

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

**EIA Reference number:** To be confirmed

**Project name:** Makoaneng Solar Power Plant near Bloemfontein, Free State province

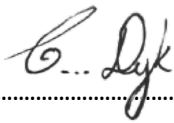
**Project title:** Makoaneng Solar Power Plant near Bloemfontein, Free State province

**Date screening report generated:** 13/02/2023 14:00:30

**Applicant:** Makoaneng Solar Power Plant (RF) (Pty) Ltd

**Compiler:** Environamics

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**Application Category:** Utilities Infrastructure|Electricity|Generation|Renewable|Solar|PV

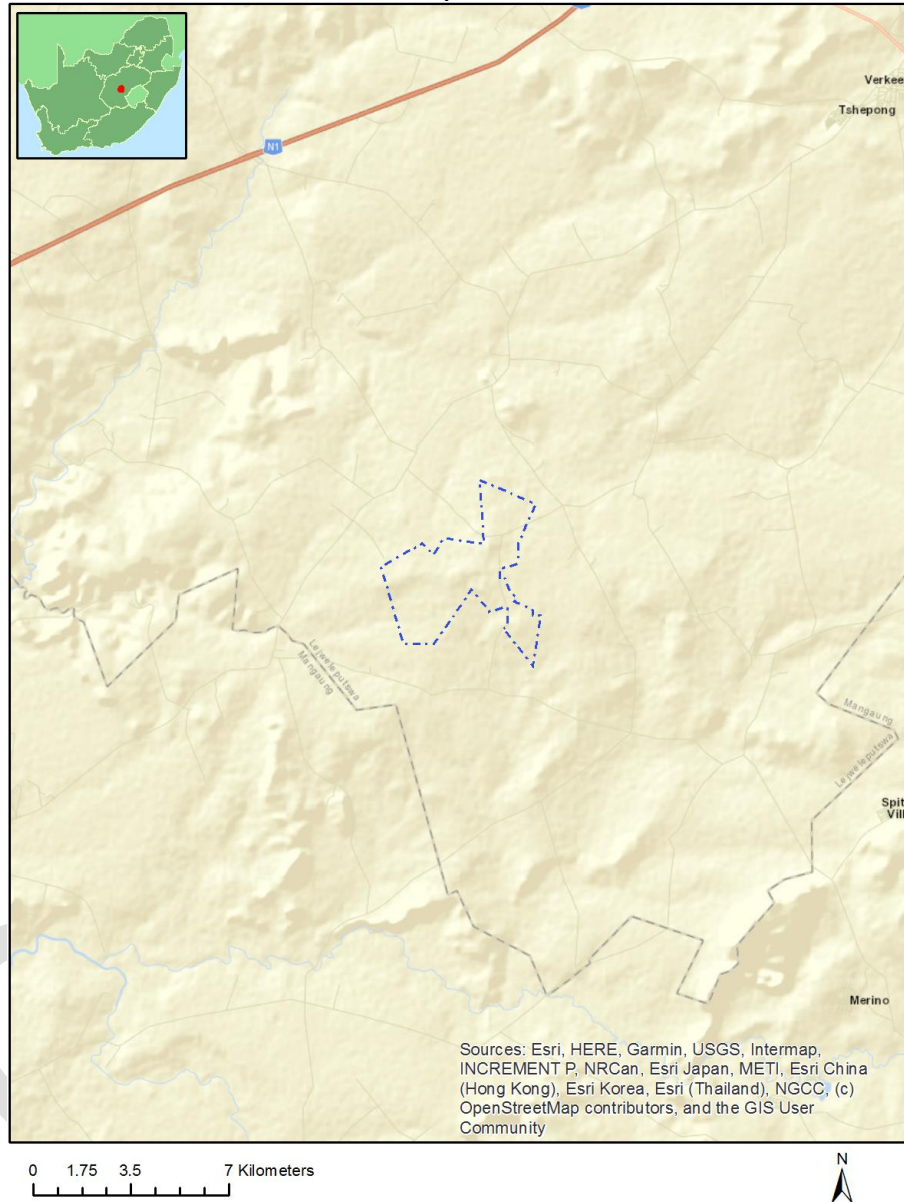
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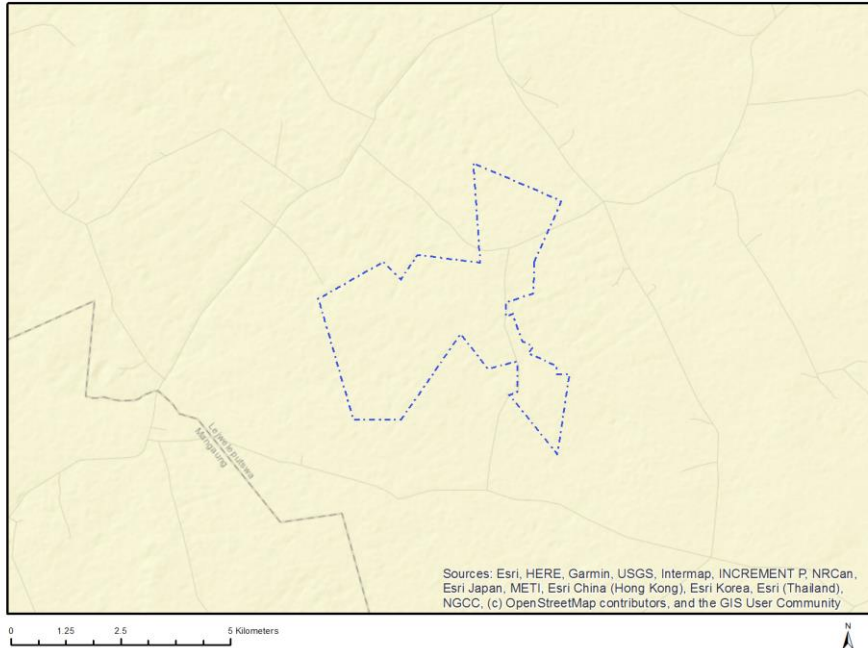
# Proposed Project Location

## Orientation map 1: General location

**General Orientation: Makoaneng Solar Power Plant near Bloemfontein, Free State province**



## 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	ROOIKRAAL	366	0	29°0'28.96S	26°39'51.27E	Farm
2	WELTEVREDEN	461	0	28°59'22.86S	26°38'10.64E	Farm
3	AVONDZON	278	0	28°58'42.68S	26°36'51.95E	Farm
4	SALOMON'S KRAAL	377	0	28°59'43.19S	26°38'43.84E	Farm
5	STERKFORTEIN	811	0	28°58'39.18S	26°40'53.56E	Farm
6	SELBORNE	392	0	28°57'47.33S	26°39'5.64E	Farm
7	GOEDEHOOP	251	0	28°58'44.65S	26°39'21E	Farm
8	MORGENDAL	255	0	28°56'2.43S	26°40'9.25E	Farm
9	UITKIJK	276	0	28°59'47.68S	26°36'33.83E	Farm
10	SALOMONS LAAGTE	382	0	29°0'15.07S	26°38'32.18E	Farm
11	AMSTERDAM	130	0	28°57'41.18S	26°40'7.63E	Farm
12	GOEDE MOED	240	0	28°59'17.76S	26°40'0.28E	Farm
13	BUXTON	581	0	28°57'4.08S	26°39'7.24E	Farm
14	MAREESRUST	644	0	28°57'6.18S	26°37'51E	Farm
15	NAKOB	750	0	28°57'57.82S	26°38'22.75E	Farm
16	WELTEVREDEN	461	0	28°59'3.85S	26°38'28.98E	Farm Portion
17	MORGENDAL	255	3	28°56'35.53S	26°40'2.62E	Farm Portion
18	AVONDZON	278	1	28°58'31.63S	26°37'34.24E	Farm Portion
19	AVONDZON	278	0	28°58'53.73S	26°36'9.68E	Farm Portion
20	SELBORNE	392	0	28°57'47.33S	26°39'5.64E	Farm Portion
21	BUXTON	581	0	28°57'4.08S	26°39'7.26E	Farm Portion
22	AMSTERDAM	130	0	28°57'41.18S	26°40'7.63E	Farm Portion
23	SALOMON'S KRAAL	377	0	28°59'43.19S	26°38'43.85E	Farm Portion
24	SALOMONS	382	0	29°0'15.07S	26°38'32.18E	Farm Portion

	LAAGTE					
25	GOEDE MOED	240	0	28°59'17.81S	26°40'23.95E	Farm Portion
26	GOEDEHOOP	251	0	28°58'44.65S	26°39'21E	Farm Portion
27	MAREESRUST	644	0	28°57'6.18S	26°37'50.99E	Farm Portion
28	UITKIJK	276	1	28°59'38.97S	26°37'3.99E	Farm Portion
29	STERKFORTEIN	811	2	28°58'24.54S	26°40'19.48E	Farm Portion
30	ROOIKRAAL	366	0	29°0'24.95S	26°39'44.49E	Farm Portion
31	NAKOB	750	0	28°57'57.82S	26°38'22.75E	Farm Portion

Development footprint<sup>1</sup> 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	12/12/20/2514	Solar PV	Approved	25.3
2	14/12/16/3/3/1/615	Solar PV	Approved	24.5
3	14/12/16/3/3/2/360	Solar PV	Approved	24.5

## Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

## 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 | Solar | PV.**

## Relevant development incentives, restrictions, exclusions or prohibitions

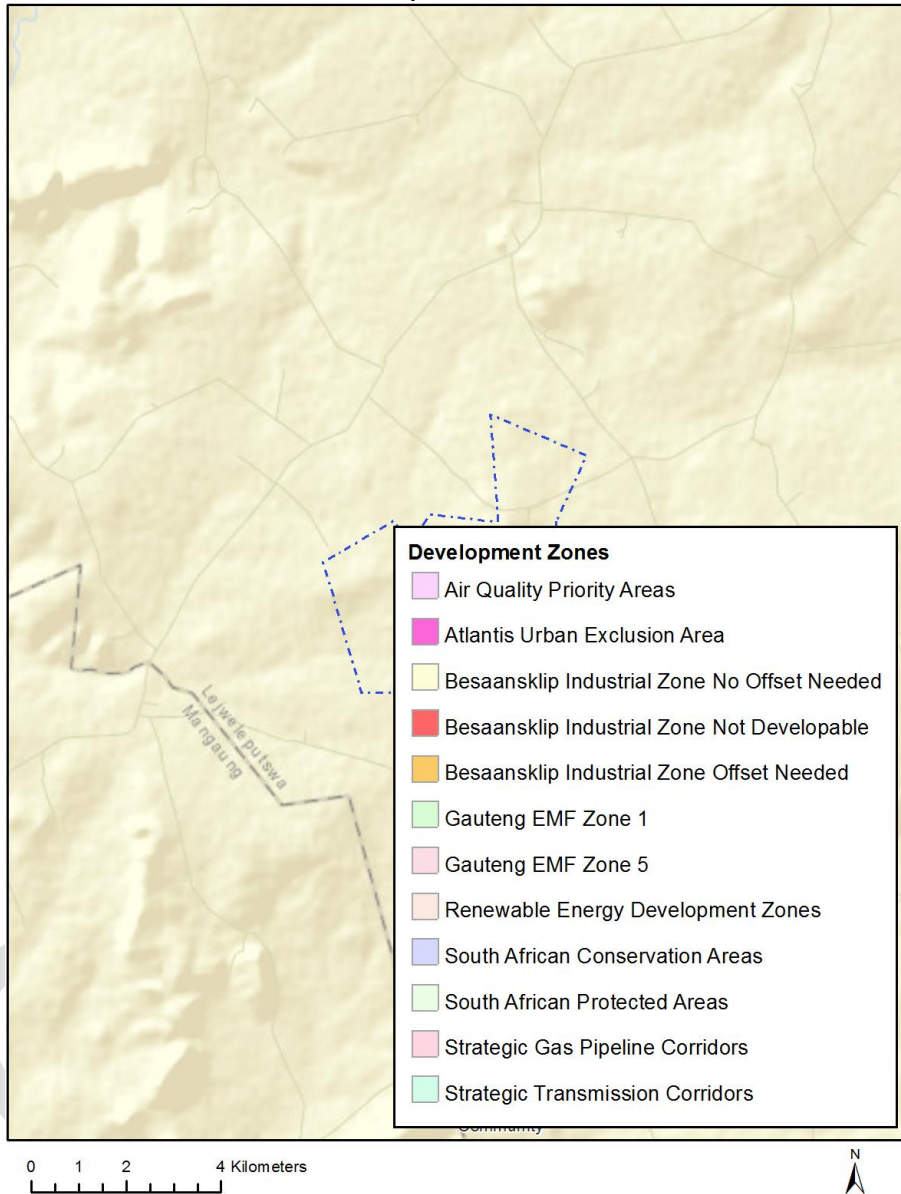
The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

No intersection with any development zones found.

<sup>1</sup> "development footprint", means the area within the site on which the development will take place and includes 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.

## Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones

**Project Location: Makoaneng Solar Power Plant near Bloemfontein, Free State province**



### 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
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Agriculture Theme		X		
Animal Species Theme			X	
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Avian Theme				X
Civil Aviation (Solar PV) Theme				X
Defence Theme				X
Landscape (Solar) Theme	X			
Paleontology Theme	X			
Plant Species Theme				X
RFI Theme			X	
Terrestrial Biodiversity Theme	X			

### Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, 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.

<b>N o</b>	<b>Special ist assess ment</b>	<b>Assessment Protocol</b>
1	Agricultural Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf</a>
2	Landscape/Visual Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
3	Archaeological and Cultural Heritage Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
4	Palaeontology Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
5	Terrestrial Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf</a>

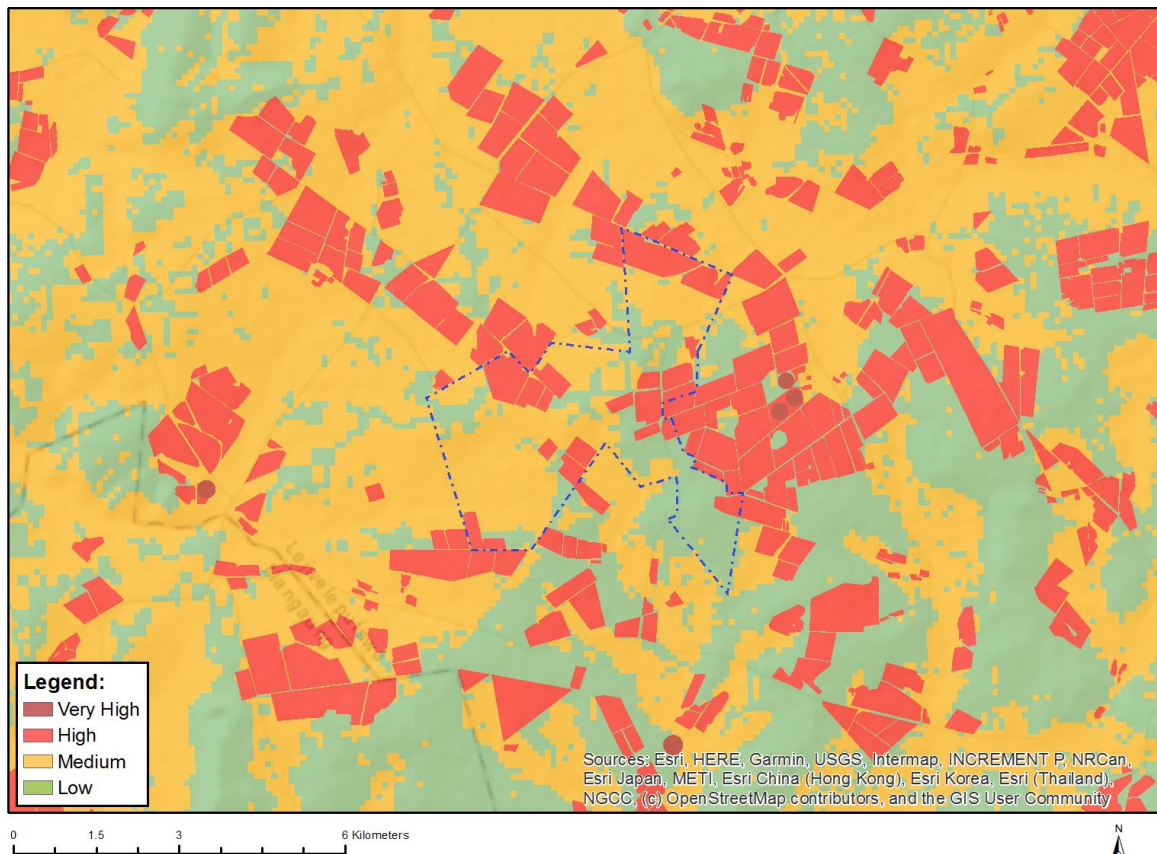
6	Aquatic Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf</a>
7	Civil Aviation Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf</a>
8	Defense Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf</a>
9	RFI Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
10	Geotechnical Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
11	Socio-Economic Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
12	Plant Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf</a>
13	Animal Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf</a>



## 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

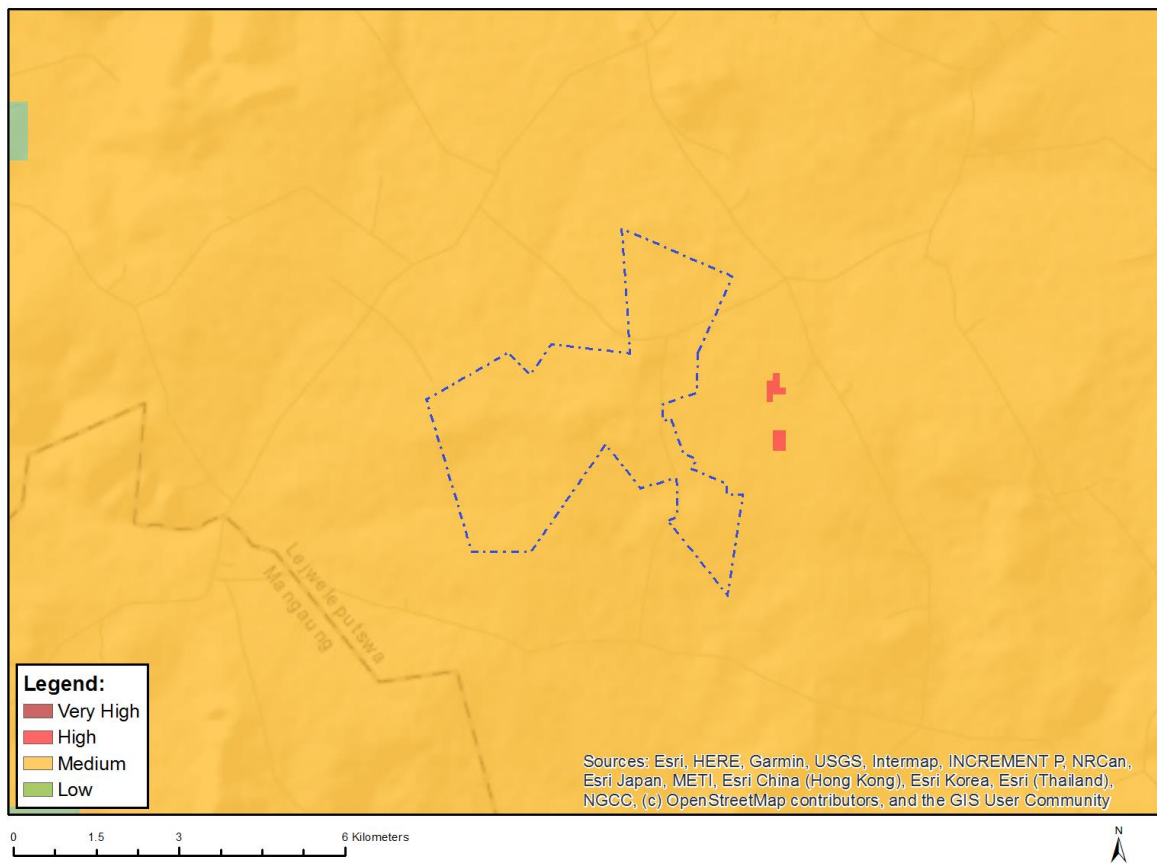


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

#### Sensitivity Features:

Sensitivity	Feature(s)
High	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	Old Fields;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
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



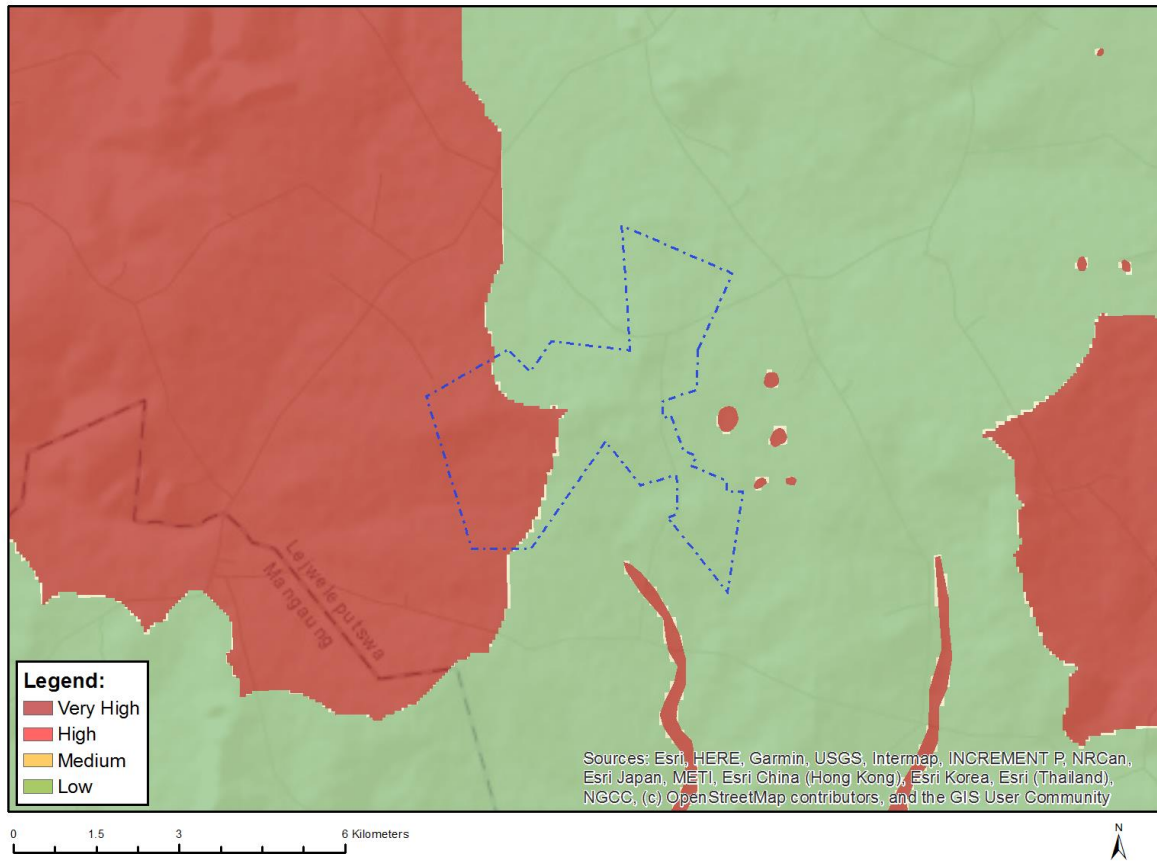
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [eiadatarequests@sanbi.org.za](mailto:eiadatarequests@sanbi.org.za) 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)
Medium	Aves-Sagittarius serpentarius
Medium	Mammalia-Hydrictis maculicollis

## MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

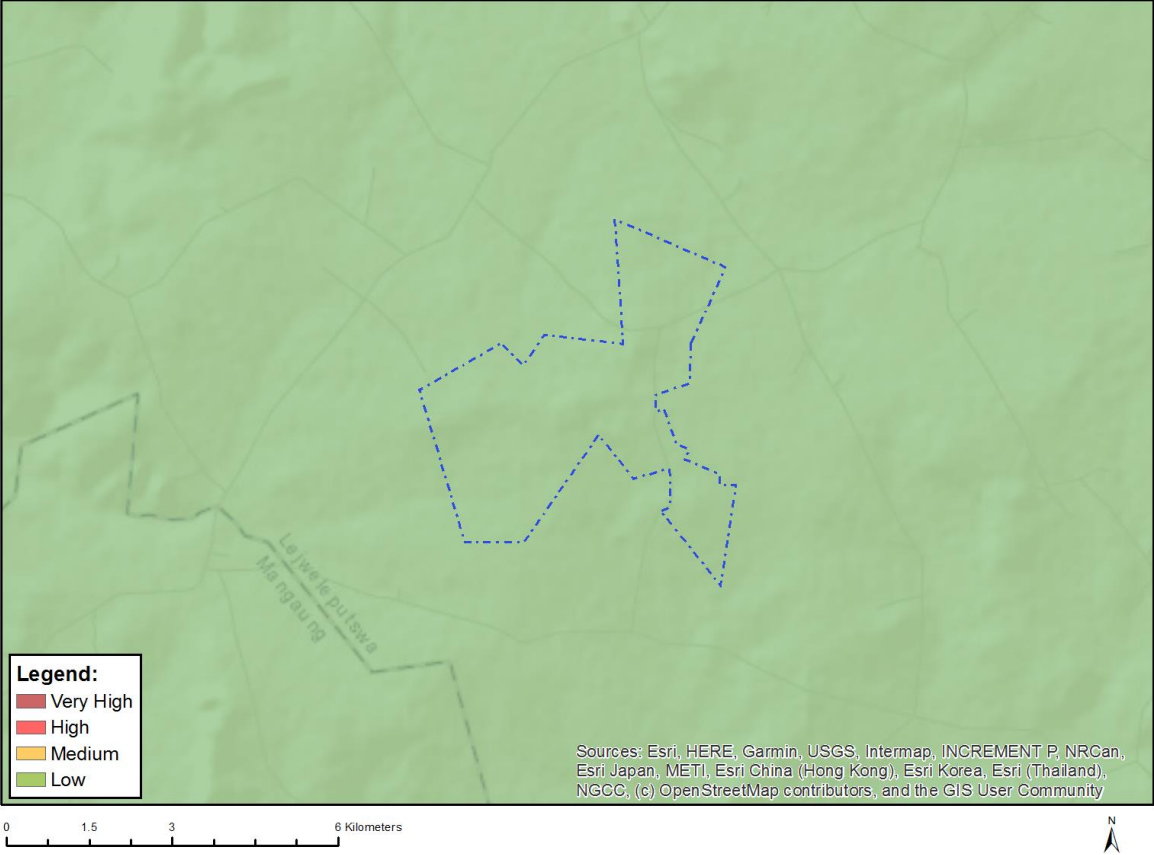


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Freshwater ecosystem priority area quinary catchments

# MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

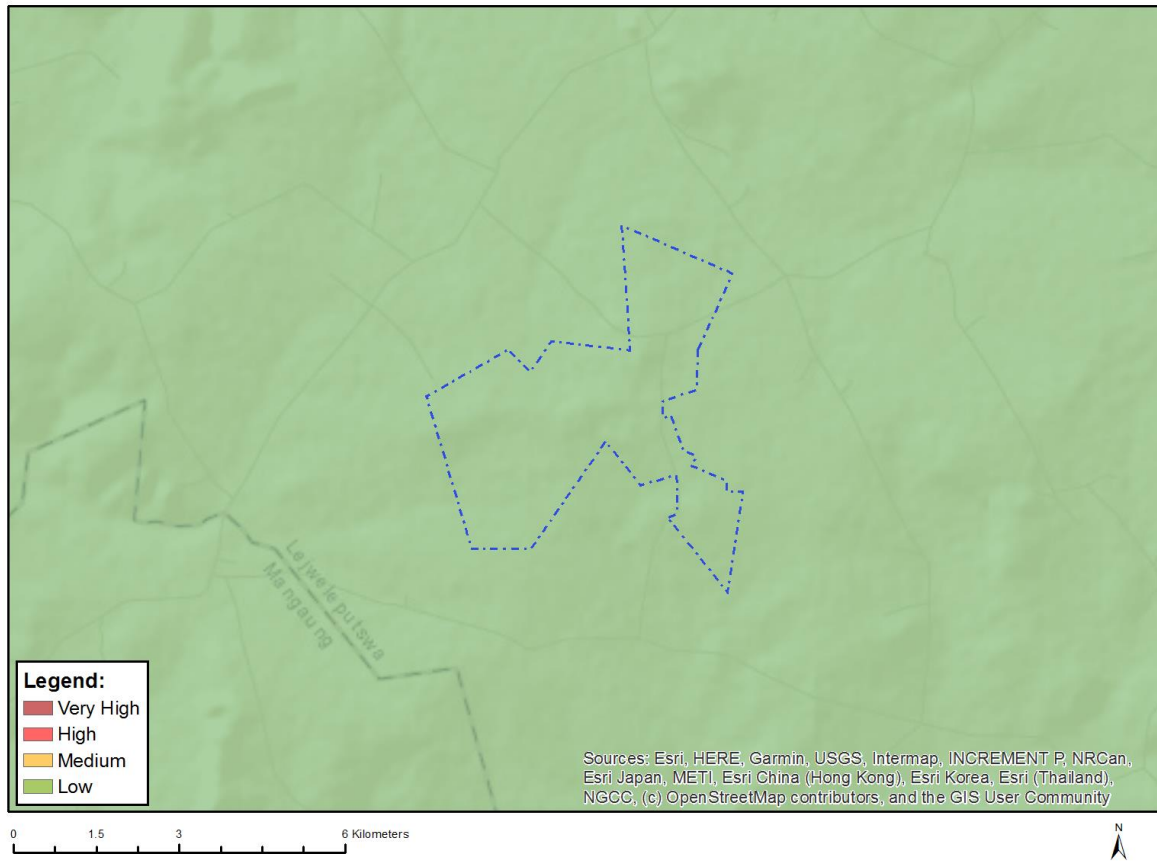


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

**Sensitivity Features:**

Sensitivity	Feature(s)
Low	Low sensitivity

## MAP OF RELATIVE AVIAN THEME SENSITIVITY

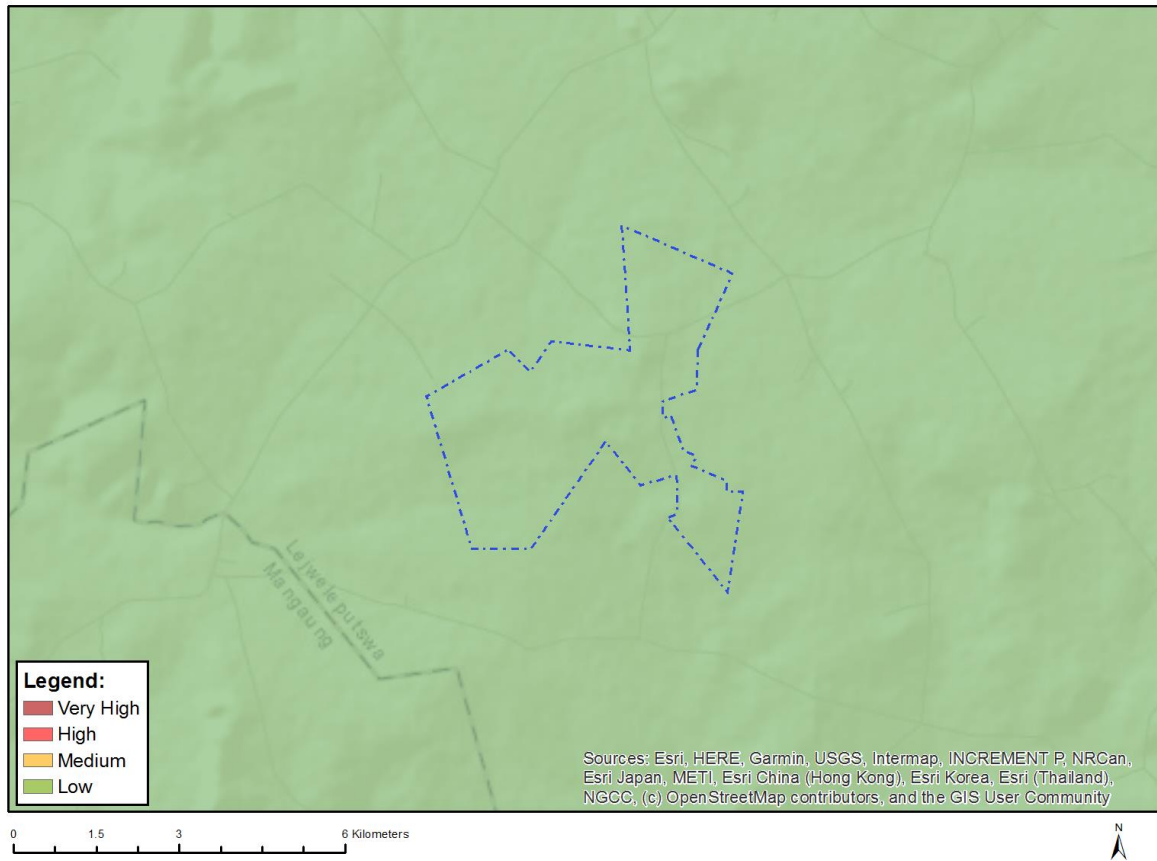


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

## MAP OF RELATIVE CIVIL AVIATION (SOLAR PV) THEME SENSITIVITY

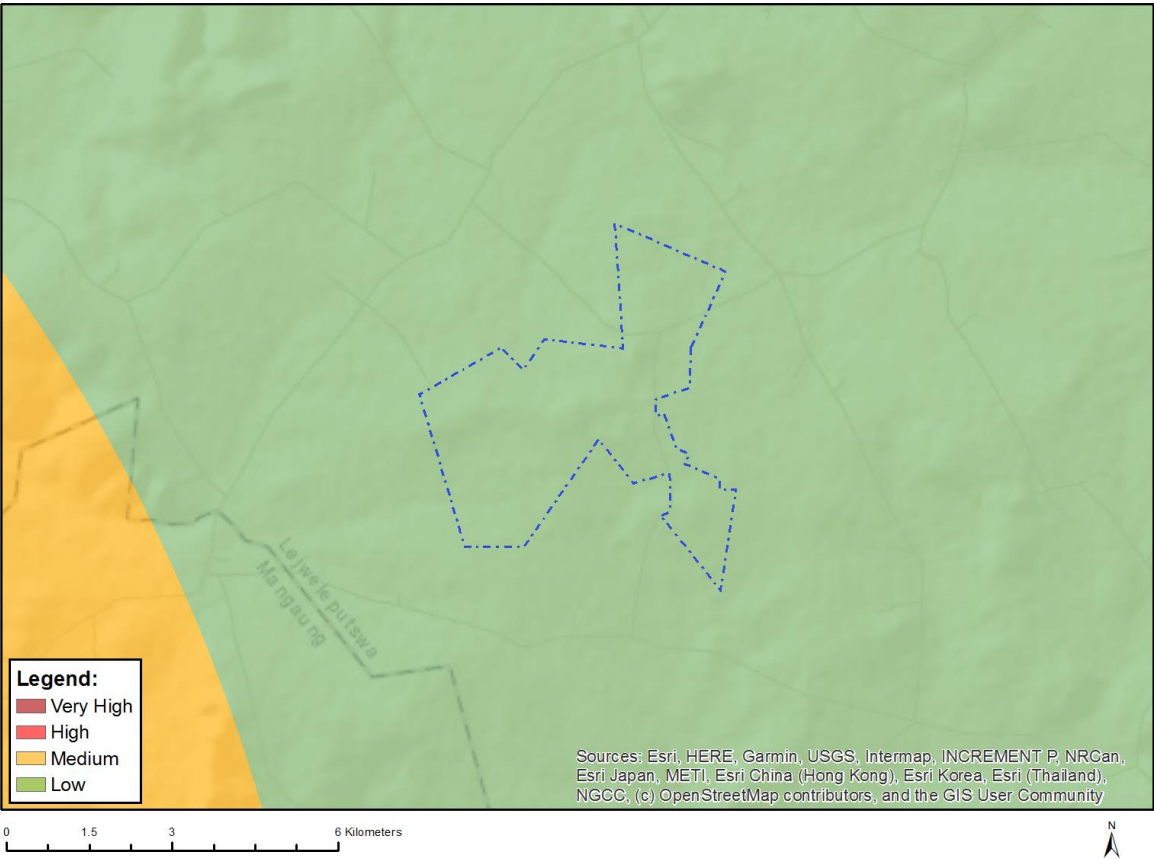


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	No major or other types of civil aviation aerodromes

# MAP OF RELATIVE DEFENCE THEME SENSITIVITY

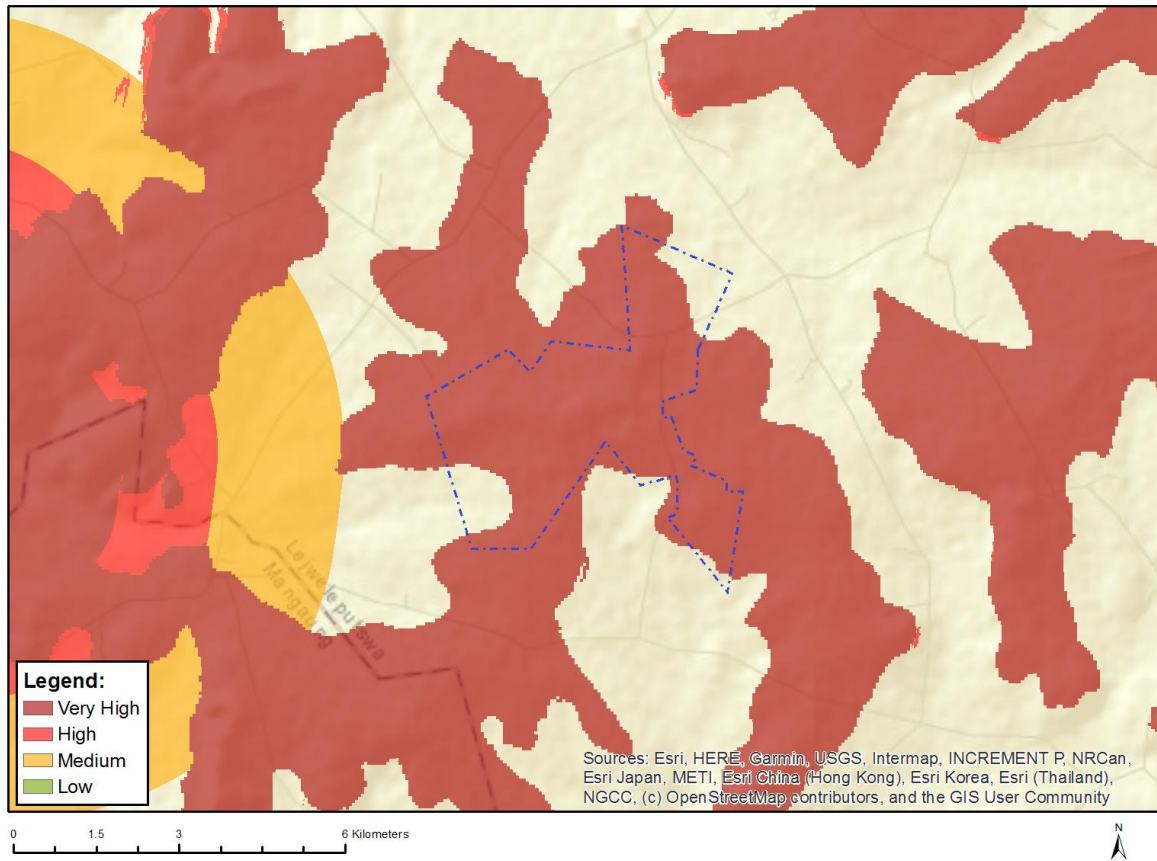


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

**Sensitivity Features:**

Sensitivity	Feature(s)
Low	Low sensitivity

## MAP OF RELATIVE LANDSCAPE (SOLAR) THEME SENSITIVITY



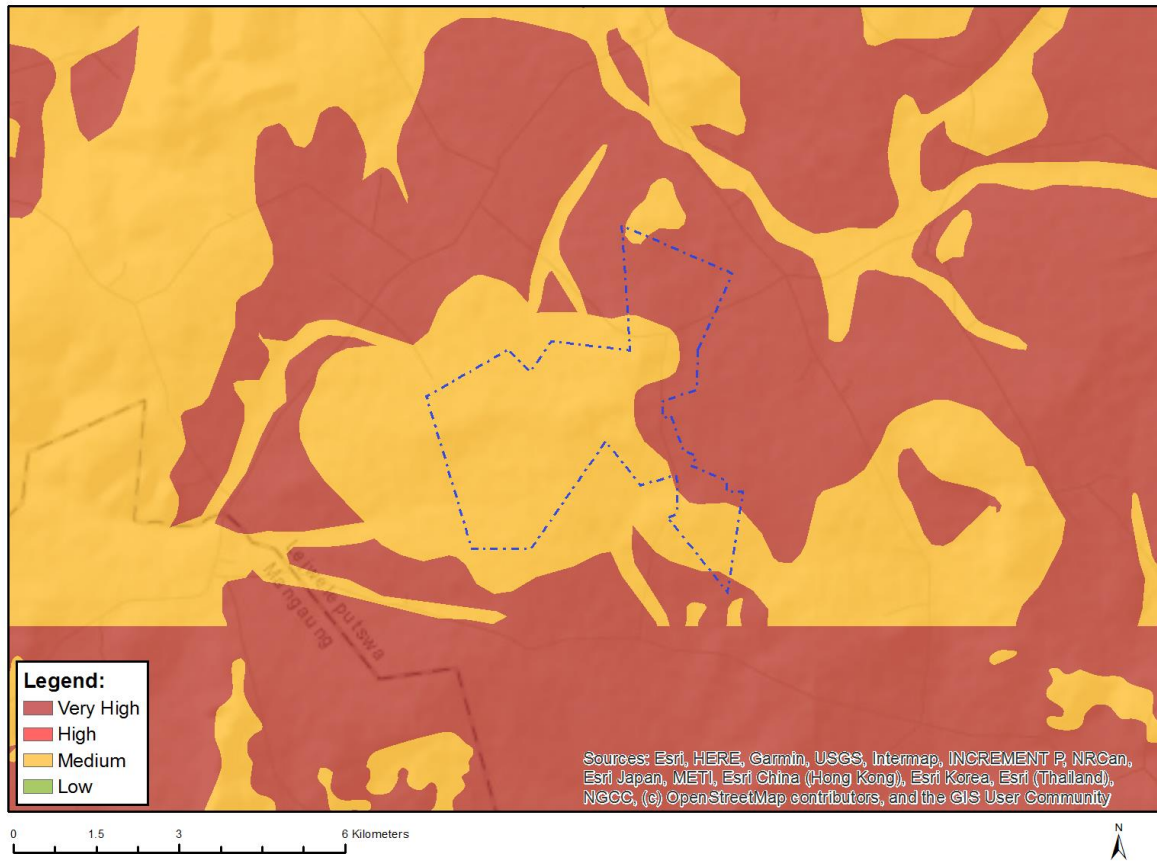
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
High	Slope between 1:4 and 1:10
Very High	Mountain tops and high ridges



## MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

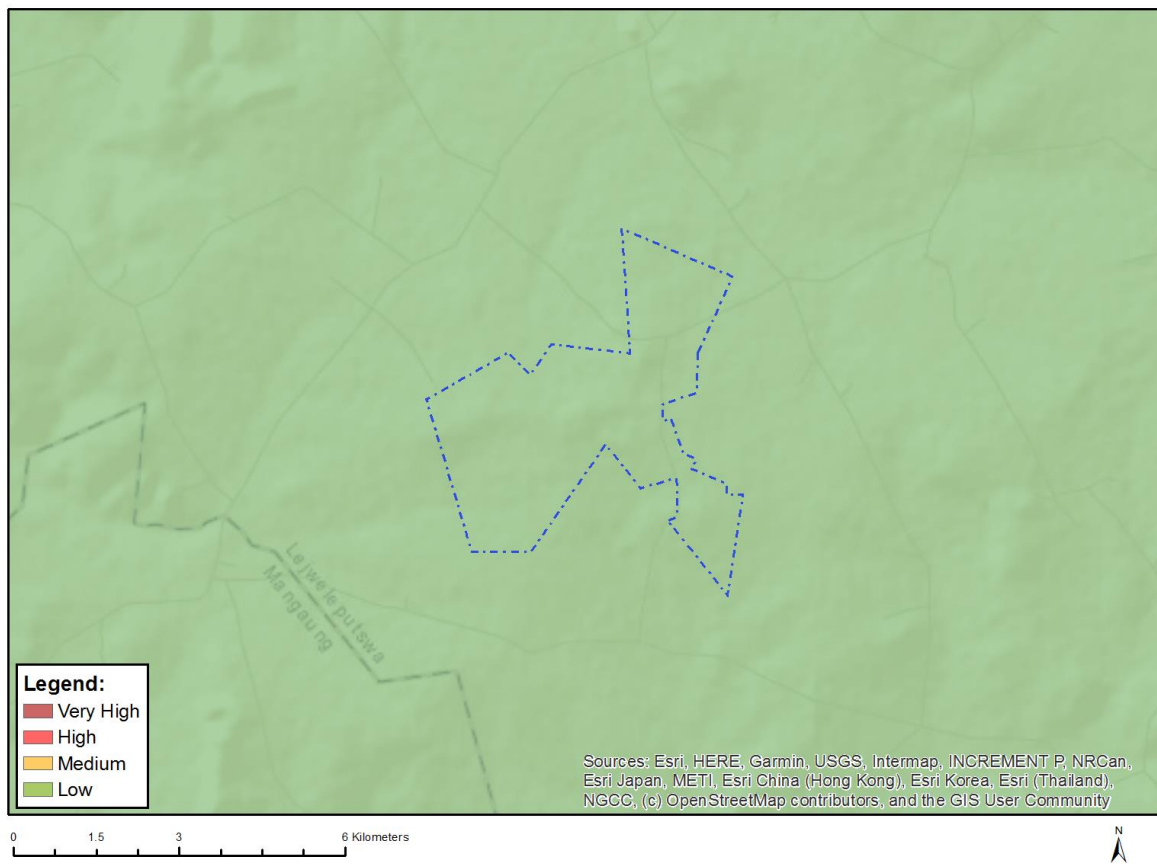


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

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

## MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



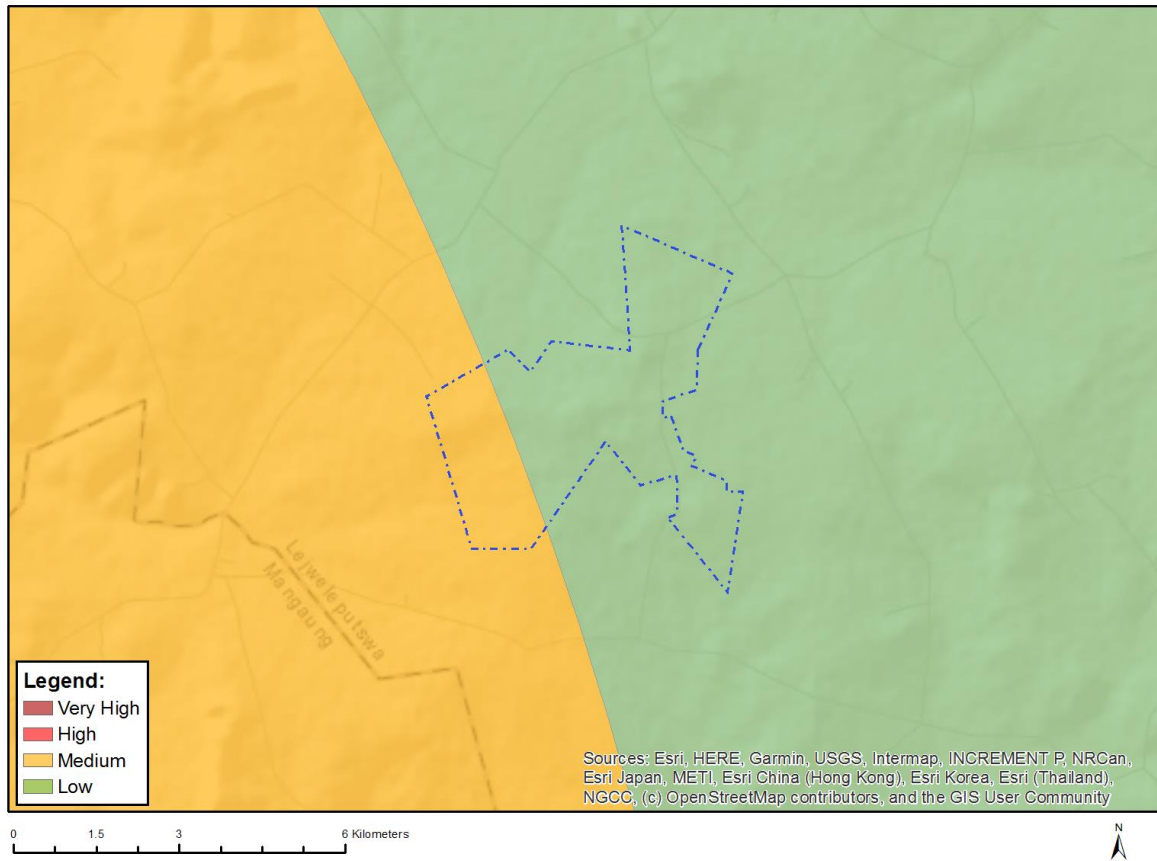
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [eiadatarequests@sanbi.org.za](mailto:eiadatarequests@sanbi.org.za) 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

## MAP OF RELATIVE RFI THEME SENSITIVITY

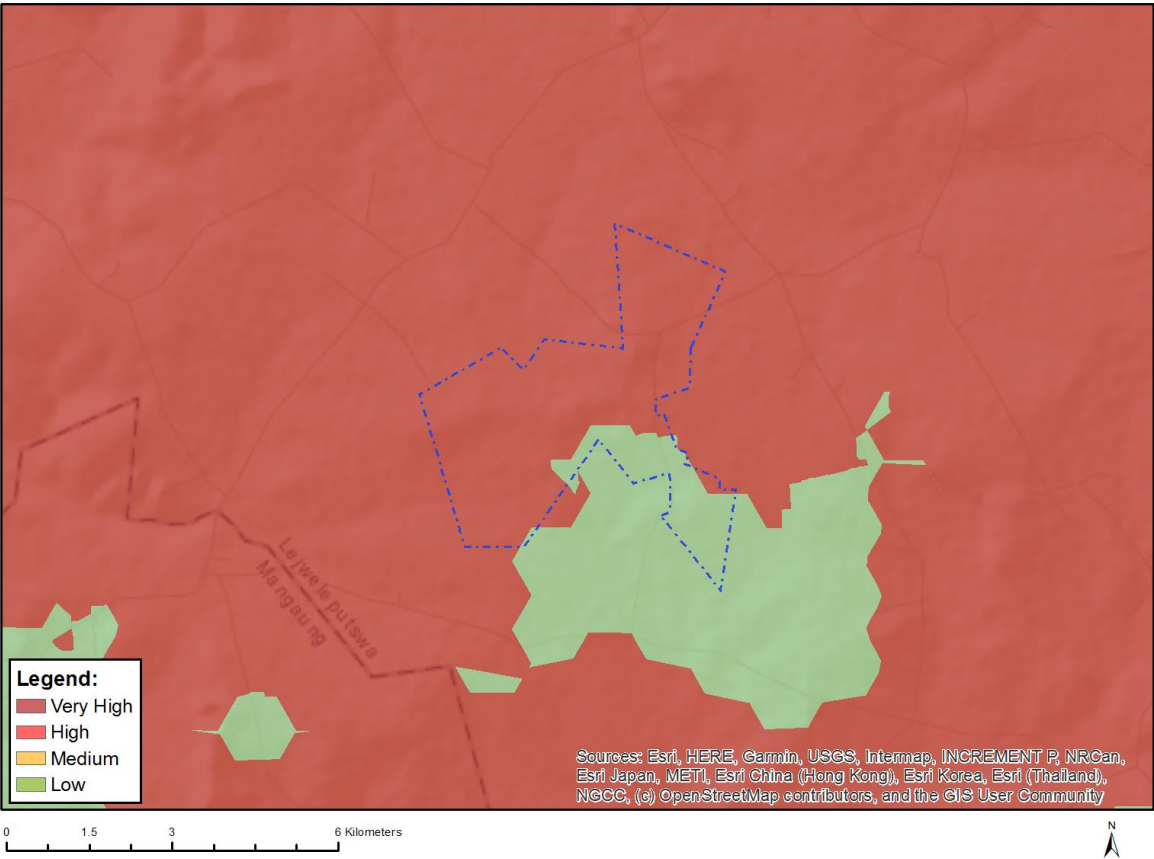


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Medium	Between 30 and 60 km from a Weather Radar installation and within the radar's line of sight

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	Ecological support area 1
Very High	Ecological support area 2
Very High	FEPA Subcatchments