Environmental Management Programme for a 140MW Wind Energy Facility.

Southern African Power Pool (SAPP), Mozambique – Zambia Interconnector Powerline, Mozambique
2018
Project Manager
This project involved the compilation of the Environmental and Social Impact Assessment and Environmental and Social Management Plan for a 300km 400kV powerline between Tete, in Mozambique, and Chipata, in Zambia.

Eskom Holdings SOC Limited, Ankerlig – Koeberg 132kV powerline walkdown, South Africa
2017

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Project Manager
This project involved the compilation of a Construction and Operation Environmental Management Plans for the Ankerlig – Koeberg 132kV powerline.

WSP | Parsons Brinckerhoff, Gwanda 100MW Solar Project, Gwanda, Matebeleland South Province, Zimbabwe
2018
Project Manager
This project involved the high-level review of the Environmental Impact Assessment for a 100MW Photovoltaic (PV) Solar Project against relevant legislation and international standards.

WSP | Parsons Brinckerhoff, Southern Energy Coal Fired Power Station, Hwange, Zimbabwe
2016
Project Manager
This project involved the high-level review of the Environmental Impact Assessment for the Southern Energy Coal Fired Power Station against relevant legislation and standards.

BioTherm Energy (Pty) Ltd, Proposed Solar and Wind Projects, Aggenys and Sutherland Northern and Western Cape Provinces, South Africa
2015
Project Manager
This project involved the compilation of 15 Environmental Impact Assessments and Environmental Management Plans for 2 Solar and 2 Wind energy Projects.

Central Energy Fund (CEF), Proposed Solar Park, Northern Cape Province, South Africa
2012
Strategic Environmental Advisor
This project involved the provision of process expertise for the compilation of an Environmental Impact Assessment and Environmental Management Plan for the proposed Solar Park.

Eskom Transmission, Proposed Tabor - Nzhelele 400kV Transmission Lines and associated infrastructure, Limpopo Province, South Africa
2012
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan for a 100km 400kV powerline between Louis Trichardt and Musina in the Limpopo Province.

Eskom Holdings SOC Limited, Retrofitting of the existing Electrostatic Precipitators with Fabric Filter Plants at Units 2, 3 and 4 at the Grootvlei Power Station, South Africa
2012
Project Manager
This project involved the compilation of a Basic Assessment Report and Environmental Management Plan for the proposed retrofitting of the existing Electrostatic Precipitators with Fabric Filter Plants at the Grootvlei Power Station.

Parsons Brinkerhoff Africa and Mulilo Power, Proposed Mulilo Coal Fired Power Station and associated infrastructure as well as associated power lines and substations, Musina, Limpopo, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Generation, Pebble Bed Modular Reactor Demonstration Plant and Associated Infrastructure, Western Cape, South Africa

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Transmissions, Proposed Bantamsklip – Kappa 765 kV Transmission Lines and associated infrastructure, Karoo, Western and Northern Cape, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan for four 260km 765kV powerlines between the Bantamsklip Nuclear Power Station Site and the proposed new Kappa Substation.

Eskom Transmission Proposed Bantamsklip – Bacchus, Bacchus - Kappa and Bacchus – Muldersvlei 400 kV Transmission Lines and associated infrastructure, Western and Northern Cape, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Distribution – Central region.Westgate – Tarlton – Kromdraai 132 kV Sub-Transmission line and associated infrastructure, Gauteng, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom, Environmental Scoping Study for the proposed new distribution line and substation, Dundonald, Mpumalanga, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan for a 132kV powerline as well as a new substation in the Tarlton area of Gauteng. Also involved in the Public Participation Process.

Eskom Distribution, The proposed new 132 kV sub-transmission line between the Dinaledi and GaRankuwa substations for Eskom, GaRankuwa, Northwest, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom, Transmission Expansion of the Transmission powerline network and associated infrastructure between the Perseus substation and the Beta substation, Free State, South Africa
2008
Project Manager
This project involved the compilation of an alignment specific construction Environmental Management Plan for the 13km 765kV Perseus Beta Turn-ins.

Eskom Distribution – Central Region, Tarlton – Kromdraai 132 kV Sub-Transmission line and associated infrastructure, Gauteng, South Africa
2008
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Eskom Distribution – Central Regio, Basic Assessment for the proposed Watershed – Mmabatho 88kV Power line. Northwest, South Africa
2008
Project Manager
This project involved the compilation of a Basic Assessment and Environmental Management Plan.

Eskom Distribution – Central Region, Proposed Watershed – Mmabatho 88kV Power line. Northwest, South Africa
2007
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Holdings SOC Limited, Proposed Combined Cycle Gas Turbine Plant and Associated Infrastructure near Majuba, Mpumalanga, South Africa
2007
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Generation, Proposed Capacity Increase of the Atlantis OCGT Plant and Associated Infrastructure, Western Cape, South Africa
2006
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Holdings SOC Limited, Proposed Concentrated Solar Thermal Plant in the Northern Cape, South Africa
2006
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Holdings SOC Limited, Proposed Underground Coal Gasification plant, Eskom, Mpumalanga, South Africa
2006
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Generation, Proposed new Coal-fired Power Station in the Lephalale Area for Eskom, Limpopo, South Africa
2005
Project Manager
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Eskom Generation, Proposed Open Cycle. Gas Turbine Power Station at Atlantis for Eskom, Western Cape, South Africa
2005
Environmental Consultant
This project involved the compilation of an Environmental Impact Assessment and Environmental Management Plan.

Infrastructure Sector

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Sasol South Africa Limited, Boegoebaai Green Hydrogen Project, Northern Cape, South Africa
2022-2023
Project Manager
This project involved the compilation of an High level Environmental Screening for the Project, in preparation future Environmental Impact Assessment Processes

Enertrag, Hendrina Green Hydrogen and Ammonia Facility, Mpumalanga, South Africa
2022-2023
Project Director
This project involved the undertaking of an Environmental Impact Assessment, including the compilation of an Environmental Management Programme

Enertrag, Camden Green Hydrogen and Ammonia Facility, Mpumalanga, South Africa
2021-2023
Project Director
This project involved the undertaking of an Environmental Impact Assessment, including the compilation of an Environmental Management Programme

Anglo American, Emalahleni Water Treatment Plant Amendment Project (EWRP), Emalahleni, Mpumalanga, South Africa.
2020
Project Manager
Compilation of a Part 1 Amendment Process for the changes to the EWRP Environmental Authorisation as well as an update of the Environmental Management Programme.

Eskom Holdings SOC Limited, Hendrina Leachate Dam, South Africa
2018
Project Manager
This project involves the compilation of a Basic Assessment and Environmental Management Plan for a leachate Dam at the Domestic Waste Landfill Site at the Hendrina Power Station.

S**ANRAL, Rehabilitation of the R34 between Vryburg and Schweizer-Reneke, Vryburg and Schweizer-Reneke, Northwest, South Africa**
2016
Project Manager
This project involved the compilation of a Basic Assessment and Environmental Management Plan.

Envirocin Incineration Systems CC, Proposed Expansion of the Cremation Facilities at the Envirocin Pet Crematorium, Kyasands, Gauteng, South Africa
2013
Project Manager
This project involves the compilation of a basic assessment for the expansion of the cremation facilities.

Industrial Development Corporation of SA (Pty) Ltd, Proposed Kraft Paper Mill in Frankfort, Frankfort, Free State, South Africa
2013
Project Manager
This project involved the undertaking of an Environmental Impact Assessment, including the compilation of an Environmental Management Programme.

SANRAL, Rehabilitation of the N14 between Delerayville and Sannieshof, Northwest, South Africa
2011
Project Manager
This project involved the compilation of a Basic Assessment and Environmental Management Plan as well as the construction of a new bridge over the Hartsriver. This project also included the compilation of Water Use License and Mining Permit Applications.

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Makhado Municipality, Proposed new Waterfall Cemetery, Limpopo, South Africa
2011
Project Manager
This project involved the compilation of a Basic Assessment and Environmental Management Plan.

Johannesburg Roads Agency, Route determination of the proposed Metro Boulevard, Weltevreden Park Area, Gauteng, South Africa
2008
Project Manager
This project involved the undertaking of an Environmental Impact Assessment.

Eskom Generation, Proposed new fuel supply pipeline between Milnerton and Atlantis, Western Cape, South Africa
2007
Project Manager
This project involved undertaking an Environmental Impact Assessment for the proposed new fuel supply pipeline between Milnerton and Atlantis to supply the Ankerlig Power Station.

Mining Sector

Rietvlei Mining Company, Establishment of the Proposed Rietvlei Opencast Coal Mine, Middelburg, Mpumalanga, South Africa
2013
Project Manager
This project involves the undertaking of an integrated environmental authorisation process, including an Environmental Impact Assessment, Environmental Management Programme Report, Waste Management License Application and Water Use License Application.

AngloGold Ashanti, Decommissioning of Redundant Infrastructure at the Vaal River Operations, Northwest and Free State, South Africa
2013
Project Manager
This project involves undertaking an integrated Environmental Authorisation and Waste Management License process for the proposed decommissioning of redundant infrastructure.

AngloGold Ashanti (Pty) Ltd, Decommissioning of Redundant Infrastructure at the West Wits Operations, Gauteng, South Africa
2013
Project Manager
This project involves undertaking a Basic Assessment process for the proposed decommissioning of redundant infrastructure.

Exxaro Coal (Pty) Ltd Inyanda Mine Pegasus South Expansion, Middelburg, Mpumalanga, South Africa
2011
Project Manager
This project included the compilation of an Environmental Impact Assessment, Environmental Management Plan, the Amendment of the existing Environmental Management Programme Report and the amendment of the existing Water Use License.

Sishen Iron Ore (Pty) Ltd, Sishen Infrastructure Program, Northern Cape, South Africa
2010
Project Manager
This project involved the compilation of an Environmental Impact Assessment and an Environmental Management Plan for the infrastructure expansion programme.

Sound Mining Solutions, Prospecting Permit Applications in the Kuruman area of the Northern Cape, South Africa

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

2011
Project Manager
This project involved the compilation of Environmental Management plans as part of six applications for Prospecting Permits.

Limpopo Department of Roads and Transport, Borrow pits required by the Limpopo Department of Roads and Transport, Limpopo, South Africa
2010
Project Manager
This project involved the compilation of Environmental Management plans as part of the applications for Mining Permits for borrow pits required for the rehabilitation of provincial roads.

Eskom Generation, Borrow pits required for the Medupi Coal Fired Power Station, Limpopo, South Africa
2008
Project Manager
This project involved the compilation of Environmental Management plans as part of the applications for Mining Permits for borrow pits.

Eskom Generation. Borrow pits required for the Ingula Pumped Storage Scheme, KwaZulu-Natal, South Africa
2008
Project Manager
This project involved the compilation of Environmental Management plans as part of the applications for Mining Permits.

Eskom Generation Project Manager, Mining Right Application for a 23 Hectare Borrow Pit required for the Steelpoort Pumped Storage Scheme, Mpumalanga, South Africa
2007
Project Manager
This project entailed the compilation of the required Environmental Management Programme Report in support of a Mining Right Application.

Minexpo, Renewed Mining and Prospecting Activities on the farm Quaggaskop 215, Vanrhynsdorp, Western Cape, South Africa
2004
Environmental Consultant
This project involved the compilation of an Environmental Management Programme Report for the recommencement of mining and prospecting activities.

Waste Management

Sasol Secunda Operations, Sasol Waste Management Environmental Management Programme, Secunda, South Africa
2019
Project Manager
Compilation of an operational Environmental Management Programme for the Sasol Waste Ash Facility, Charlie 1 Disposal Facility and the Waste Recycling Facility.

Eskom Holdings SOC Limited, Proposed continuous Ashing at Majuba Power Station, Mpumalanga, South Africa
2012
Project Manager
This project entailed the compilation Environmental Impact Assessment and Waste Management License Application for the proposed continuous ashing project at the Majuba Power Station in Mpumalanga.

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Eskom Holdings SOC Limited, Proposed continuous Ashing at Tutuka Power Station, Mpumalanga, South Africa
2012
Project Manager
This project entailed the compilation Environmental Impact Assessment and Waste Management License Application for the proposed continuous ashing project at the Tutuka Power Station in Mpumalanga.

Hendrina Power Station, Proposed extension of Ash Dams at Hendrina Power Station, Mpumalanga, South Africa
2011
Project Manager
This project entailed the compilation Environmental Impact Assessment and Waste Management License Application for the proposed extension of the ash dams at the Hendrina Power Station in Mpumalanga.

Coega Development Corporation, Phase 1 of the Environmental Impact Assessment for the Proposed Regional General and Hazardous Waste Processing Facility, Eastern Cape
2005
Project Manager
This project entailed the compilation Environmental Impact Assessment for the Proposed Regional General and Hazardous Waste Processing Facility in the Eastern Cape.

Auditing

Sasol Chemical Industries, Secunda Synfuels Operations Waste Management License Audits for the Sasol Secunda, Mpumalanga, South Africa
2014 – 2021
Lead Auditor
These projects involve the annual and biannual environmental compliance auditing of the Waste Management licenses for various waste facilities

South 32. Compliance Audits at South 32, Mpumalanga, South Africa
2016 – 2020
Project Manager
This project involved the environmental compliance audits of the Water Use Licenses for the BMK, Douglas, Klipfontein and Middelburg Mine North and South Sections at South 32 in Mpumalanga.

South 32, Compliance Audits at Middelburg Water Reclamation Plant (MWRP), Mpumalanga, South Africa
2016 – 2020
Project Manager
This project involved the environmental compliance audits of the Water Use License and Waste Management License for the MWRP at South 32 in Mpumalanga.

Nedbank, BioTherm Round 4 Lenders Technical Advisor, South Africa
2018 – 2021
Project Manager – Environmental
Environmental monitoring of the construction of the Konkoonsies II and Aggeneys Photovoltaic Solar Plants against the IFC Performance Standards.

Eskom Holdings SOC Limited, Water Use Licence Audits, Delmas, Mpumalanga, South Africa
2019
Lead Auditor
External compliance audits of the water use licences for the Delmas and Argent Powerlines in Mpumalanga.

Sasol Oil (Pty) Ltd, Sasol Alrode and Pretoria West Depot Audits, Pretoria, South Africa
2016 – 2020
Lead Auditor

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

Environmental compliance audits for environmental authorisations and environmental management plans for the Sasol Alrode and Pretoria West Depots.

Sasol Oil (Pty) Ltd, Sasol Regulation 34 Audits, South Africa
2019
Lead Auditor
Environmental compliance audits for 13 authorisations for the Sasol Owned Petrol Filling Stations.

Anglo American Platinum. Regulation 34 Audits at Mogalakwena Mine, Limpopo Province, South Africa
2019
Project Manager
Environmental compliance audits of the EMPR and various environmental authorisations at the Mogalakwena Mine.

Sasol Secunda Operations, Sasol Environmental Authorisations and Environmental Management Plans for the Secunda Operations, Secunda, South Africa
2019
Lead Auditor
Environmental compliance audits for 49 authorisations for the Sasol Secunda.

Palabora Company, Waste Management Licence Compliance Audit and PCB Plan Close Out Audit, Phalaborwa, Limpopo, South Africa
2019
Project Manager
Environmental compliance audit of a WML and the PCB Plan for the Palabora Mine.

Sasol Mining, Water Use Licence Compliance, Secunda, South Africa
2018
Project Manager
Environmental compliance audit of six WULs held by mining operations.

South 32, Legal Assessment at South 32, Klipfontein and Middelburg Mine North and South Sections at South 32 in Mpumalanga, South Africa

2019
Project Manager and Lead Auditor
This project involved the assessment of legal compliance against the mine's legal register.

Investchem (Pty) Ltd, InvestChem Annual Environmental Compliance Monitoring, Kempton Park, Gauteng, South Africa
2013 – 2019
Lead Auditor
This project involved the annual environmental compliance auditing for InvestChem's Sulphonation Plant. The monitoring included InvestChem's compliance to various commitments contained in their environmental management programmes and conditions within their environmental authorisations (records of decision).

Sasol Oil (Pty) Ltd, Compliance Audits at Sasol Alrode and Pretoria West Depots, Gauteng, South Africa
2015 – 2019
Project Manager and Lead Auditor
Annual Environmental compliance auditing of the Environmental authorisations at the Alrode and Pretoria West Depots in Gauteng.

Eskom Holdings, Water Use Licence for the Letabo Power Station, Free State, South Africa
2018
Project Manager

Environmental compliance audit of the WUL held by Eskom Letabo Power Station.

Seriti Coal, Compliance Audits at Kriel Colliery, Kriel, Mpumalanga, South Africa
2018
Project Manager
This project involved the environmental compliance audits of the Water Use Licenses.

South 32, Legal Assessment at South 32, Mpumalanga, South Africa
2017
Project Manager and Lead Auditor
This project involved the assessment of legal compliance against the mine's legal register for the BMK, Douglas, Klipfontein and Middelburg Mine North and South Sections.

South 32, EMPR Performance Assessment Report at South 32, Mpumalanga, South Africa
2016
Project Manager
This project involved the formal assessment and verification of the Environmental Management Programme Report for the BMK, Douglas, Klipfontein and Middelburg Mine North and South Sections.

ACWA Power, Solafrica Bokpoort CSP Power Plant (Pty) Ltd. Compliance Audit for the Bokpoort Concentrating Solar Power (CSP) Facility, Groblershoop, Northern Cape, South Africa
2016
Lead Auditor
This project involved the environmental compliance auditing of the Waste Management License, Environmental Authorisation and Water Use License.

Anglo Thermal Coal, EMPR Performance Assessment Report for the Landau Colliery, Mpumalanga, South Africa
2013
Auditor
This project involved the formal assessment and verification of the Landau Colliery Environmental Management Programme Report, conducted in accordance with Regulation 55 of the Mineral and Petroleum Resources Development Act (No. 28 of 2002).

AfriSam Southern Africa (Pty) Ltd, Waste Management License Audit for the Slagment Operation, Vanderbijlpark, Gauteng, South Africa
2013
Lead Auditor
This project involved the annual environmental compliance auditing for AfriSam's Slagment Operation in Vanderbijlpark in Gauteng Province. The audit included AfriSam's compliance to the conditions of their waste management license.

Anglo American Thermal Coal, EMPR Performance Assessment Report for the New Vaal Colliery, Free State, South Africa
2006 – 2007
Auditor
This project involved the formal assessment and verification of the New Vaal Colliery Environmental Management Programme Report, conducted in accordance with Regulation 55 of the Mineral and Petroleum Resources Development Act (No. 28 of 2002).

Environmental Control

Wood South Africa (on behalf of Sasol South Africa Limited), Clean Fuels Projects (EHN & MFO, Large Tanks) Project, Secunda
2022-2024
Project Director

Ashlea Strong

Environmental Planning & Advisory, Principal Associate

This project involved the monthly auditing of the contractor's compliance with the conditions of the environmental authorisation and environmental management plan for the Sasol Clean Fuels Projects in Secunda.

SANRAL.N14, rehabilitation between Sannieshof and Delareyville, Northwest, South Africa
2012
Environmental Control Officer
This project involved the monthly auditing of the contractor's compliance with the conditions of the approved Environmental Management Plan as well as ad hoc environmental advise to the Project Engineer and SANRAL.

Victor Khanye Municipality. Delmas and Bontleng Wastewater Treatment Works, Mpumalanga, South Africa
2009
Environmental Control Officer
This project involved a once off compliance audit of the above-mentioned Wastewater Treatment Works.

Mkhondo Local Municipality. Nkonjaneni Water Borne Sewer Project in Piet Retief, Mpumalanga, South Africa
2009
Environmental Control Officer
This project involved the monthly auditing of the contractor's compliance with the conditions of the approved Environmental Management Plan as well as ad hoc environmental advise to the Project Engineer.

ERWAT, Upgrading of the Waterval Water Care Works, Gauteng, South Africa
2005 – 2007
Environmental Control Officer
This project involved the monthly auditing of the contractor's compliance with the conditions of the approved Environmental Management Plan.

City of Tshwane Lotus Gardens, Ext 2 Township establishment, Gauteng, South Africa
2003
Environmental Control Officer
This project involved the monthly auditing of the contractor's compliance with the conditions of the approved Environmental Management Plan.

Training

SANRAL, N14 rehabilitation between Sannieshof and Delareyville, Northwest, South Africa
2012
Project Manager
This project involved the provision of training for the staff of the N14 rehabilitation project with regards to the contents of the environmental management plan.

Mintek, Training in Environmental Aspects and Rehabilitation for the Small-Scale Mining Division of Mintek, City, Province, South Africa
2004
Trainer
This project involved the provision of environmental awareness training for delegates involved in the small-scale miner training programme run by the Mintek small scale mining division.

Transwerk, Training in Environmental Aspects and Impacts, Germiston, Gauteng, South Africa
2004
Trainer
This project involved the provision of environmental aspects and impacts training for the staff of Transwerk in Germiston.

Environmental Assessment Practitioners Association of South Africa

Registration No. 2019/1005

Herewith certifies that

ASHLEA STRONG

is registered as an

Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 April 2026

Expires: 31 March 2027

Chairperson

Registrar

SAQA

UNIVERSITEIT VAN DIE VRYSTAAT

UNIVERSITY OF THE FREE STATE

HIERMEE WORD VERKLAAR DAT DIE THIS IS TO CERTIFY THAT THE

Magister in Omgewingsbestuur
Magister in Environmental Management

TOEGEKEN IS AAN
HAS BEEN CONFERRED UPON

ASHLEA-ROBYN STRONG

Met effek vanaf / with effect from
1 Februarie / February 2006

NADAT AAN DIE STATUTE EN REGULASIES VAN DIE UNIVERSITEIT VOLDOEN IS, AS BEWYS DAARVAN PLAAS ONS ONS ONDERSKLIE HANDTEKENINGE EN DIE SFeE VAN DIE UNIVERSITEIT HIERONDER.

IN ACCORDANCE WITH THE STATUTES AND REGULATIONS OF THE UNIVERSITY, AS WITNESS OUR RESPECTIVE SIGNATURES AND THE SEAL OF THE UNIVERSITY BELOW.

VISE-RANGEER VICE-CHANCELLOR

DEKAAN DEAN

REGISTRATEUR REGISTRAR

BLOEMFONTEIN

Appendix C

SPECIALIST SSVRS

Public

Appendix C.1

AGRICULTURE SSVR

Public

ABO UVEMVANE WIND ENERGY FACILITY 1 NEAR HEIDELBERG AND BALFOUR, GAUTENG & MPUMALANGA PROVINCES

SOIL, LAND CAPABILITY AND AGRICULTURAL POTENTIAL

SITE SENSITIVITY VERIFICATION REPORT

NOVEMBER 2024

Specialist report prepared by:

ENVIRONMENT RESEARCH CONSULTING

Prepared for: ABO ENERGY & WSP

Report Name	**ABO UVEMVANE WIND ENERGY FACILITY 1 NEAR HEIDELBERG AND BALFOUR, GAUTENG & MPUMALANGA PROVINCES: SOIL, LAND CAPABILITY AND AGRICULTURAL POTENTIAL SITE SENSITIVITY VERIFICATION REPORT**
Specialist Theme	Agriculture
Project Reference	SSVR: ABO Uvemvane Wind Energy Facility 1
Report Version	Draft 1 / 2026/03/11
Environmental Assessment Practitioner	WSP
Specialist investigation by	**ENVIRONMENT RESEARCH CONSULTING**
Fieldwork & Report Writer	Albie Götze (SACNASP 004497) *
Declaration	I, the above signed, operate as an independent consultant under the auspice of the South African Council for Natural Scientific Professions. I declare that I have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, 2017. I have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. I have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principals of science.

* SACNASP certificate & CV included in report appendices.

TABLE OF CONTENTS

1 INTRODUCTION 4
1.1 Project Background 4
1.2 Project Details 5
1.3 Scope and purpose of the study 7
1.4 Assumptions and Limitations 8
1.5 Relevant Legislation & General Regulatory Requirements 9
1.6 Methodology 10
1.6.1 Desktop assessment 10
1.6.2 Field survey 11
1.6.3 Land Capability Classification 12
1.6.4 Sensitivity Verification 12
2 RESULTS 14
2.1 Desktop assessment 14
2.1.1 Natural environment 14
2.1.2 Agricultural environment 15
2.2 Field survey findings 20
2.2.1 Description of agricultural resources in the project area 20
2.2.2 Assessment of the agricultural production potential of the project area 28
3 SITE SENSITIVITY VERIFICATION 30
3.1 Screening Report 30
3.2 Sensitivity verification 31
3.3 Consideration of Cumulative Impacts 33
3.4 Consideration of Other Impacts 34
4 SUMMARY & CONCLUSIONS 35
5 REFERENCES 38
6 APPENDIX A: SPECIALIST INVESTIGATOR 40
6.1 Details 40
6.2 Vocational Experience 40
6.3 Professional Declaration 41
7 APPENDIX B: MAP OF SITE VISIT TRACKS 43

LIST OF FIGURES

Figure 1: The locality of the proposed ABO Uvemvane WEF 1 project area near Balfour and Heidelberg. 4
Figure 2: Land capability in the proposed project area and surroundings. 15
Figure 3: Protected Agricultural Areas (in green) in relation to the ABO Uvemvane WEF 1 project area. 19
Figure 4: Soil assessment points surveyed in the ABO Uvemvane WEF 1 project area. 20
Figure 5: Areas of current and past cultivation in the proposed ABO Uvemvane WEF 1 project area. 21
Figure 6: A currently cultivated (rainfed) land where a crop of maize was recently harvested. 21
Figure 7: A planted pasture of Eragrostis curvula that is either cut and baled or grazed as standing fodder. 22

Figure 8: An abandoned cultivated area where no cultivation has taken place for an extended period (> 10 years). 22
Figure 9: Natural grazing where no cultivation has taken place in the past. . 23
Figure 10: Information obtained from the National Web-based Environmental Screening Tool for the ABO Uvemvane WEF 1 project area. 30
Figure 11: Sensitivity rating as assigned by this assessment on the agricultural sensitivity theme for the project area. 32
Figure 12: Cumulative impacts map for renewable energy projects within a 30 km radius from the proposed project site. 33
Figure 13: SACNASP registration certificate of the specialist that conducted the assessment. 42
Figure 14: Google earth image presenting tracks that were followed during site visits to the project area. 43

LIST OF TABLES

Table 1: A list of key legislation, policies, and guidelines relevant to agricultural resources in the study area. 9
Table 2: Relationship between land capability and the screening tool's agricultural sensitivity rating. 13
Table 3: Summary of the results of the desktop assessment 16
Table 4: Spatially representative soil form sample examples. 25
Table 5: Summary of the screening tool vs specialist verified sensitivities. ... 31
Table 6: Summary of possible impacts and mitigation measures. 34

1 INTRODUCTION

1.1 Project Background

ERC was appointed by ABO Energy South Africa (Pty) Ltd, on behalf of ABO Uvemvane Wind Energy Facility 1 (Pty) Ltd, to undertake a Site Sensitivity Verification of the Soil and Agricultural theme as part of the environmental authorisation application process for the proposed development of the ABO Uvemvane Wind Energy Facility 1 and associated infrastructure (from here on forward referred to as the ABO Uvemvane WEF 1 project), located approximately 9 km west of the town of Balfour in the Mpumalanga Province in the Dipaleseng Local Municipality within the Gert Sibande District Municipality, and approximately 14 km south-east of the town Heidelberg in the Gauteng Province in the Lesedi Local Municipality within the Sedibeng District Municipality (Figure 1). The site visit and field surveys were conducted between 14 and 17 October 2024. A map indicating tracks traversed by the specialist during the site visit is included in the appendices of this report together with professional information about the specialist that conducted this investigation.

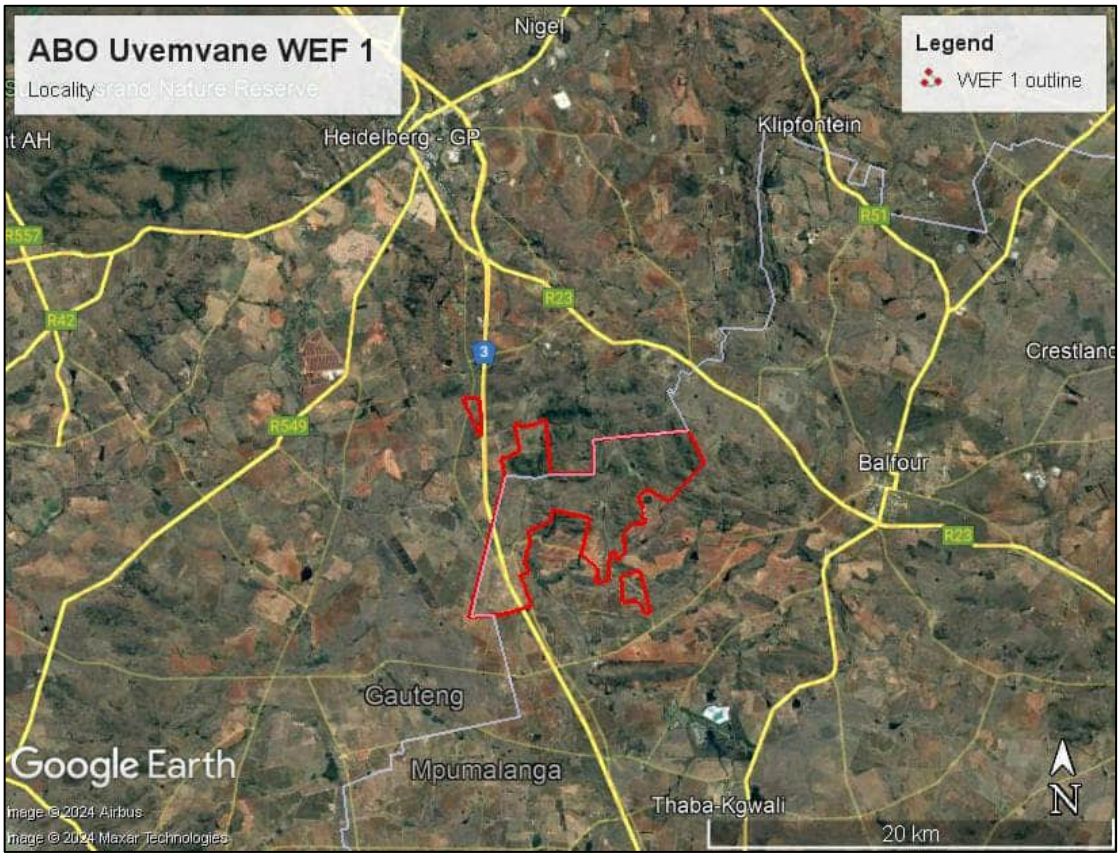


Figure 1: The locality of the proposed ABO Uvemvane WEF 1 project area near Balfour and Heidelberg.

1.2 Project Details

The Applicant, ABO Uvemvane Wind Energy Facility 1 (Pty) Ltd proposes the development of the ABO Uvemvane WEF 1 project, a commercial wind energy generation facility that covers a project area of about 4900 ha, comprising up to 33 turbines and with a total generation capacity of up to 240 MWac in capacity, as well as associated infrastructure.

It is important to note at the outset that the exact specifications of the proposed project components will be determined during the detailed engineering design phase prior to construction (after the issuing of an EA, should such an authorisation be granted), but that the information provided below is seen as the maximum development scenario for the proposed development of ABO Uvemvane WEF 1.

The proposed facility would comprise the following (to be located within the proposed development footprint):

- Up to 33 turbines with the following maximum specifications:
    - Maximum hub height 180 m;
    - Maximum blade length 100 m;
    - Maximum rotor diameter 200 m;
    - Maximum capacity per turbine 10 MW;
    - A transformer at the base of each turbine;
    - Concrete turbine foundations up to 1 ha each;
    - Turbine, crane, and blade hardstands (included in the abovementioned 1 ha).
- Primary/main access roads as well as internal road reticulation (note that existing roads/disturbed areas would be used as far as possible, and for the proposed roads, a corridor of up to 12 m wide may be temporarily impacted upon during construction and be rehabilitated to up to 10 m wide after construction), inclusive of stormwater infrastructure where relevant.
- Several temporary laydown areas / construction compounds (includes concrete batching areas), totalling up to 25 ha, would be fenced with access control; and/or
- A Battery Energy Storage System (BESS) to be located within the electrical infrastructure hub described under “associated infrastructure” below.

Associated infrastructure would include the following (to be located within the proposed development footprint):

- Associated internal electrical reticulation/ cabling (i.e., low- and medium voltage powerlines), underground as far as is feasible, and to run within

the proposed road footprint/route as far as possible as well as cabling in areas beyond the proposed roads (length yet to be determined); and

- On-site electrical infrastructure hub (several alternative locations to be assessed, with one preferred option) consisting of:
    - An on-site substation and associated infrastructure,
    - Additional step-up / transformation / collector / switchyard infrastructure,
    - Auxiliary buildings (including, but not limited to, Operation and Maintenance (O&M) building/s, admin building/s, workshop/s, gatehouse/s, security building/s, control centre/s, office/s, visitor centre/s, warehouse/s, etc.),
    - May also include the installation of a communications tower and lighting mast on site with a maximum height of 32 m and 25m respectively, and/or
    - A BESS as described above.

Access points are still to be determined, the details of which will be as per the recommendations in the Transport Impact Assessment. Access roads would be developed both to the site and within the site (i.e., between project components).

The operations of the proposed facility would require some servicing, noting that the operational electrical requirements would be nominal and would be supplied by the facility on site. Water would be required for sanitation use by operational staff (drinking and washing hands, food, etc) as well as for cleaning of equipment, and scheduled internal cleaning of building, and dust control on internal roads (where needed). Water would ideally be sourced from the local municipality, in terms of a Service Level Agreement established between the Municipality and the Proponent. If this is not possible, then further options, such as sourcing water from a private services provider, will be investigated. Where required, a storage tank (i.e., Jo-Jo tank) of up to approximately 10,000L may be used on site for temporary water storage. Sanitation requirements would be minimal, given that there would not be many operational staff. Sanitation for auxiliary buildings would be connected to the existing municipal sewage system. If the Municipality does not approve, or have capacity for, such a connection, sewage would be stored in the conservancy tank and collected either by a honey-sucker truck or by a service provider (Contractor) for treatment at a licensed disposal site. Alternatively, a standalone system would be used (i.e., porta-loos) which would be regularly serviced by an independent contractor. Note that it is **not** intended to make use of soakaways or on-site treatment solutions. Refuse/solid waste produced would also be nominal (approximately two wheelie bins per week) and would ideally be removed by the Municipality, however, if this is not possible, the Operator would employ private contractors to remove the refuse and dispose of it appropriately.

The construction phase would also require water and sanitation, with these aspects being the primary responsibility of the Contractor. However, it would be

preferable for water to be sourced from the local Municipality (where available), with alternative arrangements (for example, bringing water in with trucks) being made where necessary. Solid waste would also be produced and would be managed in accordance with the requirements in the Environmental Management Programme (EMPr).

Stormwater drainage systems are to be constructed on site where relevant to ensure that stormwater run-off from site is appropriately managed. Water from these systems is not likely to contain any chemicals or hazardous substances and would be released into the surrounding environment based on the natural drainage contours.

Temporary water pipelines may be installed on site during construction for water supply to *inter alia* the concrete batching plant and the O&M building complex for domestic use and sanitation. Possible groundwater abstraction on site for purposes of the batching plant could be considered, if required, considering any necessary and relevant legal requirements. There would be no other specific stormwater and/or landscaping initiatives undertaken as part of the proposed ABO Uvemvane WEF 1, other than any interventions prescribed by the relevant specialist/s through the S&EIA process.

The connection for either project within the cluster could occur at these via a new loop-in-loop-out connection or via a direct connection to one of the two nearby substations. Various Electrical Grid Infrastructure (EGI) routes in this regard will be assessed and further detail will be provided at Scoping Phase. Note that the EGI component of ABO Uvemvane WEF 1 will be subject to a separate environmental impact assessment.

The proposed development as described above has been assessed with the following alternatives:

1) Layout: several on-site electrical infrastructure hub location alternatives have been assessed. Presently, there is one preferred option.
2) BESS Technology: Regarding the proposed BESS, the technology thereof is dynamic and so the specific type/technology to be developed would be selected based on market demands and technology availability at the time of construction. Therefore, both Lithium-ion and redox-flow are assessed as technology alternatives, with Lithium-ion being the current preferred technology.
3) The No-go alternative has also been assessed, noting that the property does hold existing development rights (i.e. Agriculture) and so, not developing the proposed development does not necessarily mean that there would be no changes or impacts on the site.

1.3 Scope and purpose of the study

This assessment takes the form of a Site Sensitivity Verification (SSV) to assess the sensitivity of the proposed development footprint from a Soil, Land Capability and Agriculture point of view.

This assessment entailed the following aspects:

- A desktop review of existing land type maps and spatial distribution of various soil types and other agricultural related aspects to establish broad baseline conditions and possible areas of agricultural sensitivity;
- Assess the soil potential and land capability of croplands and conduct a survey to ground-truth cropland status and the agricultural sensitivity of such areas in the project area;
- Assess the overall agricultural production potential across all land surfaces in the project site;
- Base soil classifications on the latest South African Soil Classification System (Soil Classification Working Group, 2018);
- Subsurface soil observations to be done by means of a manual hand auger;
- Compile a report presenting the results of the desktop study and a description of the findings during the field assessment; and
- Assess and compare/verify the sensitivity findings of this assessment against that of a screening report generated using the National Screening Tool of the Department of Environmental Affairs (DEA) for the proposed project area.

1.4 Assumptions and Limitations

the following assumptions and limitations are applicable to this assessment:

- The soil survey conducted as part of the land capability assessment was conducted within the proposed project area and includes a 50 m buffer, which is considered adequate for the purpose of this study.
- Land Capability was classified according to prevailing climatic conditions and current soil restrictions on site.
- Since soils naturally occur in a continuum with infinite variances, it is often problematic to classify any given soil as one form, or another. For this reason, the classifications presented in this report are based on a "closest fit" basis to the latest soil classification system of South Africa (Soil Classification Working Group, 2018).
- During the sampling process, not all areas were assessed in comprehensively. Some terrain types (e.g. mountainous and hilly terrain) that generally have relatively homogenous soils and have little relevance to the crop production capabilities of the area were extrapolated.
- Some aspects of soil and land capability may therefore have been overlooked. However, it is the opinion of the specialist that sufficient sampling was done to present sufficient detail in this report to enable the Environmental Assessment Practitioner (EAP) and the regulating authorities to make a well-informed decision regarding the proposed

activities on the site. The confidence rating in the result of this assessment is high.

- Soil fertility was not considered a limitation to crop production because nutrient deficiencies and/or toxicities could be rectified by appropriate organic or inorganic rectifications during cultivation. No soil samples were analysed for soil fertility during this investigation.
- No scientific data was collected or analyzed for the calculation of ecological veld condition or grazing capacity. Any comments or observations made in this regard are based on observations, the expert knowledge, and relevant professional experience of the specialist investigator.
- Affected properties were considered in their entirety. However, currently cultivated and other potentially arable areas were considered as a priority for this assessment.
- The assessment was done over four days from 14 to 17 October 2024. Given the size of the site, and the area of cultivated and potentially arable land, is deemed adequate for this SSVR and the nature of the proposed development.
- The time of the year in which the assessment was done is deemed acceptable since seasonality has no bearing on the accuracy of land use and land capability assessments.

1.5 Relevant Legislation & General Regulatory Requirements

High potential agricultural land is defined as having: *"the soil and terrain quality, growing season and adequate available moisture supply to sustain crop production when treated and managed according to best possible farming practices"* (Land Capability report, ARC, 2006). High agricultural potential land is a scarce non-renewable resource, which necessitates an Agricultural Potential assessment prior to land development, particularly for purposes other than agricultural land use which will affect extensive tracts of land, as per Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA, 1983).

The legislation, policies and guidelines listed in Table 1 below are in general applicable to the current project. Although the list is extensive, it may not be complete.

Table 1: A list of key legislation, policies, and guidelines relevant to agricultural resources in the study area.

Relevance	Legislation / Policy / Guideline
National	Constitution of the Republic of South Africa (Act No. 108 of 1996).
	The National Environmental Management Act (NEMA) (Act No. 107 of 1998). *- Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44, GNR 320 of Government Gazette 43110 (March 2020); and GNR 1150 of Government Gazette 43855 (October 2020).*

Relevance	Legislation / Policy / Guideline
	Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) (CARA, 1983).
	Preservation and Development of Agricultural Land Act (Act No. 39 of 2024).
	Natural Scientific Professions Act (Act No. 27 of 2003).

This assessment was guided by the protocol published in Government Notice No. 320, Government Gazette 43110 of 20 March 2020: *Protocol for the specialist assessment and minimum report requirements of environmental impacts on agricultural resources by onshore wind and / or solar photovoltaic energy facilities where the electricity output is 20 MW or more.*

1.6 Methodology

1.6.1 Desktop assessment

A desktop assessment was compiled from various data sources, including but not limited to the Agricultural Geo-Referenced Information System (AGIS) and Cape Farm Mapper 3. From these and other data bases and literature, soil- and land capability data in the vicinity of the study area was collected and assessed for relevance. Soil patterns as well as land capability data within the proposed development area was reviewed on AGIS and/or Agricultural Research Council Institute for Soil Climate and Water (ARC-ISCW) databases.

Existing desktop sources were investigated for:

- General soil data
- Land type data
- Geological data
- Land capability data
- Mean annual rainfall & evaporation data
- Grazing capacity data
- Potential crop yield data
- Protected Agricultural Areas
- Current and historical satellite imagery

1.6.2 Field survey

An on-site field survey of the soils and agricultural conditions of the proposed development site was conducted from 14 to 17 October 2024.

The aim of the field survey was to:

- Ground-truth cropland status and subsequent agricultural sensitivity.
- To visually assess the overall soil- and agricultural production potential on the site.

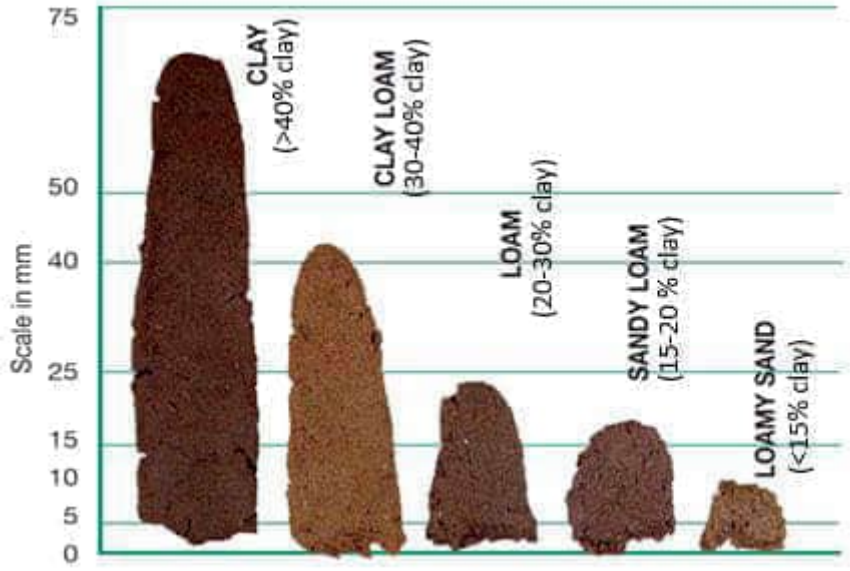
Subsurface soil observations were made by means of a manual hand auger (bucket and/or Edelman-type) to a depth of 150 cm, which is a practical, cost-effective technique and deemed adequate for the broad identification and description of soils in this type of assessment. No soil profiles were excavated as it was not deemed necessary at the time of this assessment. Soil types were classified according to the latest classification of the Soil Classification Working Group (SCWG, 2018). Soil data was subsequently analysed to assess the impacts of the proposed project under current site conditions.

Furthermore:

- Soil observation points were recorded with a handheld GPS.
- The following physical soil properties were recorded for each soil observation point:
    - Terrain morphological unit (landscape position);
    - Terrain slope;
    - Diagnostic soil horizons and their respective sequence and depth;
    - Texture and approximate clay percentage of the top and sub-soil (see method description in text box below);
    - Soil form (SCWG, 2018).

The ribbon technique (Giddings, 2014) is used to estimate soil texture and the estimated clay percentage in the soil:

- In this test a small handful of soil is placed in the palm of the hand and stones and grave are removed while also breaking down lumps in the soil, making it easier to work with.
- Enough water is added to make a bolus or ball, which is kneaded for 1 to 2 minutes, adding more water or soil until it just stops sticking to the fingers. Note how the soil feels when kneading it: gritty (sandy), silky (silty) or plastic/sticky (clay). If a bolus cannot be formed, the soil is very sandy.
- The soil is rolled into a cigar shape with about 1 to 2 cm in diameter and placed between the thumb and forefinger and gently pressing form it into a flat ribbon shape.
- The ribbon should only be 2 to 3 mm thick. The more clay you have in your soil, the longer your ribbon will be. As the ribbon develops, it is extended over the forefinger until it breaks from its own weight.



1.6.3 Land Capability Classification

Land capability is defined as the combination of soil, climate, and terrain suitability factors for supporting rain-fed agricultural production (DALRRD, 2021). The Department of Agriculture's (2016) updated and refined land capability mapping defines land capability values of 1 to 15, where values of 8 to 15 indicate land that is suitable or likely suitable as arable land, while values of 1 to 7 is indicative of land that is likely to be suitable only as non-arable grazing land.

1.6.4 Sensitivity Verification

The National Web-based Environmental Screening Tool (screening tool) (Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended) classifies agricultural sensitivity according to two independent criteria, from two independent data sets, which may be indicators

of the land's agricultural production potential but are somewhat limited in that it is based on fairly course data. The two criteria are:

- whether the land is classified as cropland or not on the most recent field crop boundary data set (Crop Estimates Consortium, 2023a & 2023b), and
- its land capability rating on the land capability data set (DAFF, 2017).

All classified cropland is, by definition, either high or very high sensitivity. There is a direct relationship between the land capability rating and the screening tool's agricultural sensitivity rating (Table 2).

Table 2: Relationship between land capability and the screening tool's agricultural sensitivity rating.

Land capability value	Agricultural sensitivity (screening tool)
1 – 5	Low
6 – 8	Medium
9 – 10	High
11 – 15	Very High

During sensitivity verification this knowledge is used and compared to the findings of the data collected (desktop and field data) during this investigation.

2 RESULTS

2.1 Desktop assessment

2.1.1 Natural environment

The proposed ABO Uvemvane WEF 1 project area is situated in hilly terrain with broad foot slopes with grassland and woody vegetation on hill slopes and along streams. The Suikerbosrand River drains the area from east to west.

According to Mucina & Rutherford (2006) and SANBI (2018), the study area falls in two biomes over four different vegetation types that have the following relevant descriptive characteristics:

Savannah biome:

- Gold Reef Mountain Bushveld (SVcb 9):
  - Characterized by rocky hills and ridges, which are often east-west trending, covered by woody vegetation, which is generally denser on south-facing slopes of the ridges and hills and more variable elsewhere. Tree and shrub layers are often continuous, and the herbaceous layer is dominated by grasses.
  - The geology mainly consists of quartzites, conglomerates and some shale horizons of the Magaliesberg, Daspoort and Silverton Formations of the Vaalian Pretoria Group as well as the Hospital Hill, Turffontein and Government Subgroups of the Randian Witwatersrand Supergroup.
  - Soils are mostly shallow, gravel lithosols of the Mispah and Glenrosa forms mostly associated with Ib and Fb land types.
- Andesite Mountain Bushveld (SVcb 11):
  - Characterised by dense, medium-tall thorny bushveld with a well-developed grass layer on hill slopes and valleys with an undulating landscape.
  - The geology is made up of Tholeitic basalt of the Klipriviervberg Group, also dark shale, micaceous sandstone and siltstone and thin coal seams of the Madzaringwe Formation, and Andesite and conglomerate of the Pretoria Group.
  - Weathering of these rocks gives rise to shallow rocky, clayey soils of mainly Mispah and Glenrosa soil forms.

Grassland biome:

- Soweto Highveld Grassland (Gm 8):
  - The landscape occurs gently to moderately undulating on the Highveld plateau supporting short to medium-high, dense, tufted grassland. Generally, in undisturbed places, only scattered small wetlands, narrow streams, pans and occasional ridges or rocky outcrops interrupt the continuous grassland cover.

- The geology is made up of shale, sandstone, or mudstone of the Madzaringwe Formation (Karoo Supergroup) or the intrusive Karoo Suite dolerites, which feature prominently in the area. In the south the Volksrust Formation (Karoo Supergroup) is found and in the west, the older Transvaal, Ventersdorp, and Witwatersrand Supergroups are most significant.
- Soils are generally deep and reddish in colour and the dominant land types include Ea, Ba and Bb.

- Tsakane Clay Grassland (Gm 9)
  - The terrain is generally flat to slightly undulating with low hills. Short dense grassland dominates the vegetation with a mixture of common highveld grasses.
  - The geology is mainly made up of balsitic lavas of the Klipriviersberg Group (Ventersdorp Supergroup), together with sedimentary rocks of the Madzaringwe Formation (Karoo Supergroup).
  - Clayey soils that are typically associated with the Ba and Bb land types occur throughout Gm 9.

Climatically the area receives summer-rainfall with Mean Annual Precipitation (MAP) of about 665 mm. Frost is frequently received in the winter.

2.1.2 Agricultural environment

Land capability information for the ABO Uvemvane WEF 1 project area, as accessed on the Cape Farm Mapper 3 website is presented in Figure 2. These vary between classes 2 (Very Low) to 10 (Moderate-High).

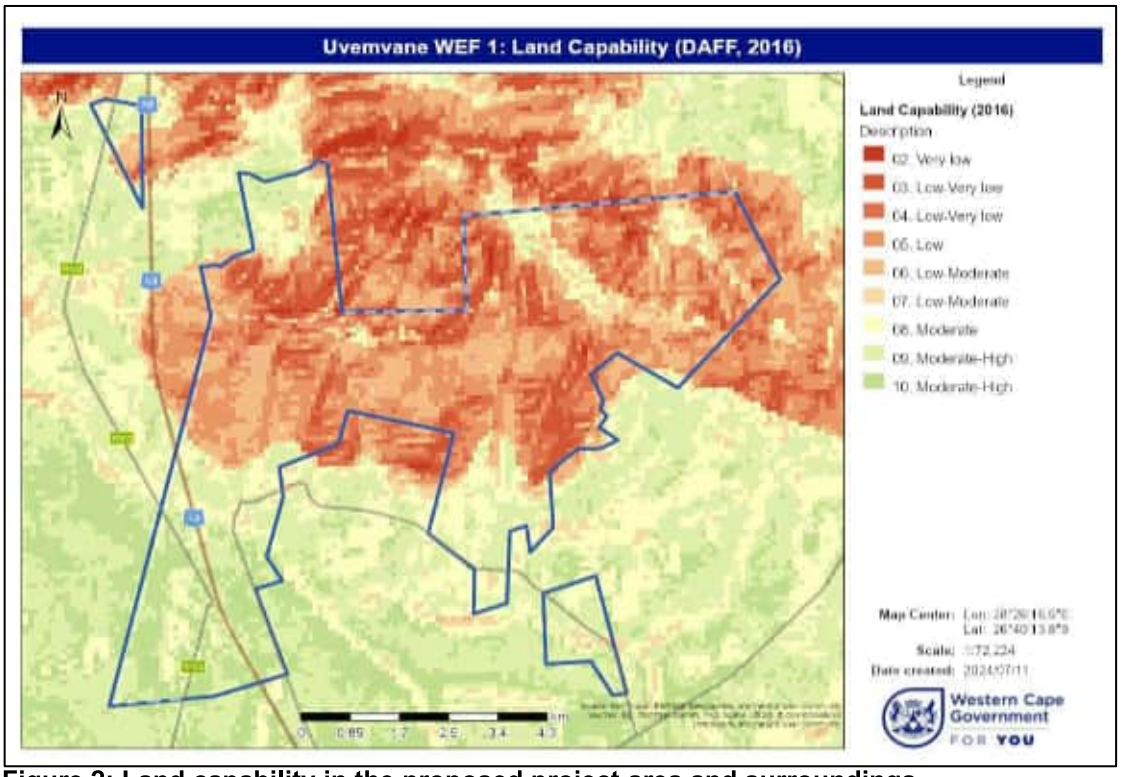


Figure 2: Land capability in the proposed project area and surroundings.

Table 3 presents a summary of data applicable to the study area, according to various data sources:

Table 3: Summary of the results of the desktop assessment

Main Aspect	Descriptor	Value / description
Climate	Mean Annual Rainfall (mm) (Schulze, 2009)	600 – 700 (Schulze, 2009)
	Total annual evaporation (mm) (Schulze, 2009)	2000 - 2200
	Climate capability classification (out of 9) (DAFF, 2017)	5 (moderate) to 6 (moderate high)
	Köppen-Geiger Climate Zones (Beck *et al*, 2018)	BSh (Dry, semi-arid, hot); Cwa (Temperate, dry winter, hot summer).
Terrain	Terrain type	Open high hills or ridges; plains with open low hills or ridges
	Terrain morphological units	Crest, midslope, foot slope & valley bottom
	Slope gradients (%)	wide range from 0 to >35%
	Altitude (m)	1500 - 1800
	Terrain capability classification (out of 9) (DAFF, 2017)	2 (low-very low) to 07 (High)
Soil	Geology	Klipriviersberg Group; Turffontein Subgroup; Johannesburg Subgroup; Jeppestown Subgroup
	Land type(s)	Ba1, Ba29, Ba 30, Ib42, Ib43 & Ib44
	General description of soils in the wider area	Red-yellow well drained massive or weakly structured soils, soils with a plinthic horizon; soils with a strong texture contrast between A and B-horizon; rocky areas.
	Dominant soil forms	Hutton, Ermelo, Clovelly, Bainsvlei, Westleigh, Sepane, Valsrivier, Sterkspruit, Rensburg, Bonheim, Swartland, Glenrosa, Mispah.
	Soil capability classification (out of 8) (DAFF, 2017)	2 (low-very low) to 08 (High-very high)
	Water erosion susceptibility	4 (moderate-high) to 7 (Low)

Main Aspect	Descriptor	Value / description
	Wind erosion susceptibility	1 (Very high) to 6 (Moderate-low)
Land use	Agricultural land use in the surrounding area	Cultivation (rain-fed & irrigation), natural grazing (livestock & game)
	Agricultural land use on the site	Cultivation (rain-fed & irrigation), natural grazing (livestock & game)
	Irrigation suitability (out of 5)	1 (unsuitable) to 4 (good)
General	Long-term grazing capacity (ha per Large Stock Unit) (DAFF, 2018)	5 to 8
	Land capability classification (out of 15) (DAFF, 2017)	2 (Low) to 10 (Moderate-high)
	Within Protected Agricultural Area (DALRRD, 2020)	Yes partially, rainfed Grootvlei - Balfour PAA ('C' priority rating)

The study area is partially situated in a rainfed Protected Agricultural Area (PAA) with a priority rating of 'C' (moderate-high priority) as defined by the Department of Agriculture, Land Reform and Rural Development (DALRRD, 2020) and recently enacted in the Preservation and Development of Agricultural Land Act (Act No. 39 of 2024) (PDALA). According to DALRRD (2020) a PAA is a demarcated area in which the climate, terrain, and soil are generally conducive for agricultural production and which, historically, has made important contributions to the production of the various crops that are grown across South Africa.

According to the PDALA, in section 11 (2)(*a*) the aim of a PAA is to:

"protect high value agricultural land capable of producing significantly higher levels of agricultural goods or best suited to produce acceptable levels of high value agricultural goods within a defined geographical area, in a sustainable manner, and includes:

(i) an agricultural land capability rating of above moderate;

(ii) agricultural land with an agricultural potential of above moderate;

(iii) unique agricultural land; and

(iv) irrigated agricultural land."

Within PAA's, the protection, particularly of arable land, is considered a priority for the protection of food security in South Africa. However, there may be much variation within a PAA and all land within it is not necessarily of sufficient agricultural potential to be suitable for crop production, due to site-specific

terrain, soil, and other constraints. All land within a PAA is therefore not necessarily worthy of prioritised protection as agricultural production land.

According to DALRRD (2020), the approach for the demarcation of the PAA's was based on a *spatial evaluation exercise through the assessment and classification of the mentioned data layers and verified through workshops with the provincial Departments of Agriculture*. Where needed it was supported by in field verifications. It also strongly recommends that in-field verification and local level assessments are conducted before using the PAA data for detail planning purposes, which forms part of the results of this SSVR.

The southern half and the extreme north-western parts of the proposed ABO Uvemvane WEF 1 project area is situated in the Grootlvlei - Balfour rainfed PAA with a 'C' priority rating (Figure 3) on land that has varying potential for rainfed crop production.

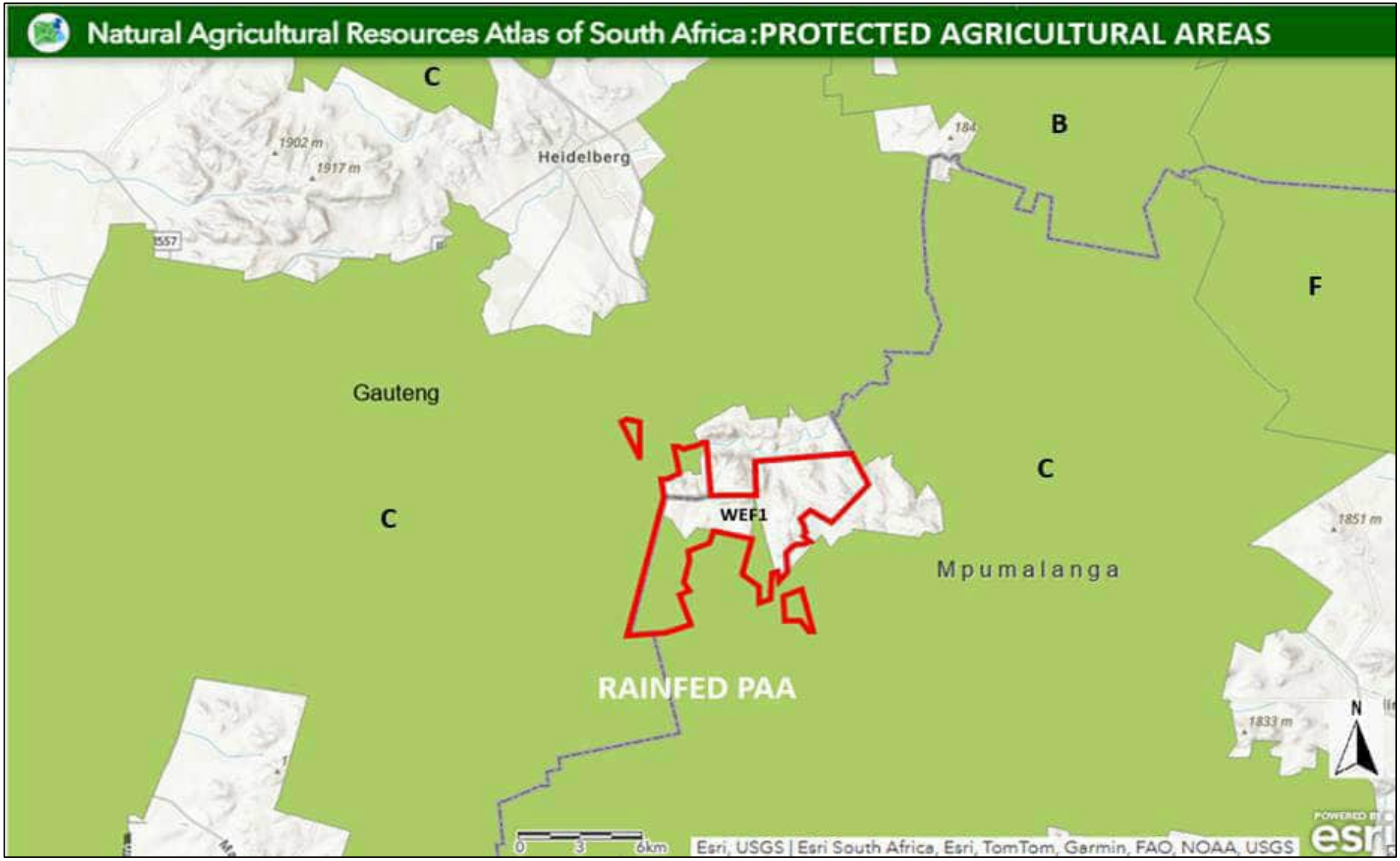


Figure 3: Protected Agricultural Areas (in green) in relation to the ABO Uvemvane WEF 1 project area.

2.2 Field survey findings

2.2.1 Description of agricultural resources in the project area

Soil sampling (using soil auger) was concentrated in current and previously cultivated croplands to determine the soil potential of these areas and to determine if they have potential for sustainable crop production. Figure 4 below presents the soil assessment points that were surveyed during the fieldwork phase.

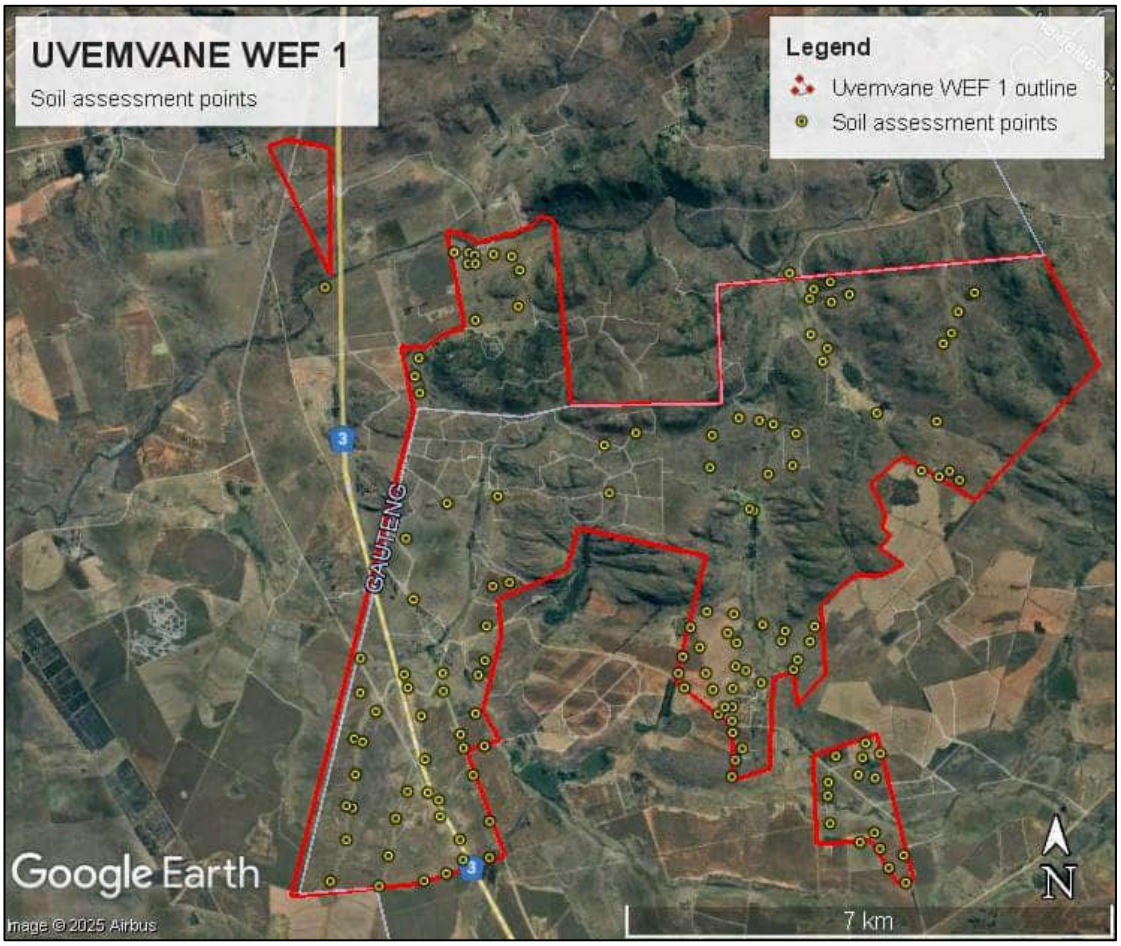


Figure 4: Soil assessment points surveyed in the ABO Uvemvane WEF 1 project area.

Three categories of cultivated land were recorded in the proposed ABO Uvemvane WEF 1 project area of which Figure 5 shows the extent. Cultivated land is divided into currently cultivated (mainly maize and soya beans) under mostly rainfed cultivation (Figure 6), planted pastures (mostly *Eragrostis curvula*) (Figure 7), and previously cultivated (not cultivated in the last 10 years) (Figure 8). All currently cultivated areas in the ABO Uvemvane WEF 1 project area are cultivated under rainfed conditions. No irrigated lands (past or present) were recorded. Natural veld where no cultivation has taken place (Figure 9) covers more than half of the land surface in the project area.

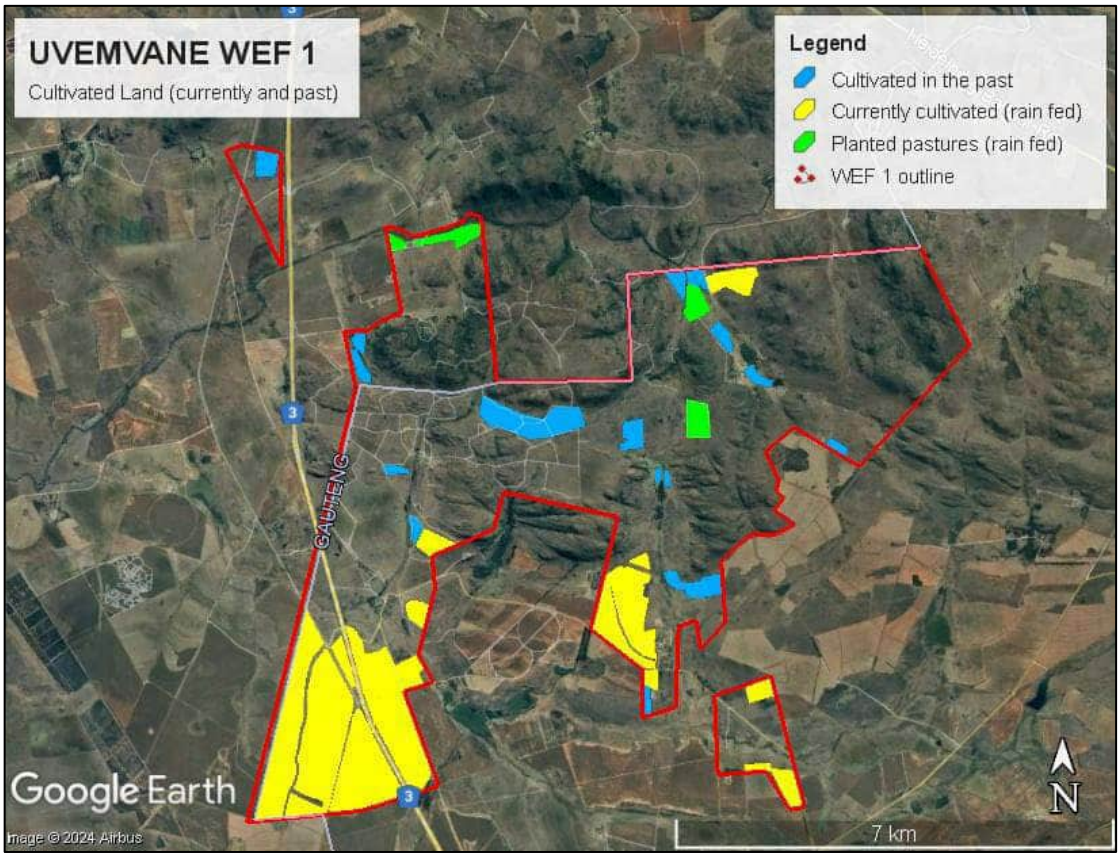


Figure 5: Areas of current and past cultivation in the proposed ABO Uvemvane WEF 1 project area.

Figure 6: A currently cultivated (rainfed) land where a crop of maize was recently harvested.

Figure 7: A planted pasture of Eragrostis curvula that is either cut and baled or grazed as standing fodder.

Figure 8: An abandoned cultivated area where no cultivation has taken place for an extended period (> 10 years).

Figure 9: Natural grazing where no cultivation has taken place in the past.

Soils were classified according to the latest South African soil classification system (Soil Classification Working Group, 2018) and interviews were conducted with landowners/users to gain an understanding of farming practices on the land.

Broad soil categories were formulated for this report by grouping soil forms with similar characteristics and potential for crop cultivation. Five such categories, in respect of agricultural cropping production potential, were recorded in the ABO Uvemvane WEF 1 project area and are shortly described:

- Category 1: deep to moderately deep, well drained, massive or weakly structured soils – good to moderate cropping potential.
    - Dominant soil forms are:
        - Hutton
        - Ermelo
        - Clovelly (lithic horizon > 1.0 m deep)
    - Dominant agricultural land use: currently cultivated (rainfed or irrigation), Previously cultivated.
    - Underlies approximately 5 % of the ABO Uvemvane WEF 1 project area.

- Category 2: moderately deep to shallow well drained, massive or weakly structured soils with a plinthic horizon – moderate to poor cropping potential.
    - Dominant soil forms are:
        - Bainsvlei

        - Avalon
        - Westleigh
        - Longlands
    - Dominant agricultural land use: currently cultivated (rainfed or irrigation), Previously cultivated, natural grazing.
    - Underlies approximately 12 % of the ABO Uvemvane WEF 1 project area.

- Category 3: heavy clay soils and soils with a strong texture contrast between the A- and B-horizons (duplex soils) – moderate to poor cropping potential.
    - Dominant soil forms are:
        - Pinedene
        - Sterkspruit
        - Valsrivier
    - Dominant agricultural land use: currently cultivated (rainfed), Previously cultivated, planted pastures, natural grazing.
    - Underlies approximately 16 % of the ABO Uvemvane WEF 1 project area.

- Category 4: gley soils – poor or no cropping potential.
    - Dominant soil forms are:
        - Rensburg
        - Bonheim
        - Sepane
        - Katspruit
    - Dominant agricultural land use: natural grazing.
    - Underlies approximately 13 % of the ABO Uvemvane WEF 1 project area.

- Category 5: shallow lithic/rocky soils – no cropping potential.
    - Dominant soil forms are:
        - Mispah
        - Glenrosa
        - Swartland
        - Dresden

- Clovelly (lithic horizon < 0.6 m deep)

- Dominant agricultural land use: natural grazing.
- Underlies approximately 54 % of the ABO Uvemvane WEF 1 project area.

Photographic examples of the dominant soil forms recorded in the general area of the ABO Uvemvane WEF 1 project area are presented in Table 4 below.

Table 4: Spatially representative soil form sample examples.

Soil Category & sample location	Description	Photographs
Category 1 Date: 16-10-2024 Coordinates: 26°41'17.59"S 28°26'45.23"E Farm Botha Spruit Number 404	Hutton A-horizon: 0 – 25 cm B-horizon: 25 – 150+ cm	
Category 1 Date: 15-10-2024 Coordinates: 26°41'32.76"S 28°24'02.68"E Remainder of Portion 6 of the Farm Malanskraal Number 407	Ermelo A-horizon: 0 – 35 cm B-horizon: 35 – 150+ cm	
Category 1 Date: 16-10-2024 Coordinates: 26°41'34.71"S 28°26'43.71"E Portion 13 (a Ptn of Ptn 2) of the Farm Malanskraal Number 407	Clovelly A-horizon: 0 – 30 cm B-horizon: 30 – 85 cm	

Soil Category & sample location	Description	Photographs
Category 2 Date: 14-10-2024 Coordinates: 26°38'52.93"S 28°23'30.61"E Remaining Extent of Portion 2 of the Farm Modderfontein Number 410	Bainsvlei A-horizon: 0 – 25 cm B-horizon: 25 – 60 cm	
Category 2 Date: 15-10-2024 Coordinates: 26°35'49.24"S 28°23'26.81"E The Remaining Extent of Ptn 2 of Farm Lagerspoort Number 406	Westleigh A-horizon: 0 – 40 cm	
Category 3 Date: 15-10-2024 Coordinates: 26°42'56.97"S 28°24'03.73"E Remainder of Portion 18 (a Ptn of Ptn 3) of the Farm Malanskraal Number 407	Pinedene A-horizon: 0 – 20 cm B-horizon: 20 – 55 cm	
Category 3 Date: 16-10-2024 Coordinates: 26°37'56.87"S 28°24'42.31"E Portion 7 of the Farm Lagerspoort Number 406	Sterkspruit A-horizon: 0 – 20 cm B-horizon: 20 – 120+ cm	

Soil Category & sample location	Description	Photographs
Category 4 Date: 17-10-2024 Coordinates: 26°39'19.95"S 28°28'11.68"E Remaining Extent of Portion 1 of the Farm Driefontein 405	Rensburg A-horizon: 0 – 30 cm	
Category 4 Date: 14-10-2024 Coordinates: 26°38'33.65"S 28°23'06.14"E Remaining Extent of Portion 2 of the Farm Modderfontein Number 410	Sepane A-horizon: 0 – 40 cm B-horizon: 40 – 80 cm	
Category 5 Date: 15-10-2024 Coordinates: 26°38'38.01"S 28°24'30.02"E The Farm Orion Number 413	Mispah A-horizon: 0 – 10 cm	
Category 5 Date: 16-10-2024 Coordinates: 26°40'46.45"S 28°23'58.33"E Remainder of Portion 6 of the Farm Malanskraal Number 407	Glenrosa A-horizon: 0 – 35 cm	

Soil Category & sample location	Description	Photographs
Category 5 Date: 16-10-2024 Coordinates: 26°38'06.27"S 28°24'40.05"E The Farm Orion Number 413	Nkonkoni A-horizon: 0 – 20 cm B-horizon: 20 – 55 cm	

From an ecological carrying capacity point of view, the grazing capacity varies from farm to farm. Some areas have been overgrazed in the past while others have not been heavily exploited. The overall grass layer seems to be in a fair condition with many climax grasses occurring in the area and many shrubs and trees that supply a generous amount of browse for game species that are also stocked on some farms. It is the specialist's opinion that the natural grazing in the area varies between 7 to 10 hectares per large stock unit (ha/LSU), which is in line with the long-term average values of 5 to 8 ha/LSU given by DAFF (2018) for the area.

2.2.2 Assessment of the agricultural production potential of the project area

The assessment of the soil and agricultural production potential of the project area is based on information gained during the desktop assessment (summarized in Table 4 previously), as well as different parameters of which information was gathered during the field assessments, which included:

- Topography (terrain unit),
- Slope (%),
- Clay percentages of different soil horizons (estimated using the ribbon technique),
- Depth of different soil horizons, and
- Any notable impacts.

Category 1 soils are in general found to be land with good to moderate cropping potential, which make these areas important to produce grain crops. The cropping potential of category 3 to 5 soils in the ABO Uvemvane WEF 1 project

area are all limited by the combination of climate and various soil constraints. Category 2 soils have moderate soil depth with potentially poor draining sub-soils that may also restrict the growth of plant roots beyond the plinthic layer. Category 3 and 4 soils have moderate to severe water infiltration restrictions which may cause waterlogging in very wet seasons and provide insufficient moisture in below average rainfall seasons. Category 5 soils are severely restricted in soil depth and provide poor to no water retention potential to produce a crop through the season and therefore limits the potential of these sections of land to grazing only.

Some cultivated lands in the project area have been abandoned as croplands or are utilized only as planted pastures in some instances. It should be noted that the cropping potential of land changes over time as the agricultural economy changes. Marginal soils that may have been economically cultivated in the past, are abandoned as they are no longer suitable as economically viable crop production in a more challenging agricultural economy, with increased input costs, and as climate conditions change and fluctuate from one extreme to another.