



Appendix 9

Additional Information



Appendix 9A

Project Coordinates

WILDEBEESTKUIL PV2: APPLICATION SITE

COORDINATES AT CENTRE POINT (DD MM SS.sss)		
POINT	SOUTH	EAST
CENTRE	S27° 13' 26.675"	E26° 17' 8.295"
COORDINATES AT CORNER POINTS (DD MM SS.sss)		
POINT	SOUTH	EAST
W_01 (NW)	S27° 13' 13.897"	E26° 16' 53.432"
W_02 (NE)	S27° 13' 1.290"	E26° 17' 23.334"
W_03 (E)	S27° 13' 23.646"	E26° 17' 32.467"
W_04 (SE)	S27° 13' 54.700"	E26° 16' 58.386"
W_05 (SW)	S27° 13' 45.167"	E26° 16' 47.449"

AREA: 115.540ha

WILDEBEESTKUIL PV2: PV DEVELOPMENT AREA

COORDINATES AT CENTRE POINT (DD MM SS.sss)		
POINT	SOUTH	EAST
CENTRE	S27° 13' 31.275"	E26° 17' 4.620"
COORDINATES AT CORNER POINTS (DD MM SS.sss)		
POINT	SOUTH	EAST
WPV2_1_01	S27° 13' 17.909"	E26° 16' 54.508"
WPV2_1_02	S27° 13' 17.936"	E26° 16' 59.801"
WPV2_1_03	S27° 13' 19.398"	E26° 16' 59.791"
WPV2_1_04	S27° 13' 20.855"	E26° 17' 2.016"
WPV2_1_05	S27° 13' 20.855"	E26° 17' 2.040"
WPV2_1_06	S27° 13' 21.004"	E26° 17' 1.692"
WPV2_1_07	S27° 13' 22.029"	E26° 17' 2.242"
WPV2_1_08	S27° 13' 21.853"	E26° 17' 2.652"
WPV2_1_09	S27° 13' 31.001"	E26° 17' 7.564"
WPV2_1_10	S27° 13' 30.987"	E26° 17' 4.740"
WPV2_1_11	S27° 13' 30.482"	E26° 17' 3.151"
WPV2_1_12	S27° 13' 28.822"	E26° 17' 2.474"
WPV2_1_13	S27° 13' 27.622"	E26° 17' 1.687"
WPV2_1_14	S27° 13' 26.541"	E26° 16' 59.625"
WPV2_1_15	S27° 13' 26.507"	E26° 16' 52.863"
WPV2_2_01	S27° 13' 27.530"	E26° 17' 7.313"
WPV2_2_02	S27° 13' 23.494"	E26° 17' 16.539"
WPV2_2_03	S27° 13' 32.401"	E26° 17' 20.314"
WPV2_2_04	S27° 13' 38.952"	E26° 17' 13.125"
WPV2_2_05	S27° 13' 38.937"	E26° 17' 10.297"
WPV2_2_06	S27° 13' 34.577"	E26° 17' 10.325"
WPV2_2_07	S27° 13' 32.220"	E26° 17' 9.039"
WPV2_2_08	S27° 13' 31.197"	E26° 17' 9.282"
WPV2_3_01	S27° 13' 37.239"	E26° 16' 50.810"
WPV2_3_02	S27° 13' 37.264"	E26° 16' 55.840"
WPV2_3_03	S27° 13' 40.225"	E26° 16' 59.629"
WPV2_3_04	S27° 13' 40.242"	E26° 17' 2.975"
WPV2_3_05	S27° 13' 42.505"	E26° 17' 1.691"
WPV2_3_06	S27° 13' 43.535"	E26° 17' 1.454"
WPV2_3_07	S27° 13' 45.701"	E26° 17' 1.440"
WPV2_3_08	S27° 13' 45.692"	E26° 16' 59.594"
WPV2_3_09	S27° 13' 44.708"	E26° 16' 58.792"
WPV2_3_10	S27° 13' 44.680"	E26° 16' 53.311"
WPV2_3_11	S27° 13' 40.715"	E26° 16' 50.144"

AREA: 23.864ha

WILDEBEESTKUIL PV2: LAYOUT COMPONENTS

COORDINATES AT CENTRE POINT (DD MM SS.sss)		
COMPONENT	SOUTH	EAST
SWITCHING SUBSTATION	S27° 13' 18.221"	E26° 17' 27.146"
TEMPORARY BUILDING ZONE	S27° 13' 26.560"	E26° 17' 7.465"
GUARD HOUSE	S27° 13' 21.341"	E26° 17' 2.377"

WILDEBEESTKUIL PV2: SITE ACCESS ROAD

CENTRE LINE COORDINATES (DD MM SS.sss)

START POINT	MIDDLE POINT	END POINT	APPROX LENGTH (KM)
S27° 13' 12.212"	S27° 13' 31.225"	S27° 13' 50.307"	1,30
E26° 16' 58.393"	E26° 17' 8.472"	E26° 17' 3.125"	

WILDEBEESTKUIL PV2: GRID CONNECTION ALTERNATIVES

COORDINATES OF CENTRE LINE (DD MM SS.sss)				
CORRIDOR	APPROX LENGTH (KM)	POINT	SOUTH	EAST
OPTION 1	2,49	START	S27° 13' 17.571"	E26° 17' 27.090"
		MIDDLE	S27° 12' 47.378"	E26° 17' 47.372"
		END	S27° 12' 15.722"	E26° 18' 24.623"
OPTION 2A & 2B	2,55	START	S27° 13' 17.571"	E26° 17' 27.090"
		MIDDLE	S27° 12' 48.520"	E26° 17' 54.301"
		END	S27° 12' 15.769"	E26° 18' 26.183"

WILDEBEESTKUIL PV2: GRID CONNECTION OPTION 1

COORDINATES OF CORRIDOR CENTRE LINE (DD MM SS.sss)		
COMPONENT	SOUTH	EAST
1 (START POINT)	S27° 13' 17.571"	E26° 17' 27.090"
2	S27° 13' 0.358"	E26° 17' 20.073"
3	S27° 12' 52.446"	E26° 17' 38.855"
4	S27° 12' 50.157"	E26° 17' 43.166"
5	S27° 12' 48.398"	E26° 17' 45.929"
6	S27° 12' 46.265"	E26° 17' 48.937"
7	S27° 12' 41.601"	E26° 17' 54.493"
8 (END POINT)	S27° 12' 15.722"	E26° 18' 24.623"

WILDEBEESTKUIL PV2: GRID CONNECTION OPTION 2A & 2B

COORDINATES OF CORRIDOR CENTRE LINE (DD MM SS.sss)		
COMPONENT	SOUTH	EAST
1 (START POINT)	S27° 13' 17.571"	E26° 17' 27.090"
2	S27° 13' 4.955"	E26° 17' 21.947"
3	S27° 12' 56.244"	E26° 17' 42.454"
4	S27° 12' 53.545"	E26° 17' 47.303"
5	S27° 12' 49.989"	E26° 17' 52.457"
6	S27° 12' 42.426"	E26° 18' 1.407"
7	S27° 12' 18.564"	E26° 18' 29.180"
8 (END POINT)	S27° 12' 15.769"	E26° 18' 26.183"



Appendix 9B
Specialist ToR



**PROPOSED DEVELOPMENT OF THE 9.9MW WILDEBEESTKUIL 2
SOLAR PHOTOVOLTAIC (PV) PLANT, 132kV POWER LINE AND
ASSOCIATED INFRASTRUCTURE NEAR LEEUDORINGSTAD IN
THE NORTH WEST PROVINCE, MAQUASSI HILLS LOCAL
MUNICIPALITY IN THE DR KENNETH KAUNDA DISTRICT
MUNICIPALITY**

TERMS OF REFERENCE (ToR) FOR SPECIALIST STUDIES

1 INTRODUCTION

The purpose of the Terms of Reference (ToR) is to provide the specialist team with a consistent approach to the specialist studies that are required as part of the Basic Assessment (BA) process being conducted in respect of the proposed solar photovoltaic (PV) plant and associated power line development. This will enable comparison of environmental impacts, efficient review, and collation of the specialist studies into the BA report, in accordance with the latest requirements of the EIA Regulations, 2014 (as amended).

2 PROCESS

In terms of the Environmental Impact Assessment (EIA) Regulations, which were published on 04 December 2014 and amended on 07 April 2017 [promulgated in Government Gazette 40772 and Government Notice (GN) R326, R327, R325 and R324 on 7 April 2017], various aspects of the proposed development are considered listed activities under GNR 327 and GNR 324 (this project is considered a BA process due to energy capacity thresholds of under 20MW and vegetation clearance thresholds of under 20ha), which may have an impact on the environment and therefore require authorisation from the provincial competent authority, namely the North West Department of Economic Development, Environment, Conservation and Tourism (NW DEDECT), prior to the commencement of such activities.

3 PROJECT DESCRIPTION

3.1 Project history

The original BA process for the proposed Wildebeestkuil PV Generation (Pty) Ltd (hereafter referred to as “Wildebeestkuil PV Generation”) solar photovoltaic (PV) plant was initiated in August 2016. All specialist studies were undertaken and subsequently all site sensitivities were identified. The specialist studies and draft basic assessment reports (DBARs) were completed and released for 30-day public review. The BA was however put out on hold prior to submitting the final basic assessment reports (FBARs) to the Department of Environmental Affairs (DEA). In February 2017, the proposed capacity and layout of the solar PV plant was amended, and a new connection point and associated power line corridors were assessed. However, the project was put on hold prior to submitting the application forms to the DEA or commencing with the legislated public participation process. In August of 2020, Wildebeestkuil PV Generation proposed an additional 9.9MW PV plant on the Wildebeestkuil site (now referred to as the Wildebeestkuil 1 Solar PV Plant & 132kV Power Line and Wildebeestkuil 2 Solar PV Plant & 132kV Power Line) outside of all site sensitivities that were identified in 2016, and as such specialist studies have been commissioned to assess and verify the now two (2) solar PV plants and 132kV power lines under the new Gazetted specialist protocols¹.

3.2 Project location

Wildebeestkuil PV Generation is proposing to construct a solar PV plant, 132kV power line and associated infrastructure approximately 4km east of the town of Leeudoringstad in the Maquassi Hills Local Municipality, which falls within the Dr Kenneth Kaunda District Municipality in the North West Province of South Africa (hereafter referred to as the “proposed development”) (Department Ref No.: To be Allocated). The proposed development will have a total maximum generation capacity of up to approximately 9.9 megawatt (MW) and will be referred to as the Wildebeestkuil 2 Solar PV Plant and 132kV Power Line. SiVEST Environmental Division (hereafter referred to as “SiVEST”) has subsequently been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the BA process for the proposed construction of the Wildebeestkuil 2 Solar PV Plant, 132kV power line and associated infrastructure. The overall objective of the solar PV plants and power lines is to generate electricity (by capturing solar energy) to feed into the national electricity grid and “wheel” the power to customers based on a power purchase agreement. Additionally, an agreement is in place to sell the energy to PowerX, who hold a National Energy Regulator of South Africa (NERSA)-issued

¹ GOVERNMENT GAZETTE No. 43110, PROCEDURES FOR THE ASSESSMENT AND MINIMUM CRITERIA FOR REPORTING ON IDENTIFIED ENVIRONMENTAL THEMES IN TERMS OF SECTIONS 24(5)(a) AND (h) AND 44 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998, WHEN APPLYING FOR ENVIRONMENTAL AUTHORISATION, 20 MARCH 2020.

In terms of sections 24(5)(a), (h) and 44 of the National Environmental Management Act, 1998, prescribe general requirements for undertaking site sensitivity verification and for protocols for the assessment and minimum report content requirements of environmental impacts for environmental themes for activities requiring environmental authorisation, as contained in the Schedule hereto. When the requirements of a protocol apply, the requirements of Appendix 6 of the Environmental Impact Assessment Regulations, as amended, (EIA Regulations), promulgated under sections 24(5) and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), are replaced by these requirements. Each protocol applies exclusively to the environmental theme identified within its scope. Multiple themes may apply to a single application for environmental authorisation, and assessments for these themes must be undertaken in accordance with the relevant protocol, or where no specific protocol has been prescribed, in accordance with the requirements of the EIA Regulations.

electricity trading license which allows them to purchase energy generated from clean and renewable resources and sell it to its customers.

The proposed solar PV plant will be located on the following properties:

- Portion 13 of the Farm Wildebeestkuil No. 59;
- Portion 14 of the Farm Wildebeestkuil No. 59; and
- Remainder of Portion 22 of the Farm Wildebeestkuil No. 59.

The combined extent of the above-mentioned properties is approximately 115.5 hectares (ha). The proposed solar PV plant and associated infrastructure assessed as part of this BA will however only occupy a portion of the above-mentioned properties.

The power line corridor alternatives associated with each proposed solar PV plant which were assessed as part of the respective BA processes traverse the following properties:

- Portion 13 of the Farm Wildebeestkuil No. 59;
- Portion 14 of the Farm Wildebeestkuil No. 59;
- Remainder of Portion 5 of the Farm Wildebeestkuil No. 59;
- Remainder of Portion 7 of the Farm Leeuwbosch No. 44;
- Remainder of Portion 29 of the Farm Leeuwbosch No. 44;
- Remainder of Portion 22 of the Farm Wildebeestkuil No. 59;
- Portion 35 of the Farm Leeuwbosch No. 44;
- Portion 36 of the Farm Leeuwbosch No. 44;
- Portion 37 of the Farm Leeuwbosch No. 44; and
- Portion 38 of the Farm Leeuwbosch No. 44.

The proposed development is located directly west of the Harvard Substation, where the current supply of electricity for the local areas and businesses is extracted from.

3.3 Solar PV Plant Components

The key components to be constructed are listed below:

- Solar PV field (arrays) comprising multiple PV modules.
- PV panel mountings. PV panels will be single axis tracking mounting, and the modules will be either crystalline silicon or thin film technology.
- Each PV module will be approximately 2.5m long and 1.2m wide and mounted on supporting structures above ground. The final design details will become available during the detailed design phase of the proposed development, prior to the start of construction.
- The foundations will most likely be either concrete or rammed piles. The final foundation design will be determined at the detailed design phase of the proposed development.

In addition, related infrastructure required are:

- Underground cabling ($\approx 0.8\text{m} \times 0.6$ wide)
- Permanent Guard House ($\approx 876\text{m}^2$)
- Temporary building zone ($\approx 2994\text{m}^2$)
- Switching Substation ($\approx 2000\text{m}^2$)

- Internal gravel roads (≈3.5m width)
- Upgrade to existing roads; and
- Site fencing (≈2.1m high)

In addition to the above, the electricity generated by the proposed solar PV plant will be fed into the national electricity grid via a 132kV power line, which will connect to the Leeudoringstad Solar Plant Substation (part of a separate BA process)². The proposed 132kV power line will consist of a series of towers anticipated to be located approximately 200m to 250m apart at this stage. The type of power line towers will be determined during the final design stages of the proposed development, prior to construction commencing. The height will vary based on the terrain, but will ensure minimum overhead line (OHL) line clearances with buildings and surrounding infrastructure. The exact location of the towers will be determined during the final design stages of the proposed development.

For the purpose of this BA, corridors between approximately 60m and 150m wide were assessed for the proposed power line corridor route alternatives (see **Section 4** below). This is to allow for flexibility to route the power lines within the assessed corridors. As such, the selected preferred power lines will be routed within the assessed corridors. The final servitudes will be routed within the power line corridors, and it is expected that the servitude will not exceed 32m.

Once fully developed, the intention is to generate electricity (by capturing solar energy) to feed into the national electricity grid and “wheel” the power to customers based on a power purchase agreement. Additionally, an agreement is in place to sell the energy to PowerX, who hold a NERSA-issued electricity trading license which allows them to purchase energy generated from clean and renewable resources and sell it to its customers.

The construction phase will be between 12 and 24 months and the operational lifespan will be approximately 20 years, depending on the length of the power purchase agreement with the relevant off taker.

4 BA ALTERNATIVES

4.1 Location alternatives

No site alternatives for the proposed developments are being considered as the placement of solar PV installations and power lines is dependent on several factors, all of which are favourable at the proposed site location. This included land availability and topography, environmental sensitivities, distance to the national grid, solar resource site accessibility and current land use.

4.2 Technology alternatives

No other activity / technology alternatives are being considered. Renewable energy development in South Africa is highly desirable from a social, environmental and development point of view. Based on the flat terrain, the climatic conditions and current land use being agricultural, it was determined that the proposed site would be best-suited for a solar PV plant and associated power line, instead of any

² Proposed Leeudoringstad Solar Plant Substation part of separate BA process and will be authorised under a separate EA.

other type of renewable energy technology. It is generally preferred to install wind energy facilities (WEFs) on elevated ground. In addition, concentrated solar power (CSP) installations are not feasible because they have a high water requirement and the project site is located in a relatively arid area. There is also not enough rainfall in the area to justify a hydro-electric plant. Therefore, the only feasible technology alternative on this site is solar PV with associated power line, and as such this is the only technology alternative being considered.

4.3 Layout alternatives

No design or layout alternatives for the PV development area, Switching Substation, Guard house and Temporary Building Zone (and all other associated infrastructure) are being considered or assessed as part of the current BA process. Design and layout alternatives were considered and assessed as part of a previous BA process that was never completed, and as such the PV development area, Switching Substation, Guard house and Temporary Building Zone (and all other associated infrastructure) have been placed to avoid site sensitivities identified as part of a previous BA process as well as the current BA process. Specialist studies were originally undertaken in 2016 and all current layouts and/or positions being proposed were selected based on the environmental sensitivities identified as part of these studies in 2016. All specialist studies which were undertaken in 2016 were however updated in 2020 (including ground-truthing, where required) to focus on the impacts of the layout being proposed as part of the current project. The results of the updated specialist assessments have informed the layout being proposed as part of the current BA process. The proposed layout has therefore been informed by the identified environmental sensitive and/or “no-go” areas.

Three (3) power line corridor route alternatives for the proposed 132kV power line were however identified and assessed by the respective specialists as part of the current BA process. These alternatives essentially provide for different power line route alignments contained within an assessment corridor. The power line corridor route alternatives were informed by the identified environmental sensitive and/or “no-go” areas. The various power line corridor alternatives are described in **Section 5.10** below.

4.4 The operational aspects of the activity

No operational alternatives were assessed in the BA, as none are available for solar PV installations and power lines.

4.5 ‘No-go’ alternative

The “no-go” alternative is the option of not fulfilling the proposed project. This alternative would result in no environmental impacts from the proposed project on the site or surrounding local area. It provides the baseline against which other alternatives are compared and will be considered throughout the report. Implementing the “no-go” option would entail no development.

The “no-go” option is a feasible option; however, this would prevent the Wildebeestkuil 2 Solar PV Plant & 132kV Power Line from contributing to the environmental, social and economic benefits associated with the development of the renewables sector.

5 SPECIALIST REPORT REQUIREMENTS

The specialist assessments should include the following sections:

5.1 Project Description

The specialist report must include the project description as provided above.

5.2 Terms of Reference (ToR)

The specialist report must include an explanation of the Terms of Reference (ToR) applicable to the specialist study. In addition, a table must be provided at the beginning of the specialist report listing the requirements for specialist reports in accordance with Appendix 6 of the EIA Regulations, 2014 (as amended) and cross referencing these requirements with the relevant sections in the report. An MS Word version of this table will be provided by SiVEST.

5.3 Legal Requirements and Guidelines

The specialist report must include a thorough overview of all applicable best practice guidelines, relevant legislation and authority requirements.

5.4 Methodology

The report must include a description of the methodology applied in carrying out the specialist assessment.

5.5 Specialist Findings / Identification of Impacts

The report must present the findings of the specialist studies and explain the implications of these findings for the proposed development (e.g. permits, licenses etc.). This section of the report should also identify any sensitive and/or 'no-go' areas on the development site which should be avoided.

The reports should be accompanied with spatial datasets (shapefiles, KML) and accompanying text documents if required.

5.6 Impact Rating Methodology

The impacts of the proposed solar PV plant and 132kV power line (during the Construction, Operation and Decommissioning phases) are to be assessed and rated according to the methodology developed by SiVEST. Specialists will be required to make use of the impact rating matrix provided (in Excel format) for this purpose. Please note that the significance of Cumulative Impacts should also be rated in this section. Both the methodology and the rating matrix will be provided by SiVEST.

Please be advised that this section must include mitigation measures aimed at minimising the impact of the proposed development.

5.7 Input to The Environmental Management Program (EMPr)

The report must include a description of the key monitoring recommendations for each applicable mitigation measure identified for each phase of the proposed development for inclusion in the Environmental Management Program (EMPr) or Environmental Authorisation (EA).

Please make use the Impact Rating Table (in Excel format) provided for each of the phases (i.e. Design, Construction, Operation and Decommissioning).

5.8 Cumulative Impact Assessment

Cumulative impact assessments must be undertaken for the proposed solar PV plant in order to determine the cumulative impact that will materialise should other Renewable Energy Facilities (REFs) and large-scale industrial developments be constructed within 50km of the proposed development.

The cumulative impact assessment must contain the following:

- A cumulative environmental impact statement noting whether the overall impact is acceptable; and
- A review of the specialist reports undertaken for other REFs and an indication of how the recommendations, mitigation measures and conclusion of the studies have been considered.

In order to assist the specialists in this regard, SiVEST will provide the following documentation / data:

- A summary table listing all REFs identified within 50km of the proposed solar PV plant;
- A map showing the location of the identified REFs;
- KML files; and
- Relevant EIA / BA reports that could be obtained.

The list of renewable energy facilities that must be assessed as part of the cumulative impact will be provided.

5.9 “No-Go” Alternative

Consideration must be given to the “no-go” option in the BA process. The “no-go” option assumes that the site remains in its current state, i.e. there is no construction of a Solar PV Plant, 132kV power line and associated infrastructure in the proposed project area and the status quo would proceed.

5.10 Comparative Assessment of Alternatives

As mentioned, layout alternatives, which subsequently informed the area for the potential erection of PV panels for the proposed solar PV plant, were identified and comparatively assessed as part of the BA process undertaken in 2016. Specialist studies were originally undertaken in 2016 and all current layouts and/or positions being proposed were selected based on the environmental sensitivities identified as part of these studies in 2016. All specialist studies which were undertaken in 2016 were however updated in 2020 (including ground-truthing, where required) to focus on the impacts of the layout being proposed as part of the current project. The results of the updated specialist assessments have informed the layout being proposed as part of the current BA process.

As the positions of the proposed PV development area, Switching Substation, Guard house and Temporary Building Zone (as well as all other associated infrastructure) have already been determined taking the identified environmental sensitive and/or “no-go” areas into consideration, the specialist is to update the comparative assessment as per the latest table provided by SiVEST.

Three (3) power line corridor route alternatives for the proposed 132kV power line were however identified and assessed by the respective specialists as part of the current BA process. These alternatives essentially provide for different power line route alignments contained within an assessment corridor. The power line corridor route alternatives were informed by the identified environmental sensitive and/or “no-go” areas. The various power line corridor route alternatives are described below.

1) Power Line Corridor Option 1:

This involves an overhead power line which will run north of the R502, from the switching substation located within the Wildebeestkuil 2 Solar PV Plant application site (namely Portion 14 of the Farm Wildebeestkuil No. 59) to either Option 1 or Option 2 of the Leeudoringstad Solar Plant Substation, depending on the alternative chosen as “preferred” for the Leeudoringstad Solar Plant Substation site³. The Leeudoringstad Solar Plant Substation site alternatives are situated approximately 2km to the north-east of the Wildebeestkuil 2 Solar PV Plant application site, within Portion 37 of the Farm Leeuwbosch No. 44.

2) Power Line Corridor Option 2A:

This involves an overhead power line which will run south of the R502, from the switching substation located within the Wildebeestkuil 2 Solar PV Plant application site (namely Portion 14 of the Farm Wildebeestkuil No. 59) to either Option 1 or Option 2 of the Leeudoringstad Solar Plant Substation, depending on the alternative chosen as “preferred” for the Leeudoringstad Solar Plant Substation site³. The Leeudoringstad Solar Plant Substation site alternatives are situated approximately 2km to the north-east of the Wildebeestkuil 2 Solar PV Plant application site, within Portion 37 of the Farm Leeuwbosch No. 44.

3) Power Line Corridor Option 2B:

This involves an underground power line which will run south of the R502, from the switching substation located within the Wildebeestkuil 2 Solar PV Plant application site (namely Portion 14 of the Farm Wildebeestkuil No. 59) to either Option 1 or Option 2 of the Leeudoringstad Solar Plant Substation, depending on the alternative chosen as “preferred” for the Leeudoringstad Solar Plant Substation site³. The Leeudoringstad Solar Plant Substation site alternatives are situated approximately 2km to the north-east of the Wildebeestkuil 2 Solar PV Plant application site, within Portion 37 of the Farm Leeuwbosch No. 44.

The specialist is therefore also to undertake comparative assessment for the above-mentioned power line corridor alternatives as per the table provided by SiVEST.

³ 132kV power line corridor route associated with solar PV plant intrinsically linked to Leeudoringstad Solar Plant Substation site (part of separate on-going BA process). Leeudoringstad Solar Plant Substation site chosen as “preferred” by respective specialists as part of that separate BA process therefore informed connection point for power line corridor being proposed as part of this BA application.

Key

PREFERRED	The alternative will result in a low impact / reduce the impact / result in a positive impact
FAVOURABLE	The impact will be relatively insignificant
LEAST PREFERRED	The alternative will result in a high impact / increase the impact
NO PREFERENCE	The alternative will result in equal impacts

Alternative	Preference	Reasons (incl. potential issues)
Power Line Corridor Route Alternative		
Option 1		
Option 2A		
Option 2B		

5.11 Conclusion / Impact Statement

The conclusion section of the specialist reports must include an **Impact Statement**, indicating whether any fatal flaws have been identified and ultimately whether the proposed development can be authorised or not (i.e. whether EA should be granted / issued or not).

5.12 Executive Summary

Specialists must provide an Executive Summary which summarises the findings of their report to allow for easy inclusion in the BA reports.

6 DELIVERABLES

All specialists will need to submit the following deliverables:

- 1 x Draft Specialist Report for inclusion in DBAR no later than 07 September 2020 and updated version based on EAP and applicant review no later than 11 September 2020;
- 1 x Final Specialist Report for inclusion in FBAR (should updates and/or revisions be required);
- A copy of the Specialist Declaration of Interest (DoI) form, containing original signatures. This form will be provided to the specialists. **Please note that the undertaking / affirmation under oath section of the report must be signed by a Commissioner of Oaths;** and
- All data relating to the studies, such as shape files, photos and maps (see **Section 7** below).

7 GENERAL SUBMISSION REQUIREMENTS

Please ensure that your specialist report includes the following:

- A detailed description of the study's methodology; indication of the locations and descriptions of the development footprint, and all other associated infrastructures that they have assessed and are recommending for authorisations;

- Provide a detailed description of all limitations to the studies. All specialist studies must be conducted in the correct season and providing that as a limitation will not be allowed;
- All specialist studies must be final, and provide detailed / practical mitigation measures for the preferred alternative and recommendations, and must not recommend further studies to be completed post EA;
- Should a specialist recommend specific mitigation measures, these must be clearly indicated;
- Regarding cumulative impacts:
 - Clearly defined cumulative impacts and where possible the size of the identified impact must be quantified and indicated, i.e. hectares of cumulatively transformed land.
 - A detailed process flow to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project.
 - Identified cumulative impacts associated with the proposed development must be rated with the significance rating methodology used in the process.
 - The significance rating must also inform the need and desirability of the proposed development.
 - A cumulative impact environmental statement on whether the proposed development must proceed.
- The report must in line with the DEA Screening Tool Specialist Theme Protocols (As gazetted 20 March 2020) if they apply. If they do not, the report must be written in accordance with Appendix 6 of the EIA Regulations, 2014 (as amended);
- A table at the beginning of your report cross referencing how the requirements for specialist according to Appendix 6 of the EIA Regulations, 2014 (as amended) has been adhered to. An MS Word version will be provided;
- A thorough overview of all applicable legislation, policies, guidelines. etc.;
- Identification of sensitive and/or “no-go” areas to be avoided;
- Please note that the Department considers a “no-go” area, as an area where no development of any infrastructure is allowed; therefore, no development of associated infrastructure is allowed in the “no-go” areas;
- Should the specialist definition of “no-go” area differ from the Departments definition; this must be clearly indicated. The specialist must also indicate the “no-go” area's buffer if applicable;
- Recommend mitigation measures in order to minimise the impact of the proposed development;
- Provide implications of specialist findings for the proposed development (e.g. permits, licenses etc.);
- Specify if any further assessment will be required;
- Include an Impact Statement, concluding whether any fatal flaws have been identified and ultimately whether the proposed development can be authorised or not (i.e. whether EA should be granted / issued or not); and
- A copy of the Specialist Declaration of Interest (DoI) form, containing original signatures, must be appended to all Draft and Final Reports. This form will be provided to the specialists. **Please note that the undertaking / affirmation under oath section of the report must be signed by a Commissioner of Oaths.**

8 DEADLINES AND REPORT SUBMISSION

- Draft Specialist Report for inclusion in DBAR no later than 07 September 2020 and updated version based on EAP and applicant review no later than 11 September 2020.
- Any changes arising based on stakeholder engagement no later than 16 October 2020

9 REPORT / DATA FORMATS

- All specialist reports must be provided in MS Word format;
- Where maps have been inserted into the report, SiVEST will require a separate map set in PDF format for inclusion in our submission;
- Where figures and/or photos have been inserted into the report, SiVEST will require the original graphic in .jpg format for inclusion in our submission; and
- ***Delineated areas of sensitivity must be provided in either ESRI shape file format or Google Earth KML format. Sensitivity classes must be included in the attribute tables with a clear indication of which areas are “No-Go” areas.***

10 SPECIALIST SPECIFIC ISSUES

Terrestrial Ecology

- Describe the terrestrial ecology features of the project area, with focus on features that are potentially impacted by the proposed project. The description should include the major habitat forms within the study site, giving due consideration to terrestrial ecology (flora), terrestrial ecology (fauna) and Species of Special Concern (SSC).
- Consider seasonal changes and long-term trends, such as due to climate change;
- Identify any SSC or protected species on site and clearly map with a high degree of certainty the exact no-go zones with a high level of confidence;
- Map the sensitive ecological features within the proposed project area, showing any ‘no-go’ areas (i.e. ‘very high’ sensitivity). Specify set-backs or buffers and provide clear reasons for these recommendations. Also map the extent of disturbance and transformation of the site;
- Identify and assess the potential impacts of the project on the terrestrial environment and provide mitigation measures to include in the environmental management plan; and
- The assessment should be based on existing information, national and provincial databases, SANBI mapping, professional experience and field work conducted.

Soils and Agricultural Potential

- Describe the existing environment in terms of soils, geology, land-use and agricultural potential. Significant soils and agricultural features or disturbances should be identified, as well as sensitive features and receptors within the project area. The description must include surrounding agricultural land uses and activities, to convey the local agricultural context;
- Describe and map soil types (soil forms), soil characteristics (soil depth, soil colour, limiting factors, and clay content of the top and sub soil layers), and degradation and erodibility of soils etc. to the extent necessary to inform this assessment;

- Varying sensitivities of the soils and agricultural potential must be mapped and highlighted;
- The assessment is to be based on existing information, and professional experience and field work conducted by the specialist, as considered necessary and in accordance with relevant legislated requirements;
- Identify and assess the potential impacts of the proposed development on loss of agricultural land, soils and agriculture, including impacts of associated infrastructure, such as the buildings, fencing etc. and provide relevant mitigation measures to include in the environmental management plan;
- Identify any protocols, legal and permit requirements relating to soil and agricultural potential impacts that are relevant to this project and the implications thereof;
- Map sensitivity of the site and clearly show no-go areas i.e. existing irrigated fields/ cultivated lands; and
- The report needs to fulfil the terms of reference for an agricultural study as set out in the National Department of Agriculture's document, Regulations for the evaluation and review of applications pertaining to renewable energy on agricultural land, dated September 2011, with an appropriate level of detail for the agricultural suitability and soil variation on site (which may therefore be less than the standardised level of detail stipulated in the above regulations).

Avifauna (Birds)

- Describe the affected environment from an avifaunal perspective, including consideration of the surrounding habitats and avifaunal features (e.g. Ramsar sites, Critical Bird Areas, wetlands, migration routes, feeding, roosting & nesting areas, etc.);
- Describe and map bird habitats on the site, based on on-site monitoring, desk-top review, collation of available information, studies in the local area and previous experience;
- Map the sensitivity of the site in terms of avifaunal features such as habitat use, roosting, feeding and nesting / breeding; and
- Identify and assess the potential impacts of the proposed development on avifauna. Provide sufficient mitigation measures to include in the environmental management plan.

Geotechnical

- Comprehensive desktop geotechnical report detailing the geological, hydrogeological and geotechnical conditions is required.
- A literature review should be undertaken as part of the desktop investigation in which topographic and geological maps must be reviewed.
- Consideration must be given, but not limited to, the following at desktop level.
 - The influence of topography on site suitability of the PV Plant and 132kV power line.
 - Any envisaged geological and geotechnical influences and the competency of foundations for the construction of the PV plant and 132kV power line.
 - Tectonic influences on overall stability, namely the presence of faulting, lineaments and preferred discontinuity orientations.
- As part of the literature review, any available previous investigations and reports should be reviewed and critical geotechnical conclusions presented in the desktop report.

Heritage

- Describe and map the heritage features of the site and surrounding area. This is to be based on desk-top reviews, fieldwork, available databases, and findings from other heritage studies in the area, where relevant. Include reference to the grade of heritage feature and any heritage status the feature may have been awarded;
- Assess the impacts and provide mitigation measures to include in the environmental management plan;
- Map heritage sensitivity for the site. Clearly show any “no-go” areas in terms of heritage (i.e. “very high” sensitivity) and provide recommended buffers or set-back distances;
- Identify and assess potential impacts from the project on the full scope of heritage features, including archaeology, palaeontology and the cultural-historical landscape, as required by heritage legislation;
- Liaise with the relevant authority in order to obtain a final comment in terms of section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), including Regulations issued thereunder, as necessary; and
- Load the relevant documents on the South African Heritage Resources Information System (SAHRIS) to obtain a comment from SAHRA.

Social

- Describe the social assessment context of the Leeudoringstad and Kgakala areas, focusing on aspects that are potentially affected by a substation project, and taking into consideration the current situation as well as the trends, the local planning (IDPs and SDFs), other developments in the area. The study should look more broadly than the individual land parcels on which the proposed project will be developed, as most, if not all, of the anticipated social impacts may be experienced in the urban areas nearest to the proposed development;
- Apply a variety of appropriate options for sourcing information, such as review of analogous studies, available databases and social indicators, and use of interviews with key affected parties such as local communities, local landowners & government officials (local and regional) etc.;
- The social study does not lend itself to providing a spatially based sensitivity map. Therefore, instead, the study could provide a simplified schematic mapping of the links between the project actions (i.e. interventions) and the receiving social environment (i.e. the socio-ecological system), which may occur at a local, provincial or national scale, and showing how these links can be optimized to enhance benefits and minimize negative impacts;
- Consider social issues such as potential in-migration of job seekers, opportunities offered by training and skills development, cumulative effects with other projects in the local area implications for local planning and resource use;
- Provide recommendations to enhance the socio-economic benefits of the proposed development and to avoid (or minimise) the potential negative impacts;
- Identify and assess potential social benefits and costs as a result of the proposed development, for all stages of the project, and including the estimated direct employment opportunities; and
- Evaluate the implications of the project on the local socio-economic context.

Surface Water / Aquatic Ecology

- Compile a Surface Water / Aquatic Ecology Compliance Statement according to the protocol for the assessment and reporting of environmental impacts on aquatic biodiversity on a site

identified as being of “low sensitivity” for aquatic biodiversity, gazetted on 20 March 2020 (Sections 24(5)(A) and (H) and 44 of NEMA, 1998) (<https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazettedAquaticBiodiversityAssessment.pdf>);

- The Surface Water / Aquatic Biodiversity Compliance Statement, must verify:
 - That the site is of “low” sensitivity for aquatic biodiversity; and
- Whether or not the proposed development will have an impact on the aquatic features.
- The Surface Water / Aquatic Biodiversity Compliance Statement, must contain, as a minimum, the following information:
 - Contact details and curriculum vitae of the specialist including SACNASP registration number and field of expertise;
 - A signed statement of independence by the specialist;
 - Baseline profile description of biodiversity and ecosystems, including the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;
 - Methodology used to verify the sensitivities of the aquatic biodiversity features on the national web based environmental screening tool;
 - Methodology used to undertake the Initial Site Sensitivity Verification and preparation of the Compliance Statement, including equipment and modelling used, where relevant;
 - Where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr;
 - A description of the assumptions made and any uncertainties or gaps in knowledge or data as well as a statement of the timing and intensity of site inspection observations; and
 - Any conditions to which the statement is subjected.
- Where the information gathered from the Initial Site Sensitivity Verification differs from that identified as having a “low” aquatic biodiversity sensitivity by the national web based environmental screening tool and it is found to be of a “very high” sensitivity, the following will be required:
 - Describe the aquatic ecology features of the project area, with focus on features that are potentially impacted by the proposed project. The description should include the major habitat forms within the study site, giving due consideration to freshwater ecosystems, drainage lines and wetlands;
 - Consider seasonal changes and long-term trends, such as due to climate change as far as possible;
 - Identify any Species of Special Concern or protected species on site relevant to the aquatic environment;
 - Map the sensitive ecological features within the proposed project area, showing any ‘no-go’ areas (i.e. ‘very high’ sensitivity) with a very high confidence and accuracy. Specify set-backs or buffers and provide clear reasons for these recommendations. Also map the extent of disturbance and transformation of the site;
 - Identify and delineate wetlands that may occur on the site, using the relevant and latest protocols established by DWAF;
 - Determine if a Water Use License (WUL) or General Authorisation (GA) is required and if so, determine the requirements thereof by undertaking the appropriate DWS risk assessment.

- Verify the datasets of watercourses against a digital terrain model (or slope / contour data) to ensure that the watercourses are mapped in the correct places based on topography;
- Identify and assess the potential impacts of the project (including all access roads) on the aquatic environment;
- Provide mitigation measures to include in the environmental management plan; and
- The assessment should be based on existing information, national and provincial databases, SANBI mapping, professional experience and field work conducted.

Visual

- Describe the visual character of the local area. Any significant visual features or visual disturbances should be identified and mapped, as well as any sensitive visual receptors within the proposed project area or within viewsheds of the proposed development;
- Visual character and visual absorption capacity should be described;
- Viewsheds for various elements of the proposed development should be calculated, defined and presented, and the varying sensitivities of these viewsheds must be highlighted;
- Mapping of visual sensitivity of the site will require consideration of visual receptors outside the site, and sensitivity to development on the site for potentially affected visual receptors of 'very high' sensitivity;
- Assessment to be based on findings of the site visit, visual modelling, and a photographic survey of the surrounding region from which the landscape and visual baselines can be prepared;
- Identify and assess potential impacts from the project on the receiving environment. All impacts should be considered under varying conditions as appropriate to the study i.e. day, night, clear weather, cloudy weather etc. Provide mitigation measures to include in the EMPr;
- Maps depicting viewsheds / line of sight across the site should be generated and included in the reports. These maps should indicate current viewsheds / visual landscape / obstructions as well as expected visual impacts during the construction, operational and decommissioning phases of the proposed development;
- Provide specific mitigation on light management and
- Provide photomontages from accessible locations.



Appendix 9C
SiVEST Impact Rating Methodology



1 ENVIRONMENTAL IMPACT ASSESSMENT (EIA) METHODOLOGY

The Environmental Impact Assessment (EIA) Methodology assists in evaluating the overall effect of a proposed activity on the environment. Determining of the significance of an environmental impact on an environmental parameter is determined through a systematic analysis.

1.1 Determination of Significance of Impacts

Significance is determined through a synthesis of impact characteristics which include context and intensity of an impact. Context refers to the geographical scale (i.e. site, local, national or global), whereas intensity is defined by the severity of the impact e.g. the magnitude of deviation from background conditions, the size of the area affected, the duration of the impact and the overall probability of occurrence. Significance is calculated as shown in **Table 1**.

Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

1.2 Impact Rating System

The impact assessment must take account of the nature, scale and duration of effects on the environment and whether such effects are positive (beneficial) or negative (detrimental). Each issue / impact is also assessed according to the various project stages, as follows:

- Planning;
- Construction;
- Operation; and
- Decommissioning.

Where necessary, the proposal for mitigation or optimisation of an impact should be detailed. A brief discussion of the impact and the rationale behind the assessment of its significance has also been included.

The significance of Cumulative Impacts should also be rated (As per the Excel Spreadsheet Template).

1.2.1 Rating System Used to Classify Impacts

The rating system is applied to the potential impact on the receiving environment and includes an objective evaluation of the possible mitigation of the impact. Impacts have been consolidated into one (1) rating. In assessing the significance of each issue the following criteria (including an allocated point system) is used:

Table 1: Rating of impacts criteria



ENVIRONMENTAL PARAMETER		
A brief description of the environmental aspect likely to be affected by the proposed activity (e.g. Surface Water).		
ISSUE / IMPACT / ENVIRONMENTAL EFFECT / NATURE		
Include a brief description of the impact of environmental parameter being assessed in the context of the project. This criterion includes a brief written statement of the environmental aspect being impacted upon by a particular action or activity (e.g. oil spill in surface water).		
EXTENT (E)		
This is defined as the area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment of a project in terms of further defining the determined.		
1	Site	The impact will only affect the site
2	Local/district	Will affect the local area or district
3	Province/region	Will affect the entire province or region
4	International and National	Will affect the entire country
PROBABILITY (P)		
This describes the chance of occurrence of an impact		
1	Unlikely	The chance of the impact occurring is extremely low (Less than a 25% chance of occurrence).
2	Possible	The impact may occur (Between a 25% to 50% chance of occurrence).
3	Probable	The impact will likely occur (Between a 50% to 75% chance of occurrence).
4	Definite	Impact will certainly occur (Greater than a 75% chance of occurrence).
REVERSIBILITY (R)		
This describes the degree to which an impact on an environmental parameter can be successfully reversed upon completion of the proposed activity.		
1	Completely reversible	The impact is reversible with implementation of minor mitigation measures
2	Partly reversible	The impact is partly reversible but more intense mitigation measures are required.
3	Barely reversible	The impact is unlikely to be reversed even with intense mitigation measures.
4	Irreversible	The impact is irreversible and no mitigation measures exist.
IRREPLACEABLE LOSS OF RESOURCES (L)		
This describes the degree to which resources will be irreplaceably lost as a result of a proposed activity.		
1	No loss of resource.	The impact will not result in the loss of any resources.
2	Marginal loss of resource	The impact will result in marginal loss of resources.
3	Significant loss of resources	The impact will result in significant loss of resources.
4	Complete loss of resources	The impact is result in a complete loss of all resources.
DURATION (D)		
This describes the duration of the impacts on the environmental parameter. Duration indicates the lifetime of the impact as a result of the proposed activity.		



1	Short term	The impact and its effects will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase (0 – 1 years), or the impact and its effects will last for the period of a relatively short construction period and a limited recovery time after construction, thereafter it will be entirely negated (0 – 2 years).
2	Medium term	The impact and its effects will continue or last for some time after the construction phase but will be mitigated by direct human action or by natural processes thereafter (2 – 10 years).
3	Long term	The impact and its effects will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter (10 – 50 years).
4	Permanent	The only class of impact that will be non-transitory. Mitigation either by man or natural process will not occur in such a way or such a time span that the impact can be considered transient (Indefinite).

INTENSITY / MAGNITUDE (I / M)

Describes the severity of an impact (i.e. whether the impact has the ability to alter the functionality or quality of a system permanently or temporarily).

1	Low	Impact affects the quality, use and integrity of the system/component in a way that is barely perceptible.
2	Medium	Impact alters the quality, use and integrity of the system/component but system/ component still continues to function in a moderately modified way and maintains general integrity (some impact on integrity).
3	High	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component is severely impaired and may temporarily cease. High costs of rehabilitation and remediation.
4	Very high	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component permanently ceases and is irreversibly impaired (system collapse). Rehabilitation and remediation often impossible. If possible rehabilitation and remediation often unfeasible due to extremely high costs of rehabilitation and remediation.

SIGNIFICANCE (S)

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. This describes the significance of the impact on the environmental parameter. The calculation of the significance of an impact uses the following formula:

Significance = (Extent + probability + reversibility + irreplaceability + duration) x magnitude/intensity.



The summation of the different criteria will produce a non-weighted value. By multiplying this value with the magnitude/intensity, the resultant value acquires a weighted characteristic which can be measured and assigned a significance rating.

Points	Impact Significance Rating	Description
5 to 23	Negative Low impact	The anticipated impact will have negligible negative effects and will require little to no mitigation.
5 to 23	Positive Low impact	The anticipated impact will have minor positive effects.
24 to 42	Negative Medium impact	The anticipated impact will have moderate negative effects and will require moderate mitigation measures.
24 to 42	Positive Medium impact	The anticipated impact will have moderate positive effects.
43 to 61	Negative High impact	The anticipated impact will have significant effects and will require significant mitigation measures to achieve an acceptable level of impact.
43 to 61	Positive High impact	The anticipated impact will have significant positive effects.
62 to 80	Negative Very high impact	The anticipated impact will have highly significant effects and are unlikely to be able to be mitigated adequately. These impacts could be considered "fatal flaws".
62 to 80	Positive Very high impact	The anticipated impact will have highly significant positive effects.

The table below is to be represented in the Impact Assessment section of the report. The excel spreadsheet template can be used to complete the Impact Assessment.



Appendix 9D
DFFE External Review Confirmation

Stephan Jacobs

From: Liandra Scott-Shaw
Sent: Wednesday, 15 April 2020 12:11 PM
To: Tarryn Curtis; Kerry Schwartz; Stephan Jacobs
Subject: FW: IQ/20/0121: External Peer Reviewer/ Specialists

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: IQ [mailto:IQ@environment.gov.za]
Sent: Wednesday, 15 April 2020 11:55 AM
To: Liandra Scott-Shaw
Subject: IQ/20/0121: External Peer Reviewer/ Specialists

Dear Liandra

A specialist permanently employed by an EAP is regarded as independent, provided he has no vested interest in the project and receives fair and normal remuneration of the work. In this instance no external peer review of reports is required, unless the competent authority has reason to believe that the EAP or specialist is not complying or has not complied with the requirements of regulation 13 of the EIA regulations, as amended, in respect of the application.

For an example, where an engineering company has a vested interest in the final design or future engineering contracts for a particular project and the in-house EAPs and /or specialists are used for the environmental component of the project, then the EIA and specialist reports must be externally peer reviewed prior to the commencement of the public participation processes.

If there is reasonable suspicion that the objectivity of a specialist may be compromised, then the competent authority has the power to request that an external peer review of that particular study/studies be undertaken in terms of Regulation 14.

Further to the above, all specialists are required to sign a declaration of independence which must be submitted with their reports. Should the specialist is found not to be independent, then the process specified in Regulation 14 would apply, similar to when it relates to an EAP.

Kind regards
Chantal Engelbrect

From: Liandra Scott-Shaw [mailto:LiandraS@sivest.co.za]
Sent: Thursday, 09 April 2020 12:15
To: IQ <IQ@environment.gov.za>
Subject: External Peer Reviewer/ Specialists

Dear IQ

If an EAP uses internal specialists (specialists and EAP from the same company) to undertake specialist work according to Appendix 6 of the Regulations, can the EAP be forced to appoint a peer reviewer and / or external specialist in the absence of Regulation 14 being enforced?

Kind regards

Liandra Scott-Shaw (Pr.Sci.Nat)

Environmental Scientist
SiVEST Environmental Division



SiVEST is a Level 3 BBBEE Contributor

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Appendix 9E
Screening Tool Report

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

EIA Reference number: TBA

Project name: Wildebeestkuil PV

Project title: Wildebeestkuil PV2 Grid Connection

Date screening report generated: 10/03/2021 08:40:18

Applicant: Upgrade Energy

Compiler: SiVEST

Compiler signature:



Application Category: Utilities Infrastructure | Electricity | Distribution and Transmission | Powerline

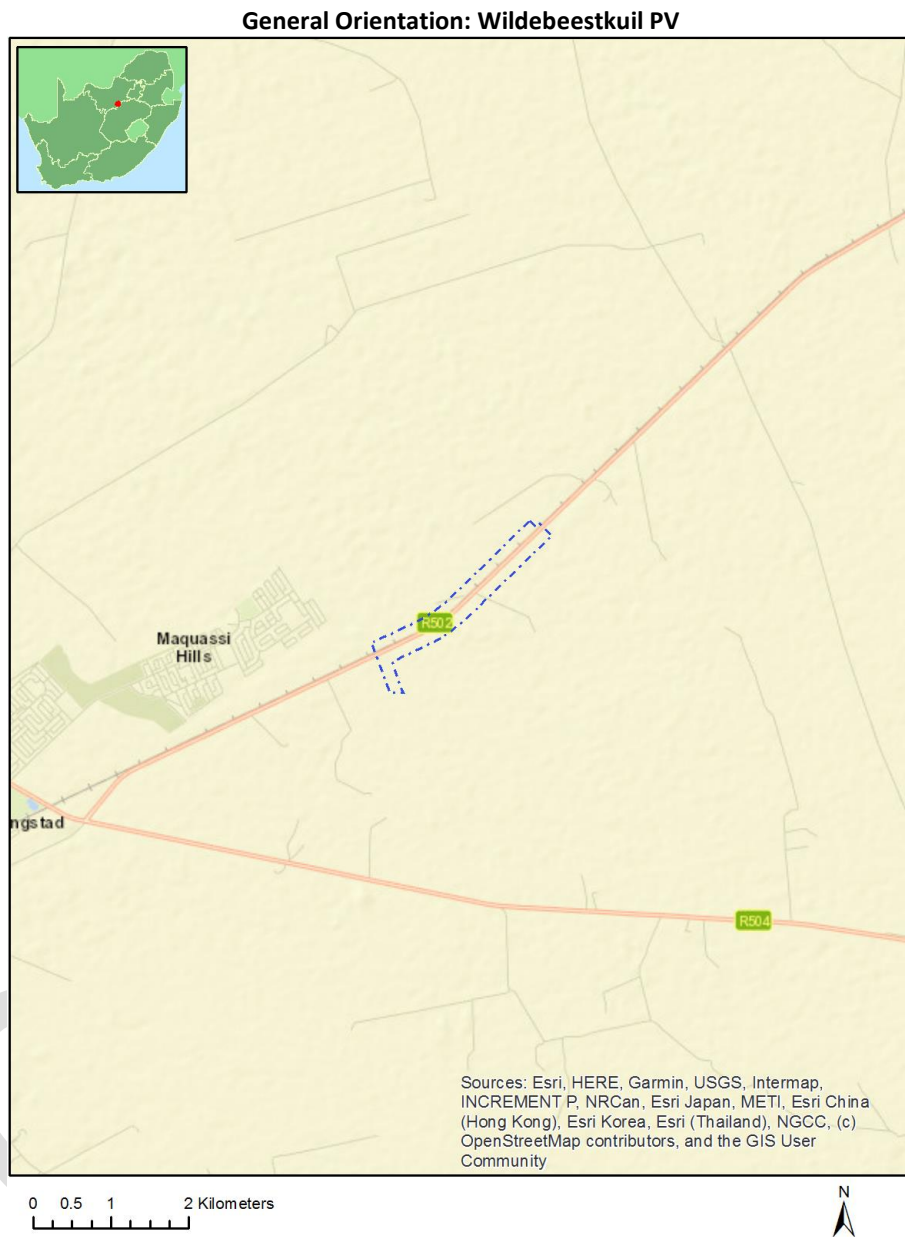


Table of Contents

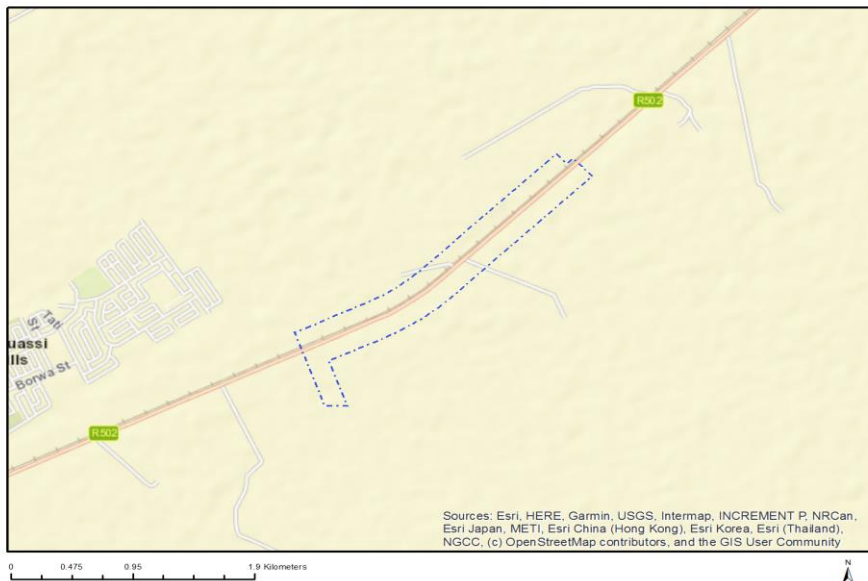
- Proposed Project Location 3
 - Orientation map 1: General location 3
- Map of proposed site and relevant area(s) 4
 - Cadastral details of the proposed site 4
 - Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area 5
 - Environmental Management Frameworks relevant to the application 5
- Environmental screening results and assessment outcomes 5
 - Relevant development incentives, restrictions, exclusions or prohibitions 5
- Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones 6
 - Proposed Development Area Environmental Sensitivity 6
 - 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 CIVIL AVIATION THEME SENSITIVITY 13
 - MAP OF RELATIVE DEFENCE THEME SENSITIVITY 14
 - MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY 15
 - MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY 16
 - MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 17

Proposed Project Location

Orientation map 1: General location



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	LEEUBOSCH	44	0	27°11'27.59S	26°18'45.97E	Farm
2	WILDEBEESTKUIL	59	0	27°14'8.38S	26°16'18.07E	Farm
3	LEEUBOSCH	44	38	27°12'13.43S	26°18'49.9E	Farm Portion
4	WILDEBEESTKUIL	59	5	27°13'11.22S	26°16'40.39E	Farm Portion
5	WILDEBEESTKUIL	59	28	27°13'24.91S	26°16'26.07E	Farm Portion
6	LEEUBOSCH	44	45	27°12'45.93S	26°17'52.3E	Farm Portion
7	WILDEBEESTKUIL	59	13	27°13'28.87S	26°17'13.5E	Farm Portion
8	LEEUBOSCH	44	7	27°12'28.37S	26°17'31.82E	Farm Portion
9	LEEUBOSCH	44	44	27°12'53.07S	26°17'40.76E	Farm Portion
10	LEEUBOSCH	44	36	27°12'51.14S	26°17'34.54E	Farm Portion
11	WILDEBEESTKUIL	59	14	27°13'10.59S	26°17'11.79E	Farm Portion
12	LEEUBOSCH	44	29	27°12'41.76S	26°18'31.02E	Farm Portion
13	LEEUBOSCH	44	35	27°13'5.87S	26°18'5.22E	Farm Portion
14	LEEUBOSCH	44	37	27°12'10.08S	26°18'15.54E	Farm Portion
15	LEEUBOSCH	44	43	27°12'40.4S	26°17'58.17E	Farm Portion
16	LEEUBOSCH	44	42	27°12'12.87S	26°18'30.29E	Farm Portion

Development footprint¹ vertices:
No development footprint(s) specified.

¹ "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.

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	14/12/16/3/3/1/1519	Solar PV	Approved	8.6

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 | Distribution and Transmission | Powerline.

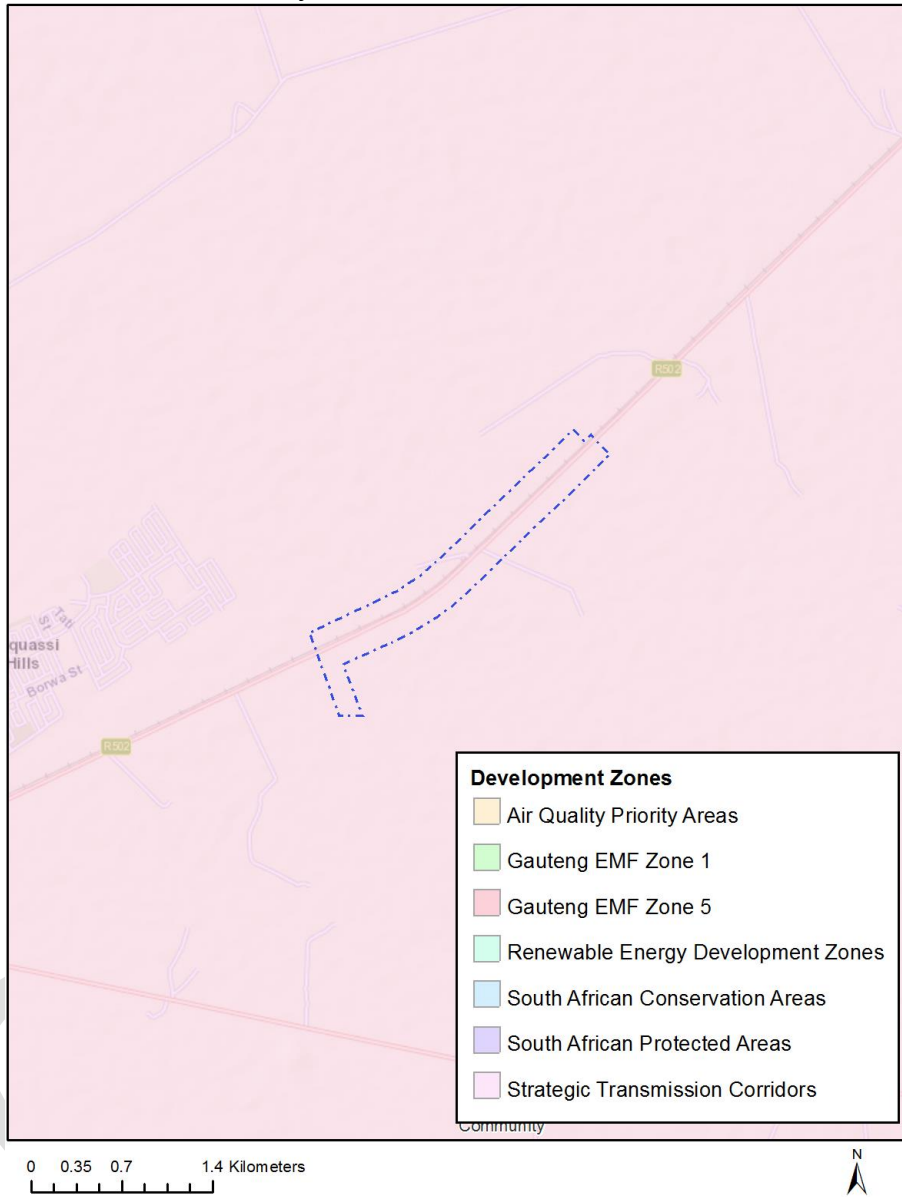
Relevant development incentives, restrictions, exclusions or prohibitions

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

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN11316February2018.pdf

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

Project Location: Wildebeestkuil PV



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
Civil Aviation Theme				X
Defence Theme				X
Paleontology Theme			X	
Plant Species 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.

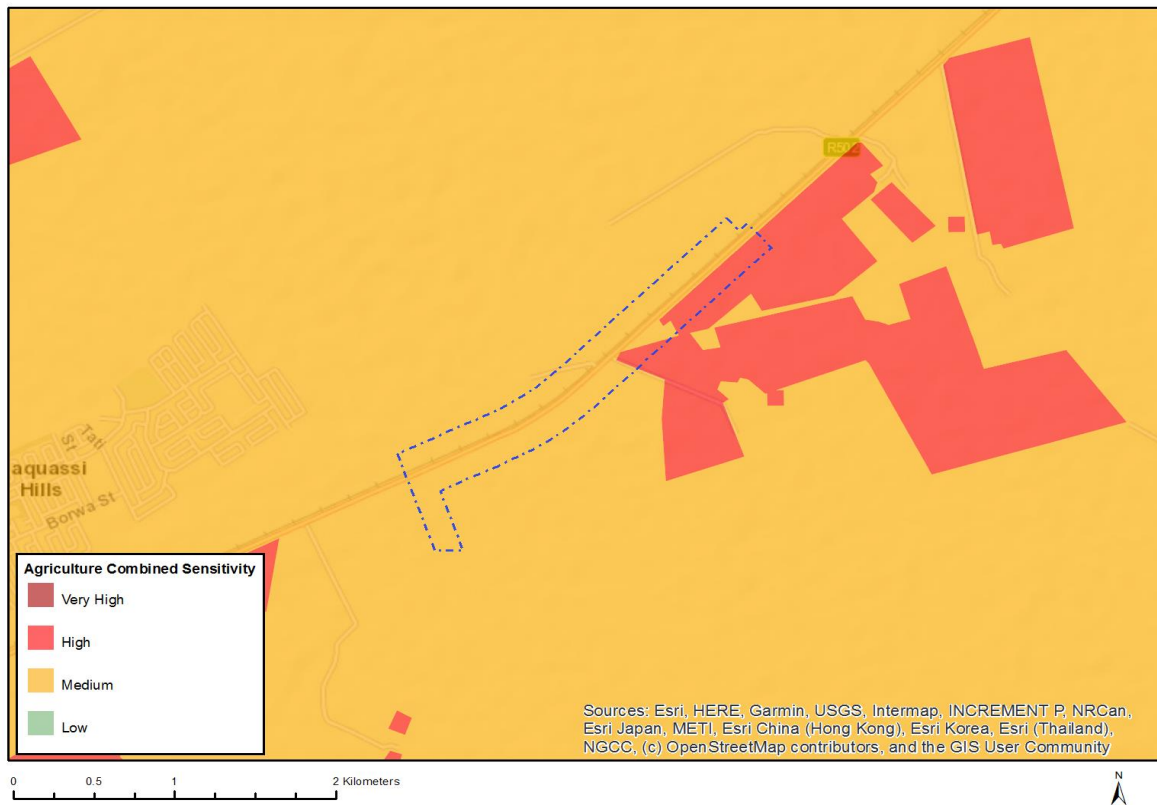
N o	Special ist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.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	RFI Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
12	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

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

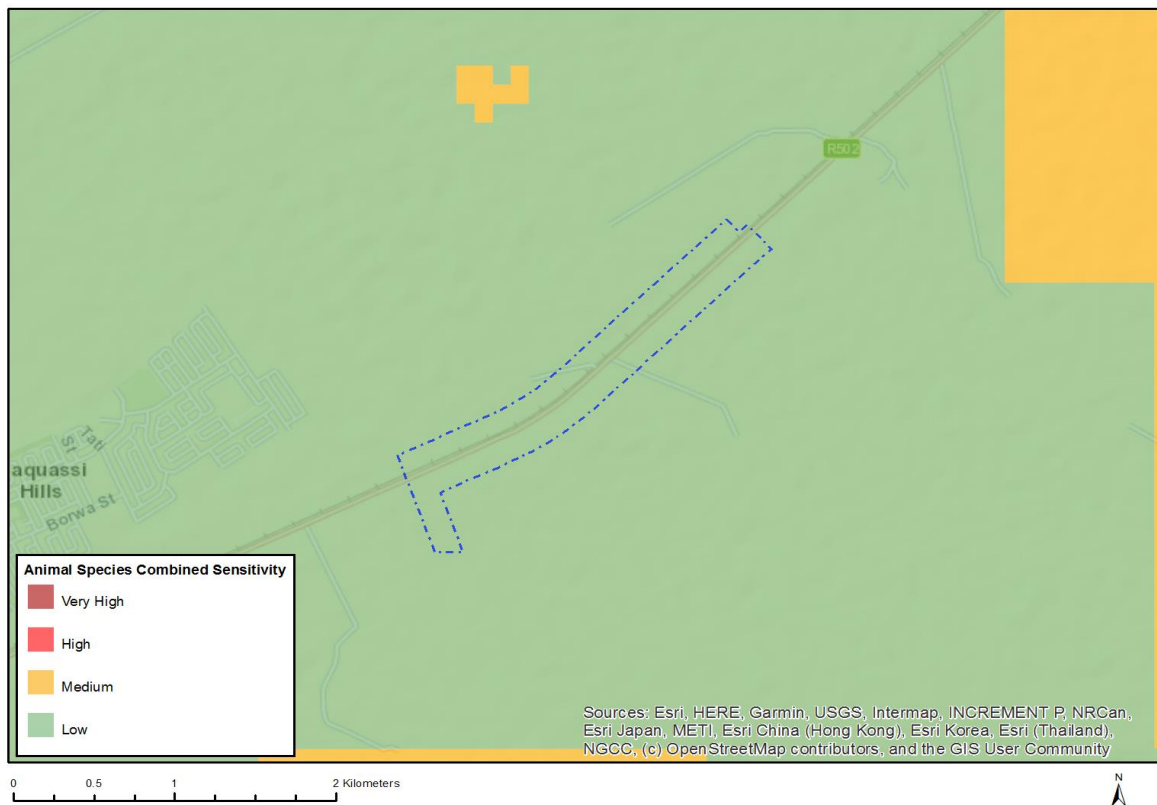


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Annual Crop Cultivation / Planted Pastures Rotation; Land capability; 06. Low-Moderate/07. Low-Moderate/08. Moderate
Medium	Land capability; 06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



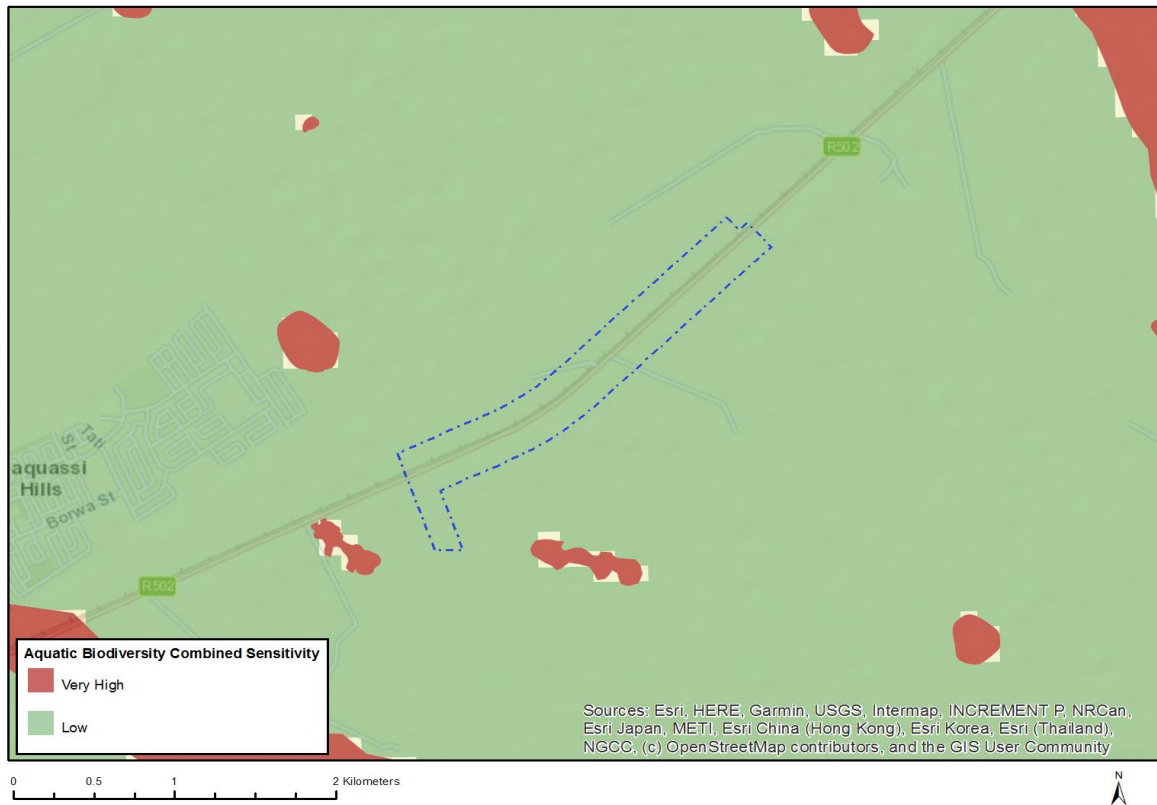
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their 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)
Low	Low sensitivity

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

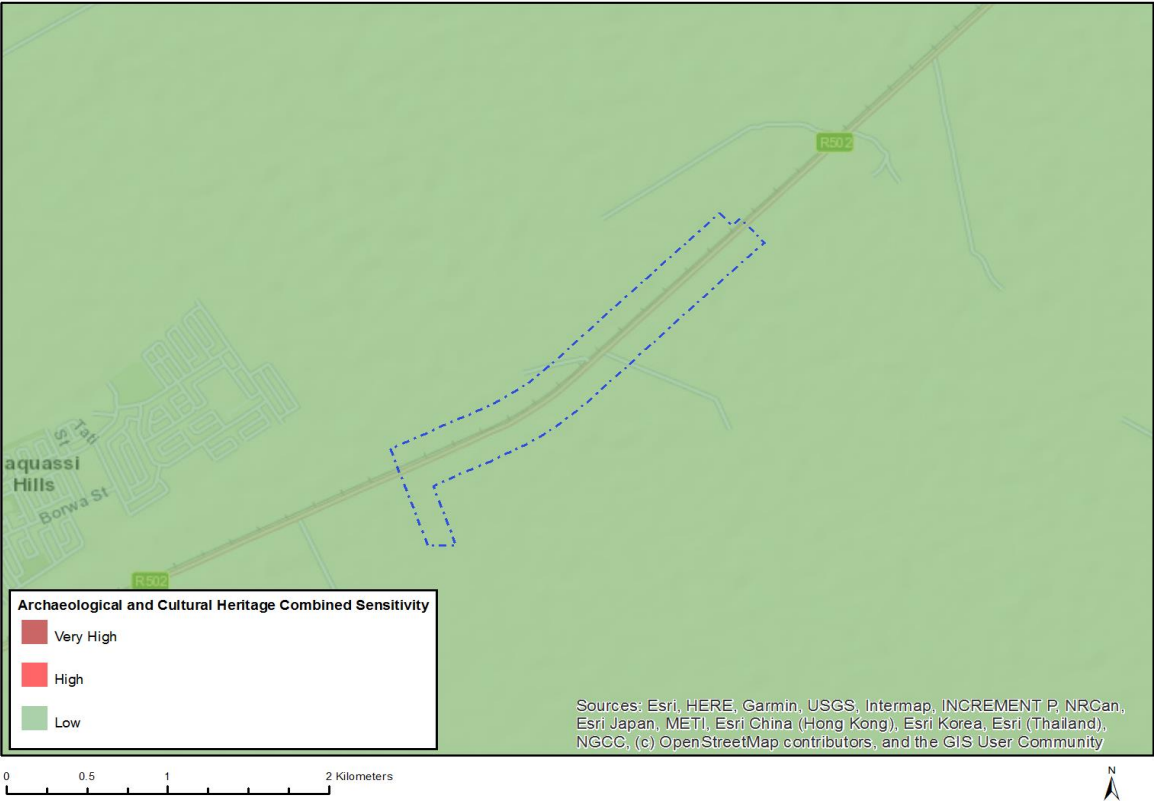


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

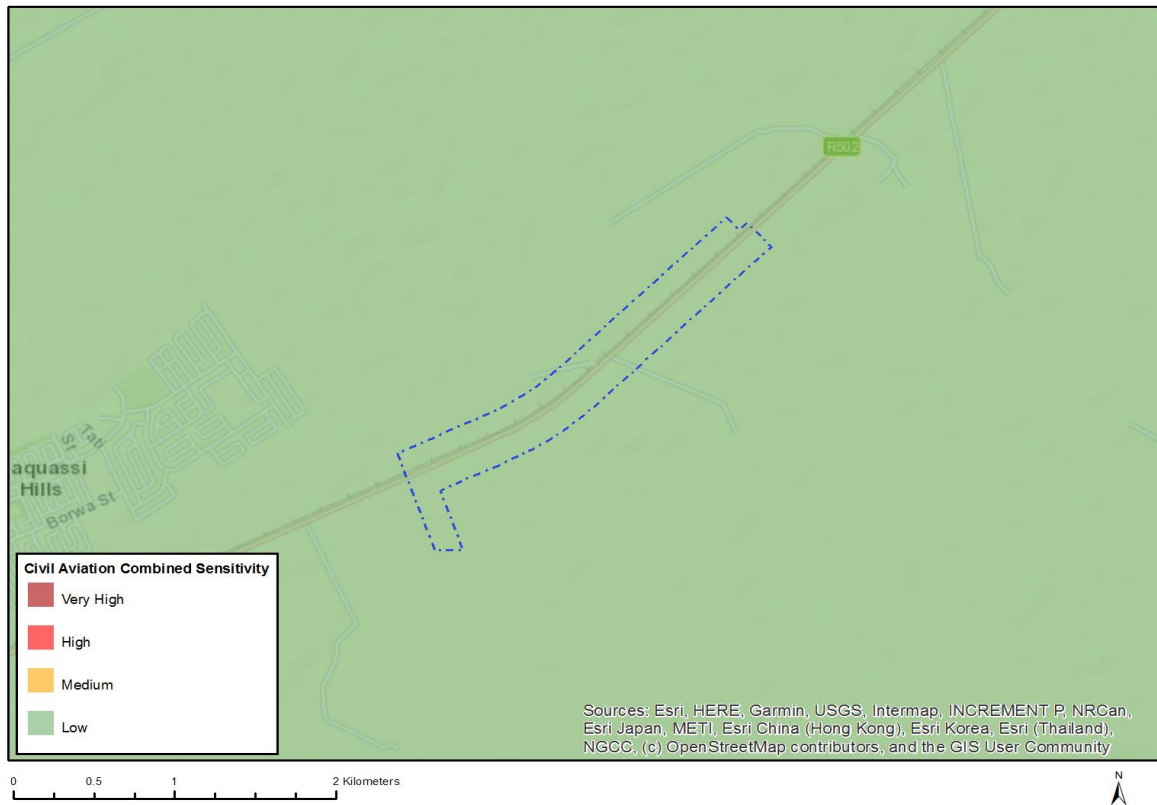


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

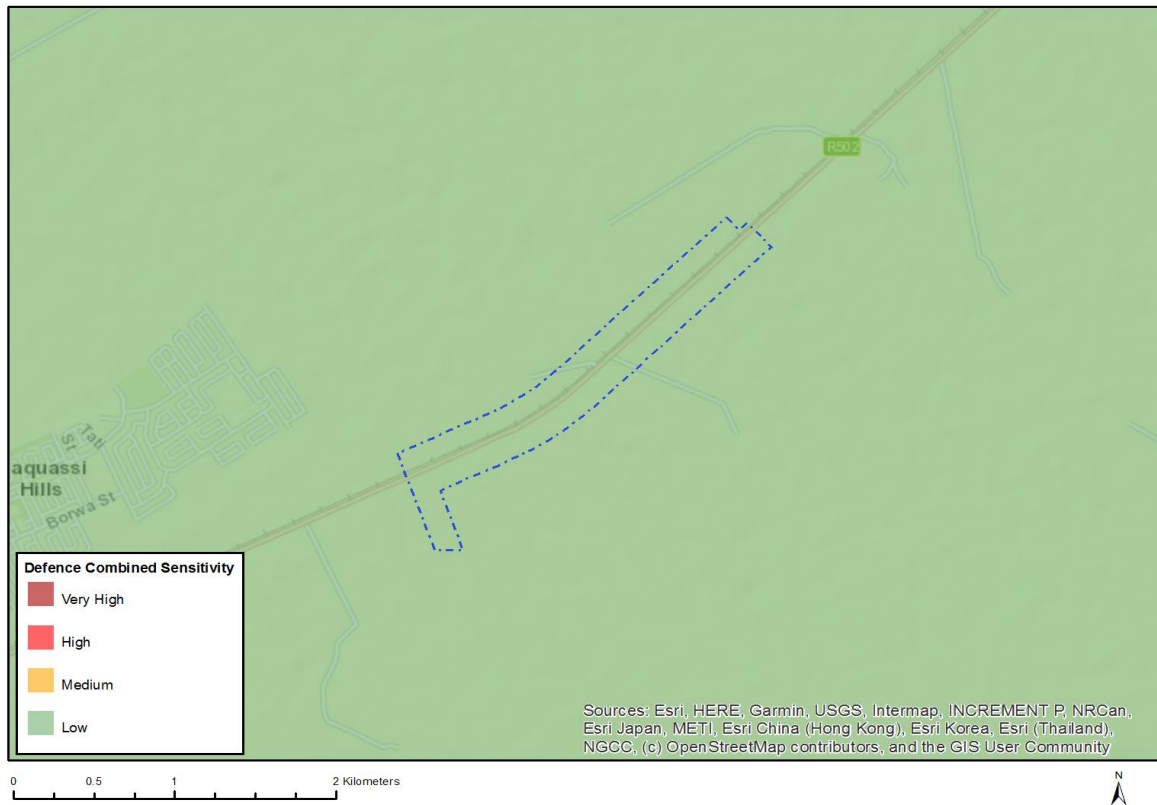


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

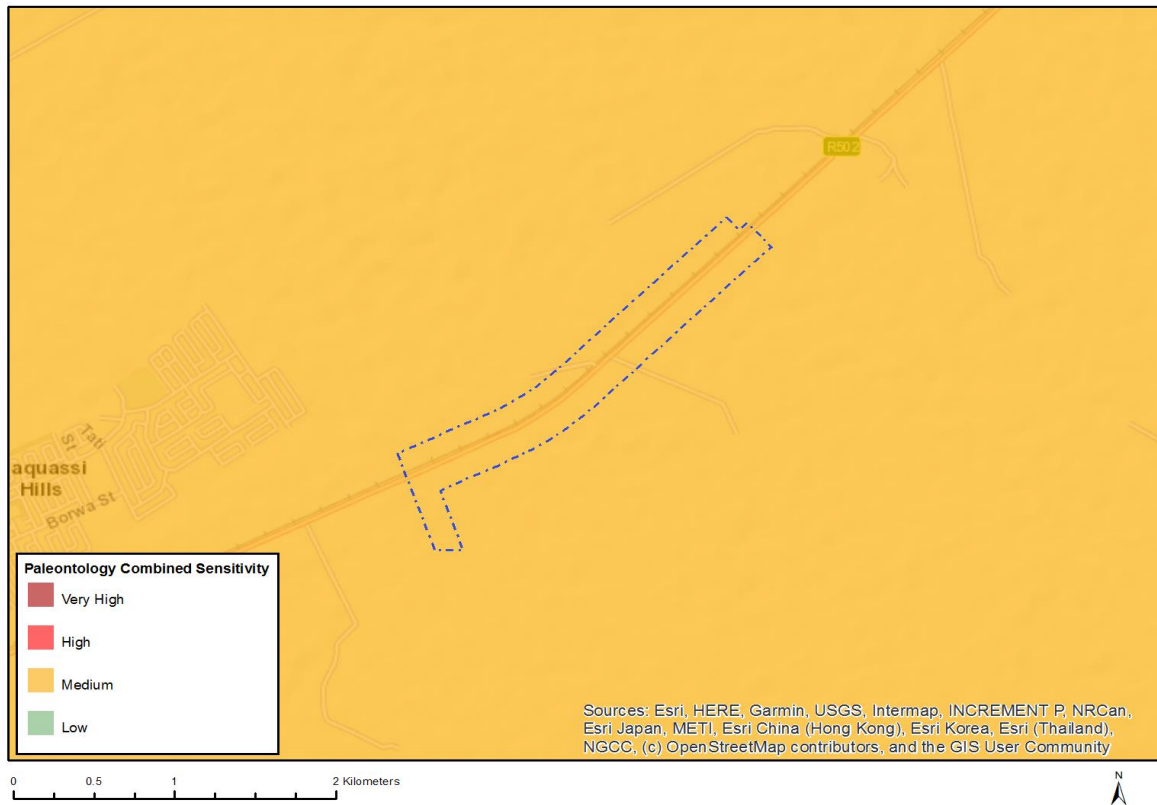


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

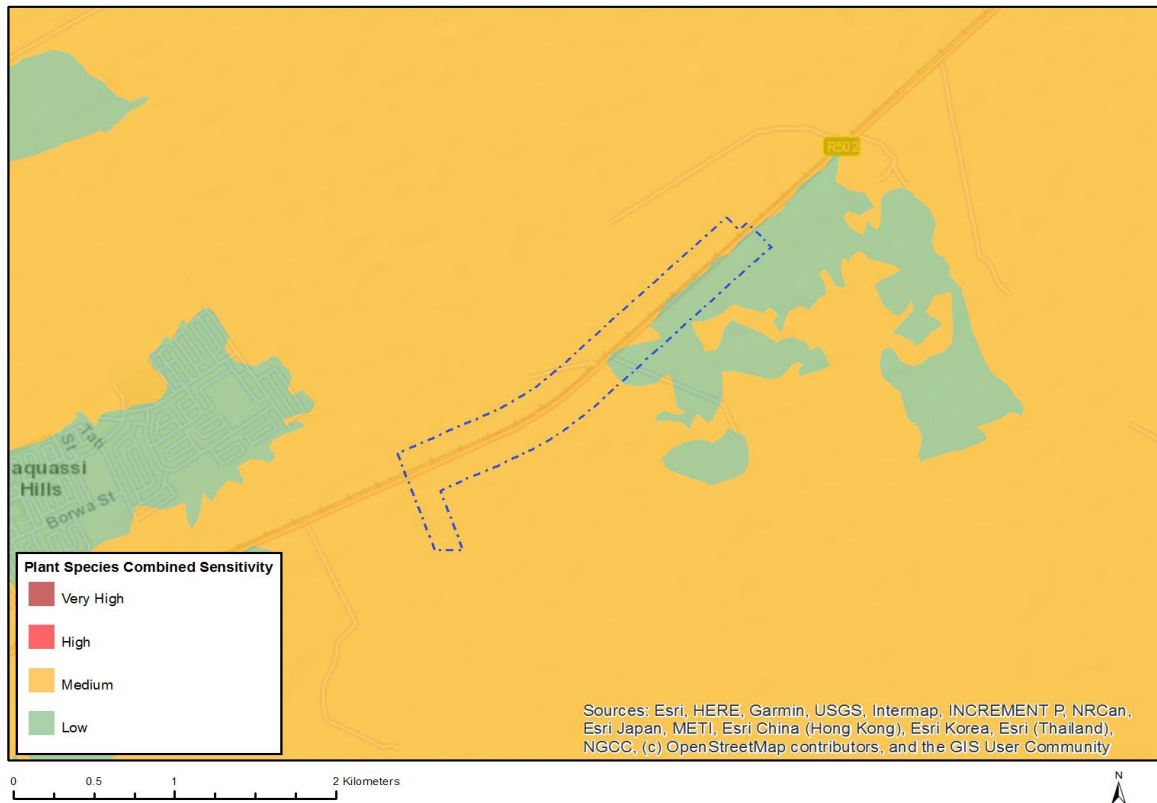


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

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

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



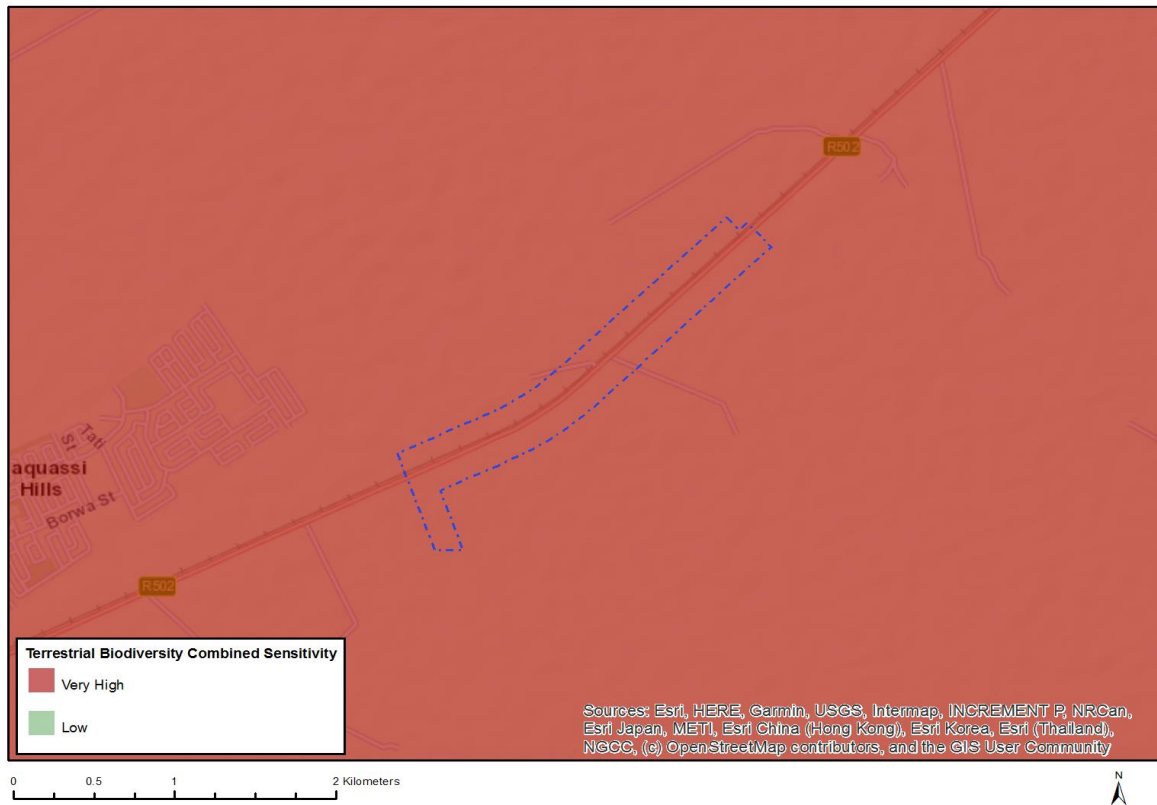
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their 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 1261

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Ecological Support Area 1
Very High	Ecological Support Area 2
Very High	Endangered ecosystem

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

EIA Reference number: TBA

Project name: Wildebeestkuil PV

Project title: Wildebeestkuil PV2

Date screening report generated: 10/03/2021 07:49:58

Applicant: Upgrade Energy

Compiler: SiVEST

Compiler signature:



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

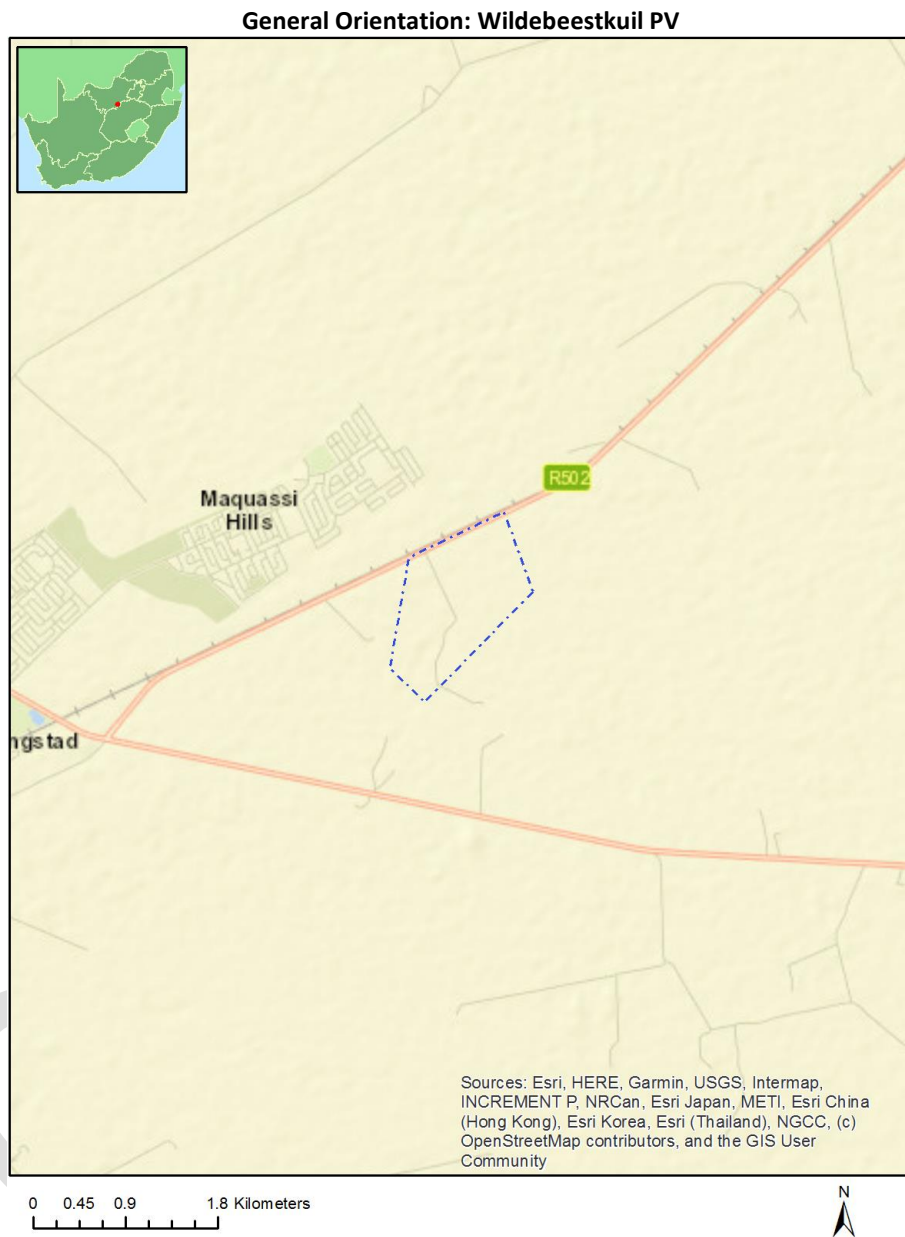


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 - Environmental Management Frameworks relevant to the application 5
- Environmental screening results and assessment outcomes 5
 - Relevant development incentives, restrictions, exclusions or prohibitions 5
- Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones 6
 - Proposed Development Area Environmental Sensitivity 6
 - 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
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 - MAP OF RELATIVE DEFENCE THEME SENSITIVITY 16
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 - MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 21

Proposed Project Location

Orientation map 1: General location



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	WILDEBEESTKUIL	59	0	27°14'8.38S	26°16'18.07E	Farm
2	WILDEBEESTKUIL	59	22	27°13'31.02S	26°16'56.59E	Farm Portion
3	WILDEBEESTKUIL	59	13	27°13'28.87S	26°17'13.5E	Farm Portion
4	WILDEBEESTKUIL	59	14	27°13'10.59S	26°17'11.79E	Farm Portion

Development footprint¹ 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	14/12/16/3/3/1/1519	Solar PV	Approved	11.2

¹ "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.

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:

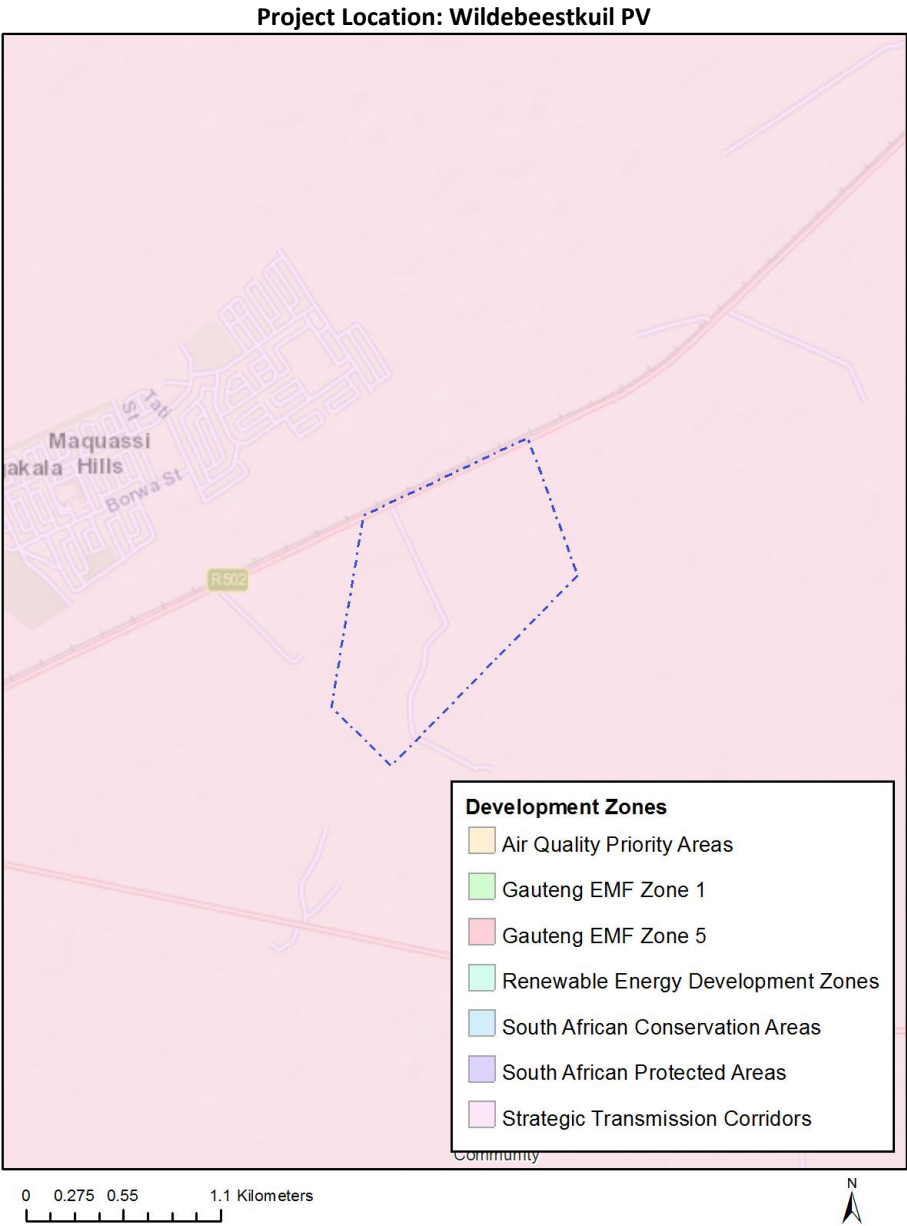
Utilities Infrastructure | Electricity | Generation | Renewable | Solar | PV.

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.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN 113 16 February 2018.pdf

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



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 Theme		X		
Bats 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.

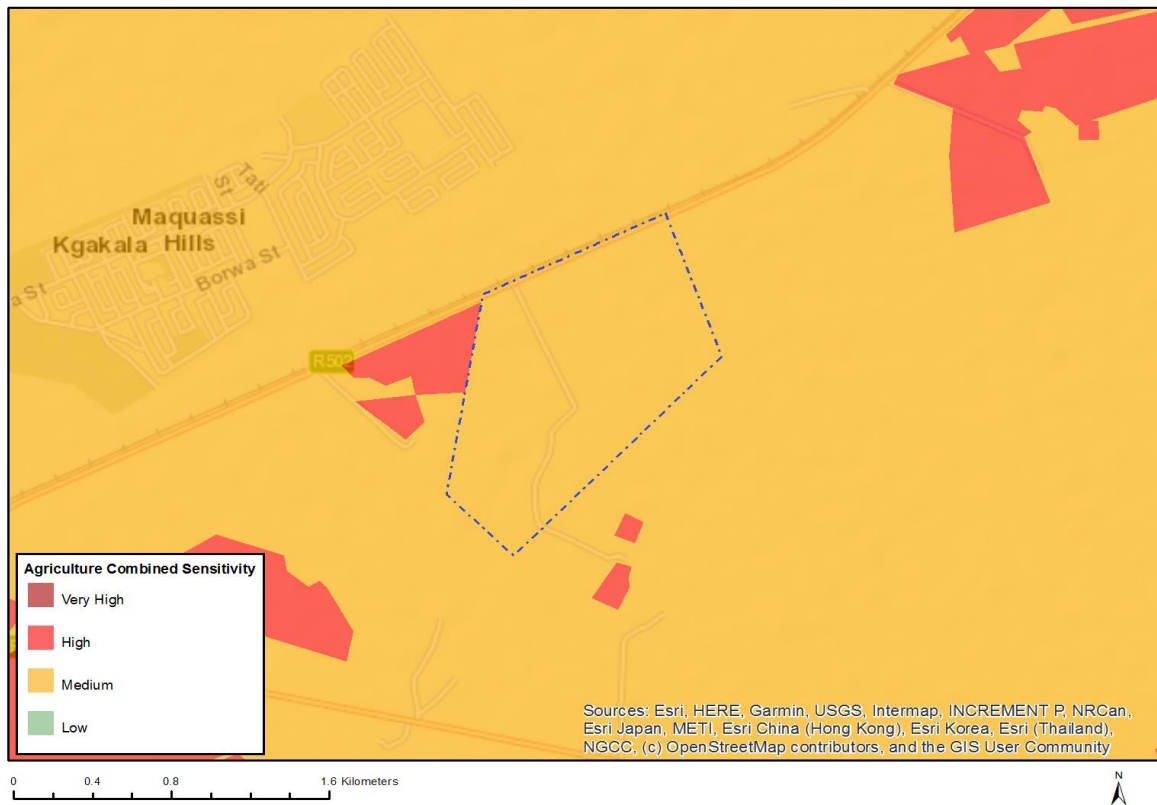
N o	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_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	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf

	sity Impact Assessment	/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	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
12	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
13	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf
14	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf

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

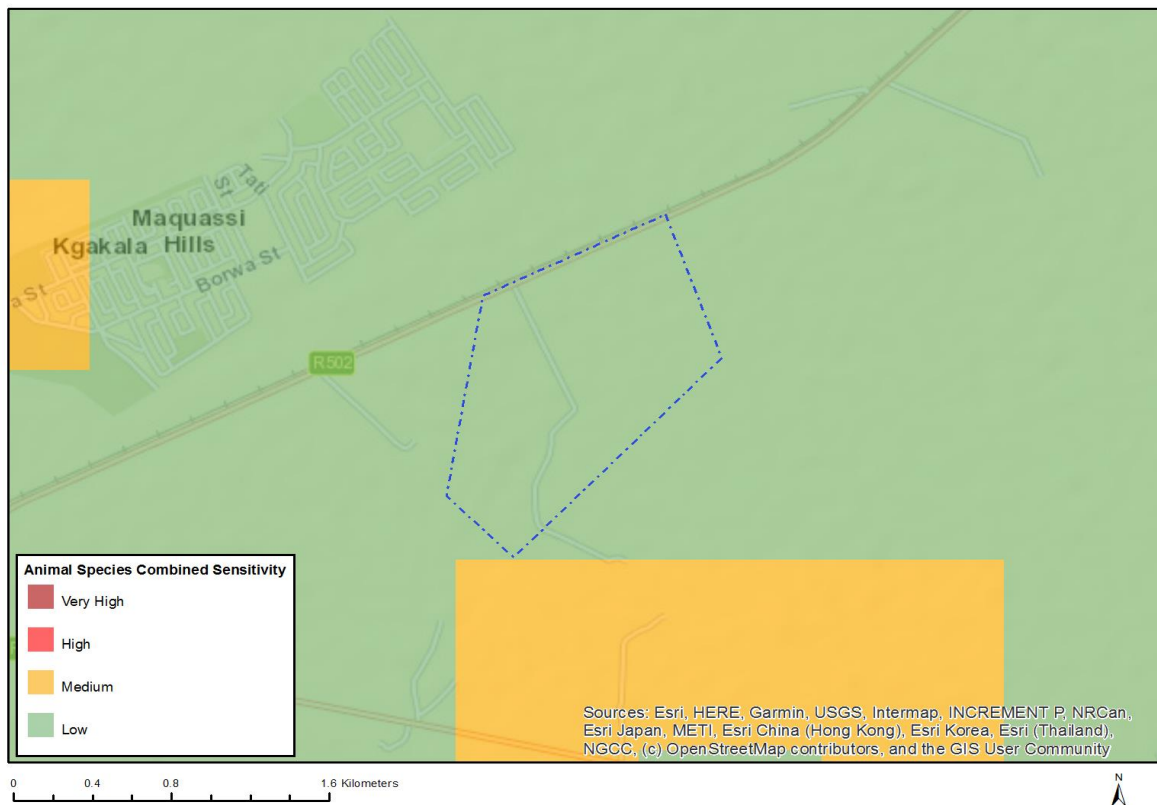


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



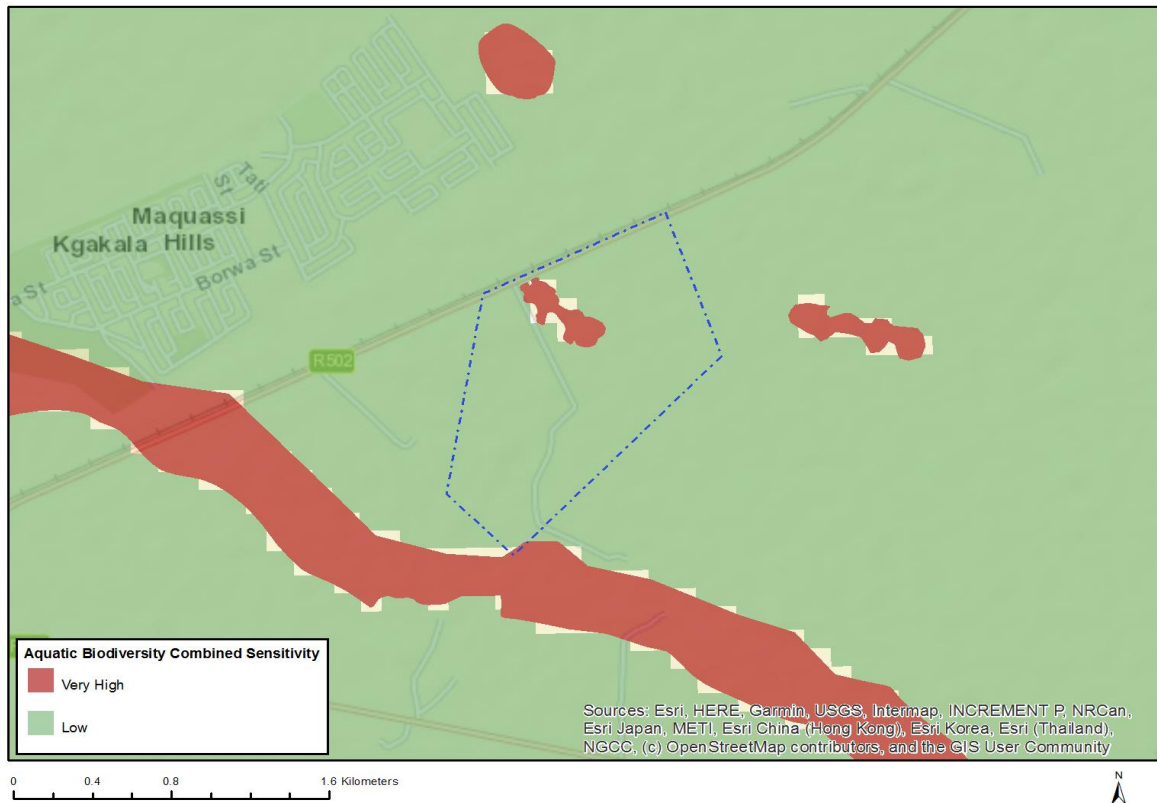
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their 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)
Low	Low sensitivity

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

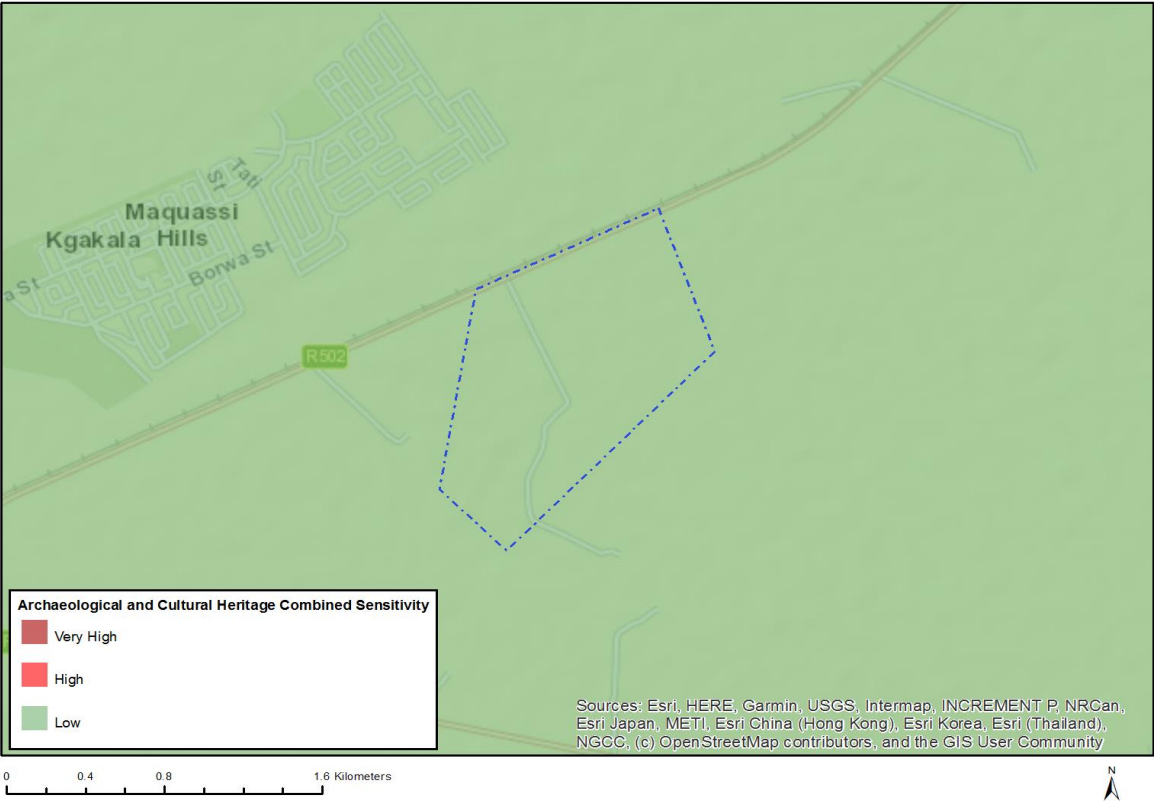


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Aquatic CBAs
Very High	Wetlands and Estuaries

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

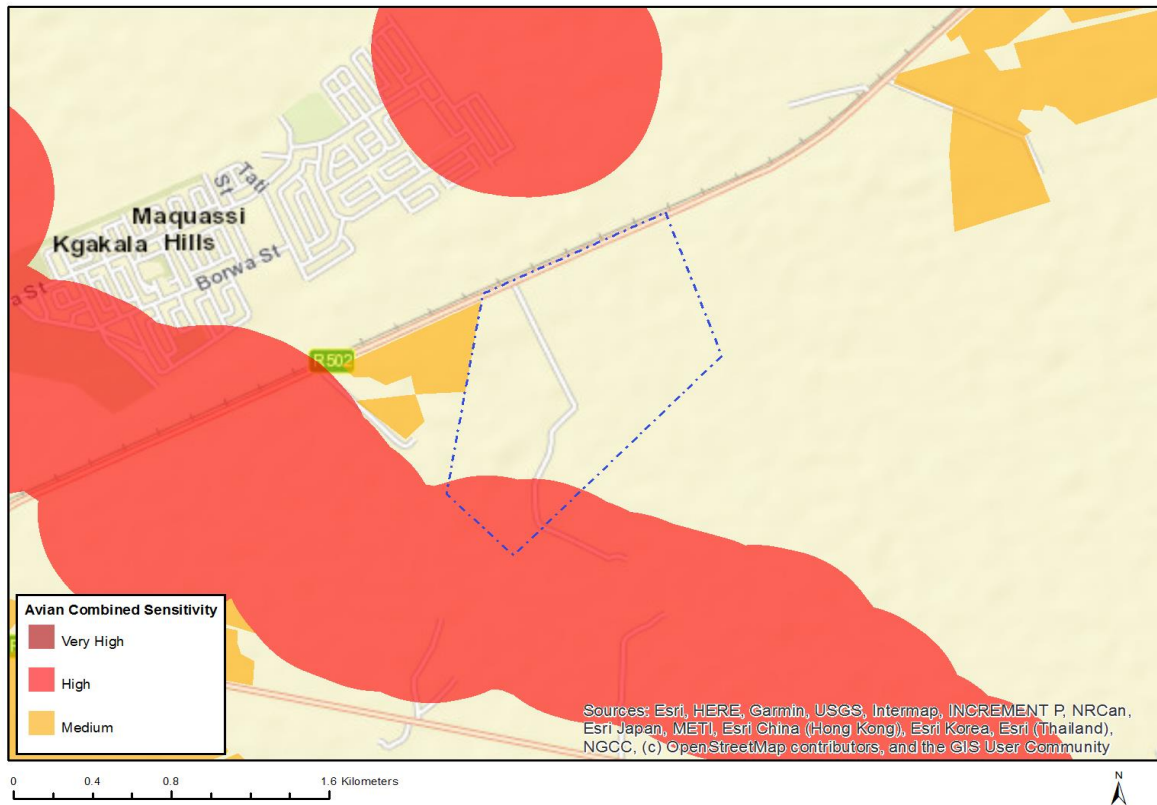


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE AVIAN THEME SENSITIVITY

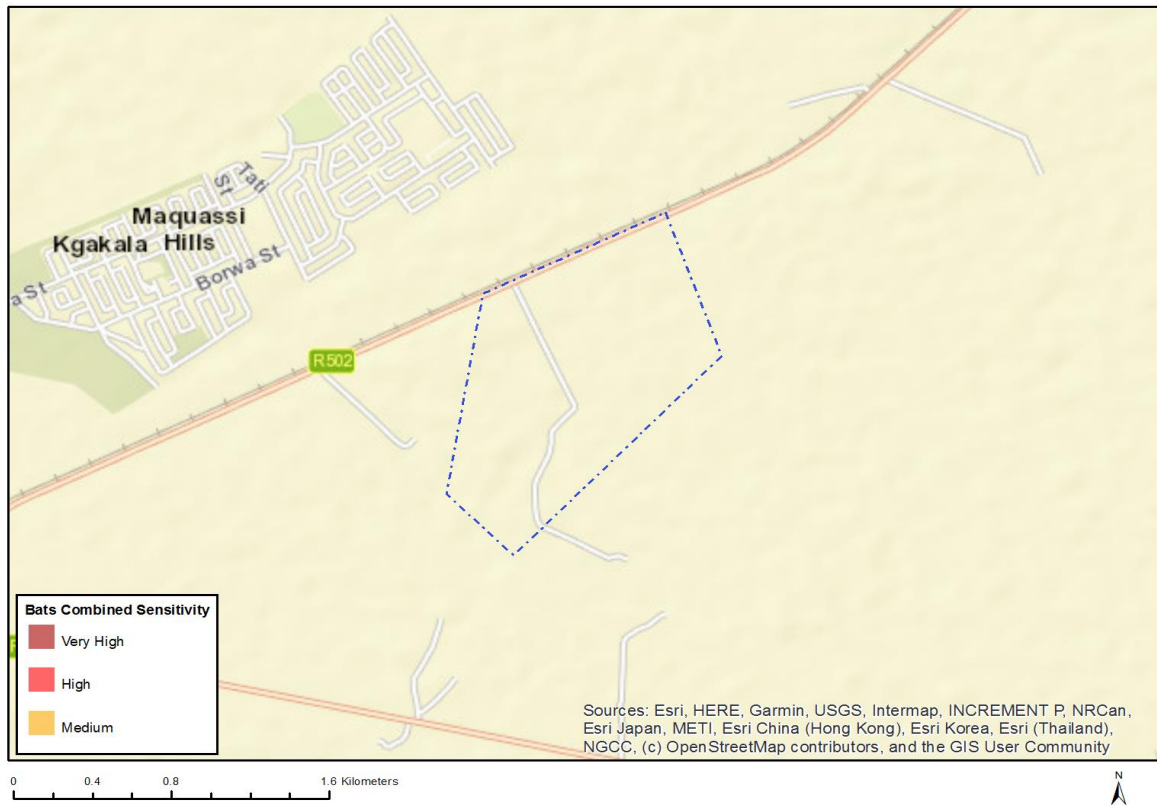


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 500 m of a river

MAP OF RELATIVE BATS THEME SENSITIVITY

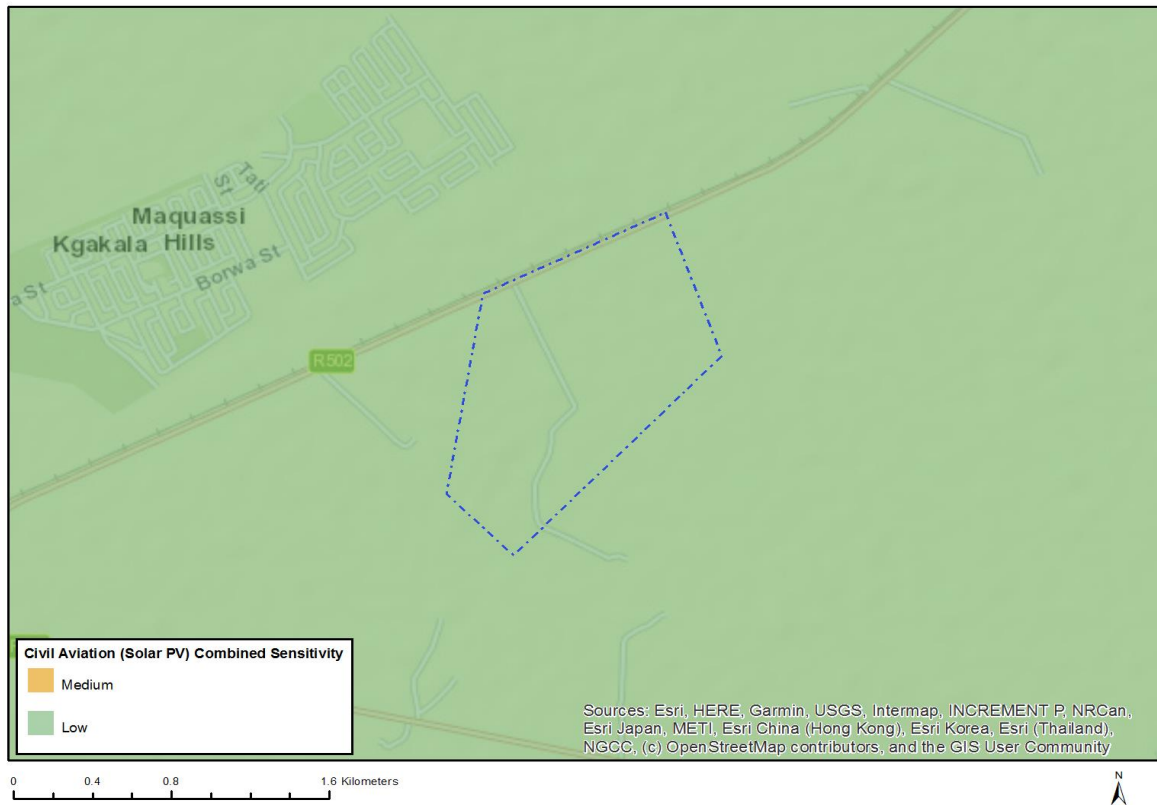


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION (SOLAR PV) THEME SENSITIVITY

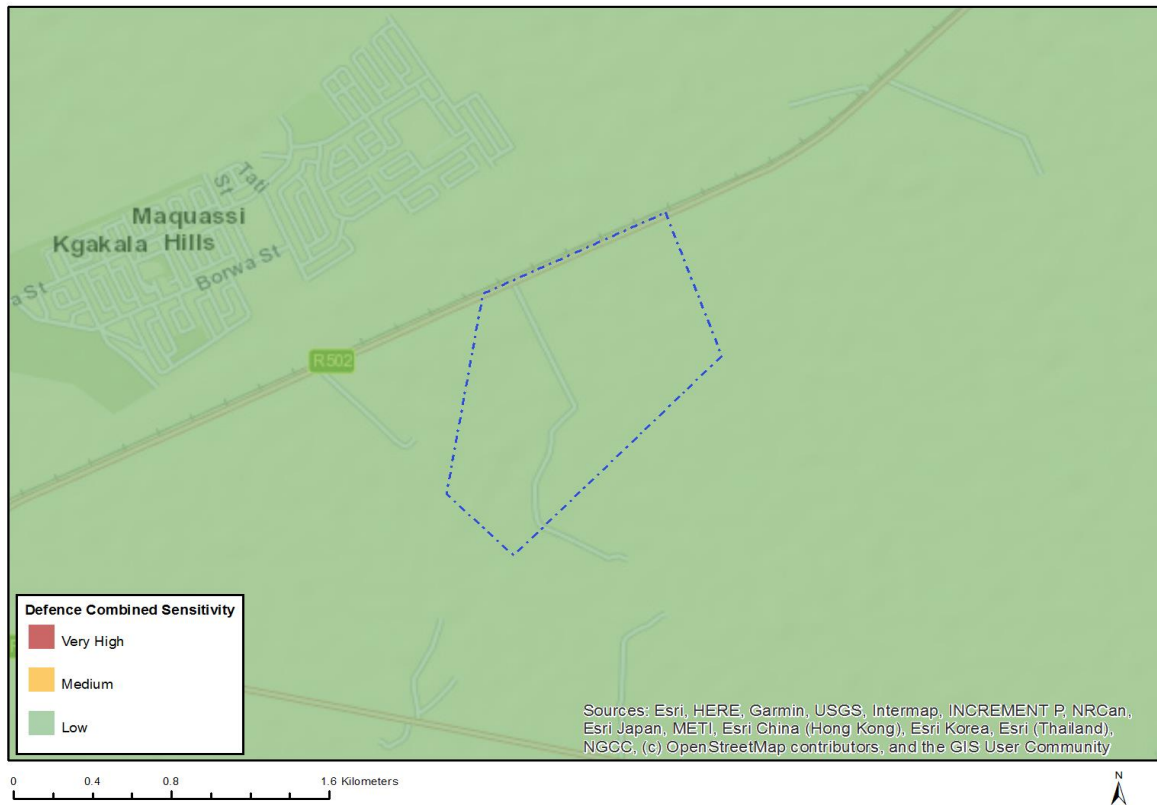


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

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

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

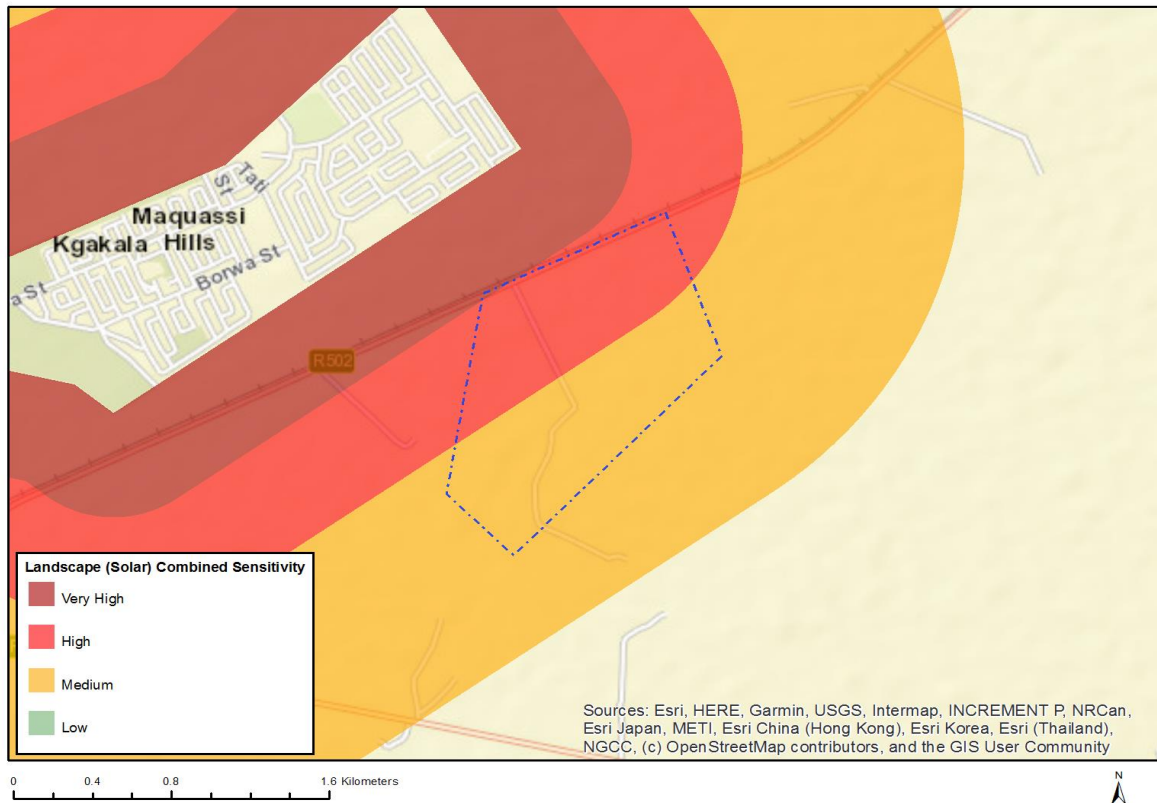


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE LANDSCAPE (SOLAR) THEME SENSITIVITY

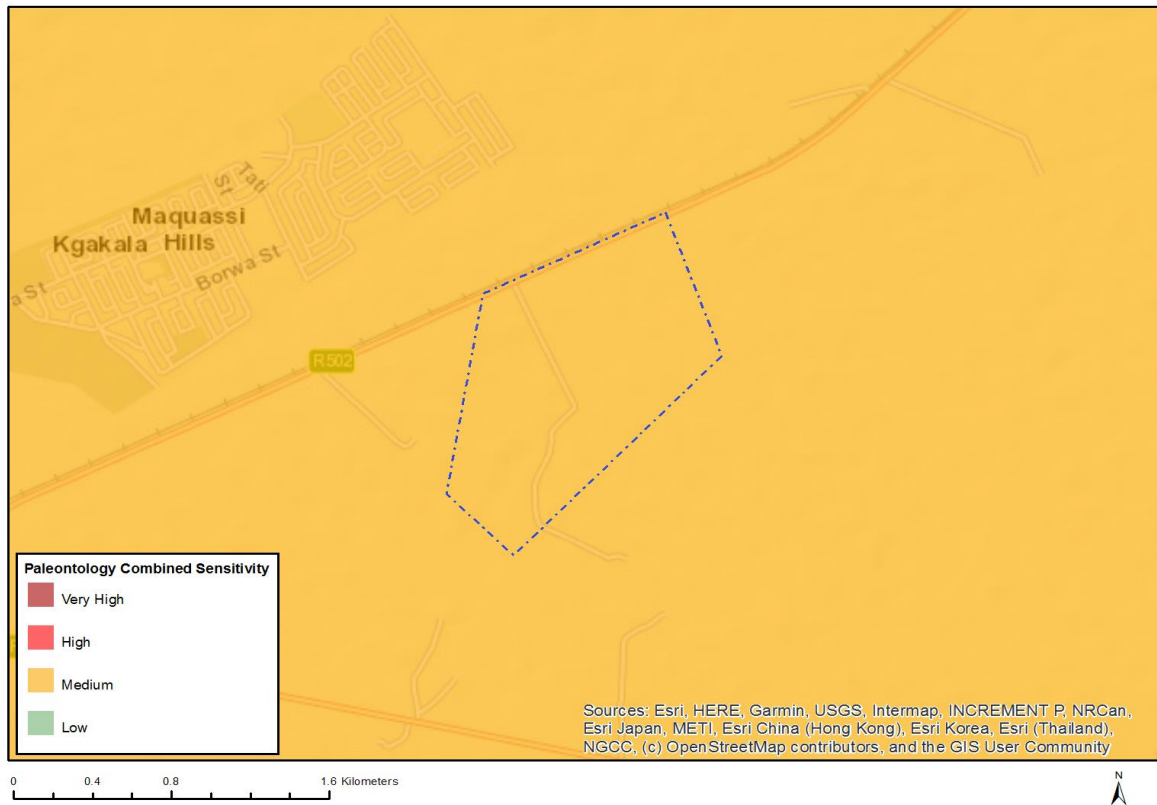


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
High	Between 500 and 1000 m of a town or village
Medium	Between a and 2 km of a town or village
Very High	Within 500 m of a town or village

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

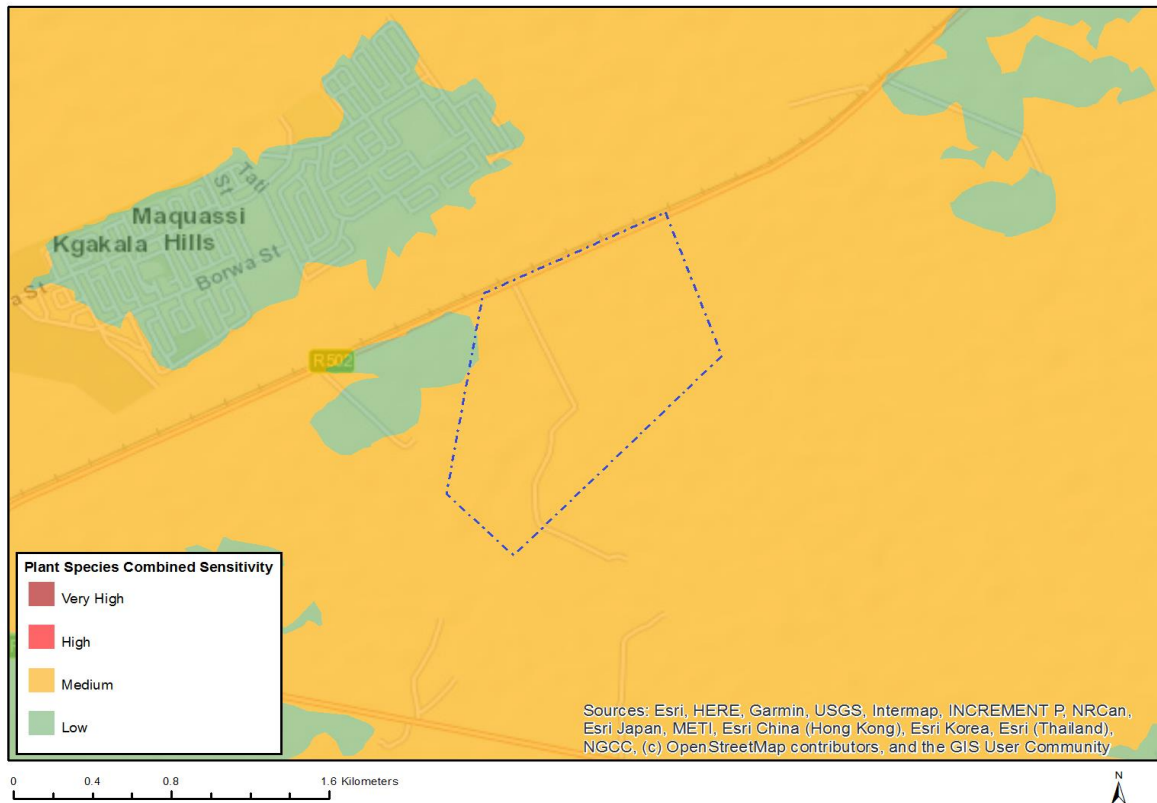


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

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

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



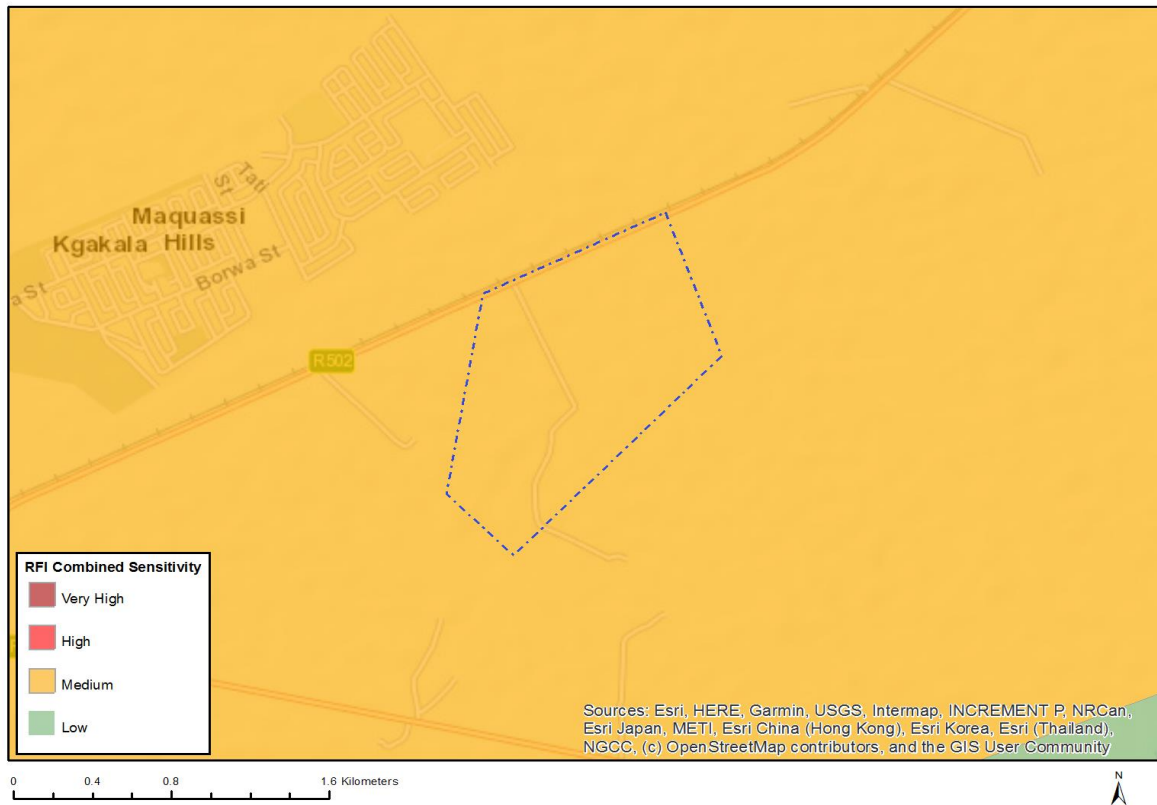
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Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1261

MAP OF RELATIVE RFI THEME SENSITIVITY

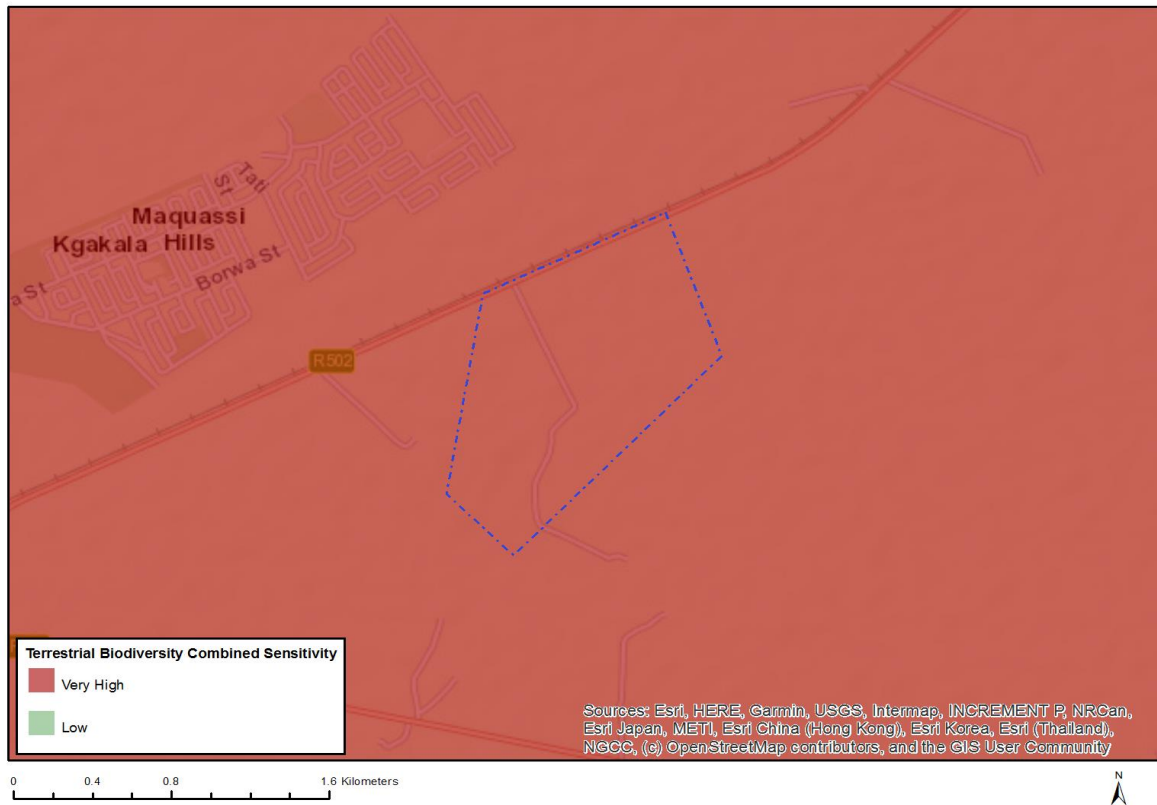


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
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)
Very High	Endangered ecosystem

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

EIA Reference number: TBA

Project name: Wildebeestkuil PV

Project title: Wildebeestkuil PV2 Switching Substation

Date screening report generated: 10/03/2021 09:37:09

Applicant: Upgrade Energy

Compiler: SiVEST

Compiler signature:



Application Category: Utilities Infrastructure | Electricity | Distribution and
Transmission | Substation

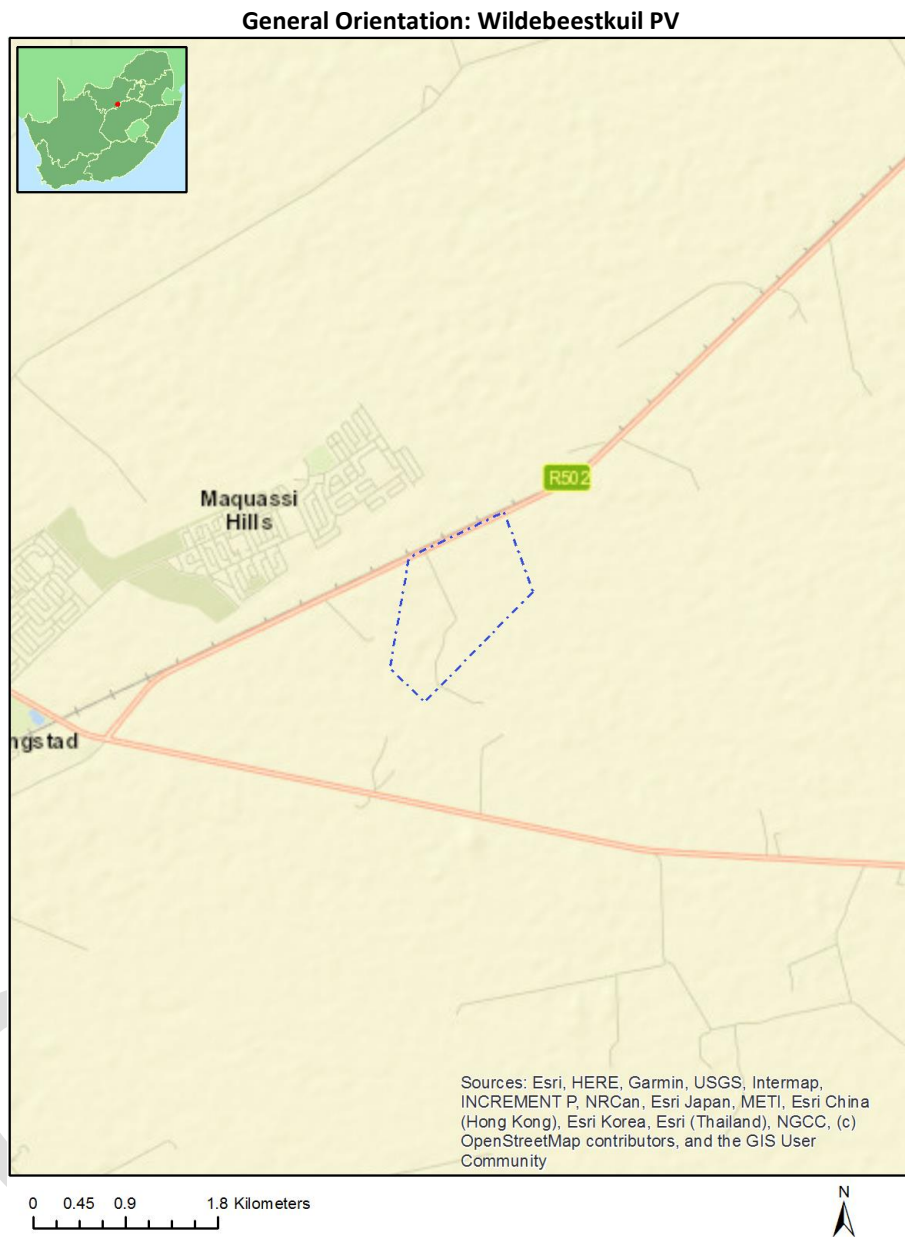


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 - MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY 15
 - MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY 16
 - MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY 17

Proposed Project Location

Orientation map 1: General location



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	WILDEBEESTKUIL	59	0	27°14'8.38S	26°16'18.07E	Farm
2	WILDEBEESTKUIL	59	22	27°13'31.02S	26°16'56.59E	Farm Portion
3	WILDEBEESTKUIL	59	14	27°13'10.59S	26°17'11.79E	Farm Portion
4	WILDEBEESTKUIL	59	13	27°13'28.87S	26°17'13.5E	Farm Portion

Development footprint¹ 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	14/12/16/3/3/1/1519	Solar PV	Approved	11.2

¹ “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.

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:

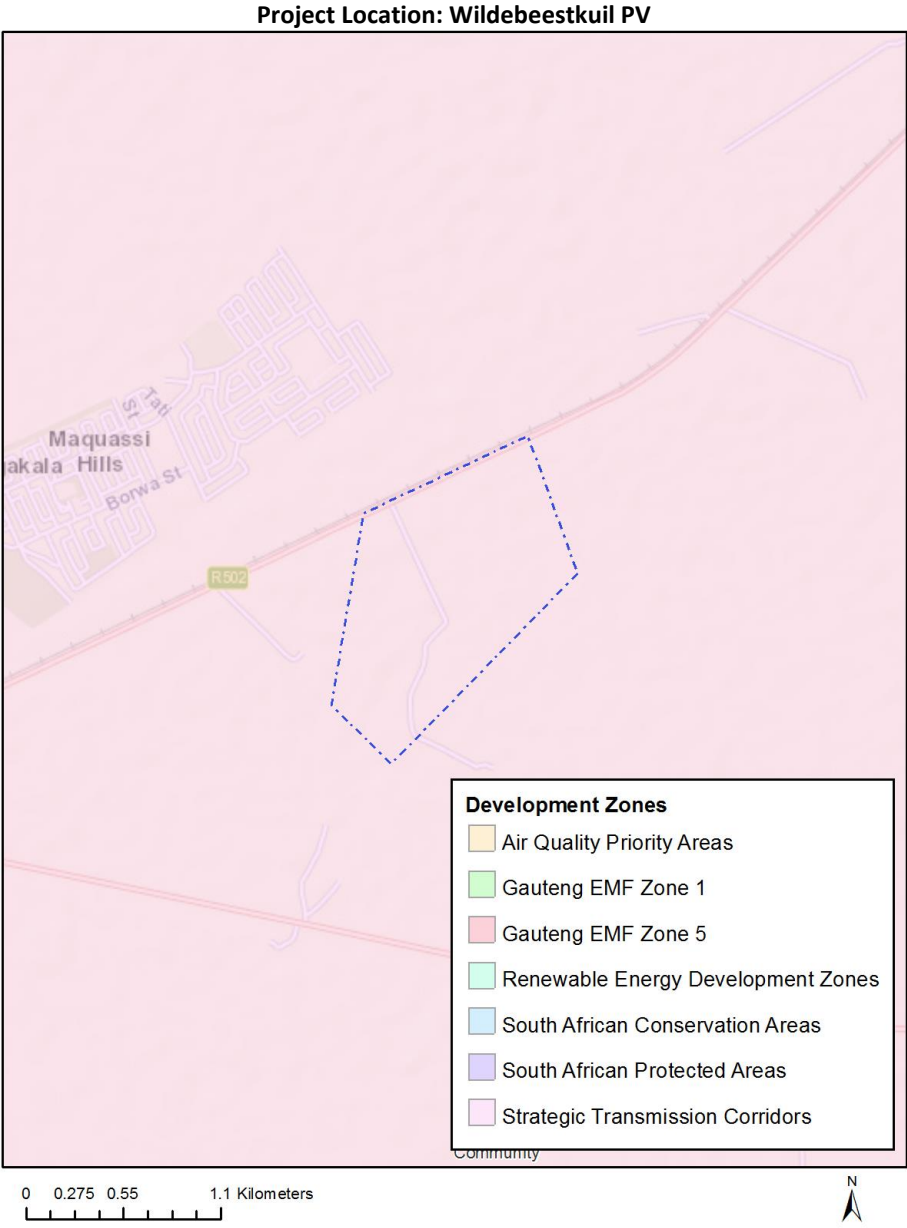
Utilities Infrastructure | Electricity | Distribution and Transmission | Substation.

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
Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN 113 16 February 2018.pdf

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



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
Civil Aviation Theme				X
Defence Theme				X
Paleontology Theme			X	
Plant Species 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.

No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Geotechnical Assess	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

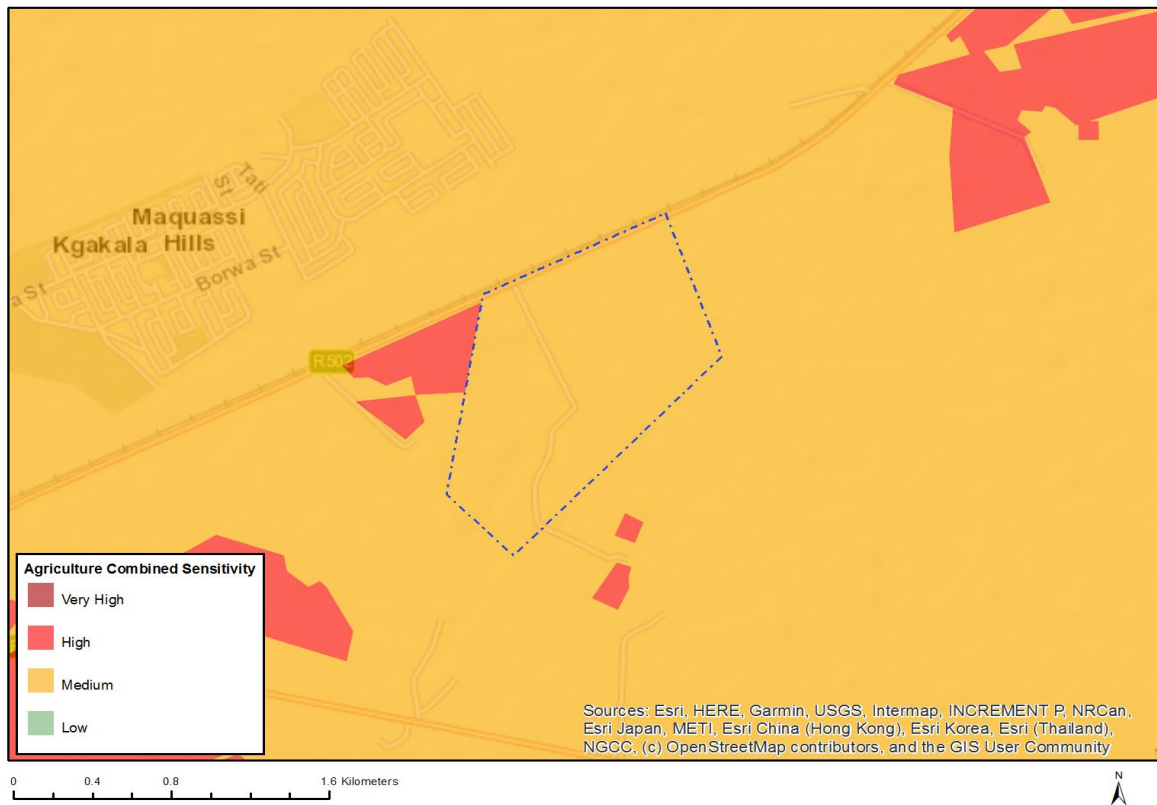
	ment	
7	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
8	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

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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

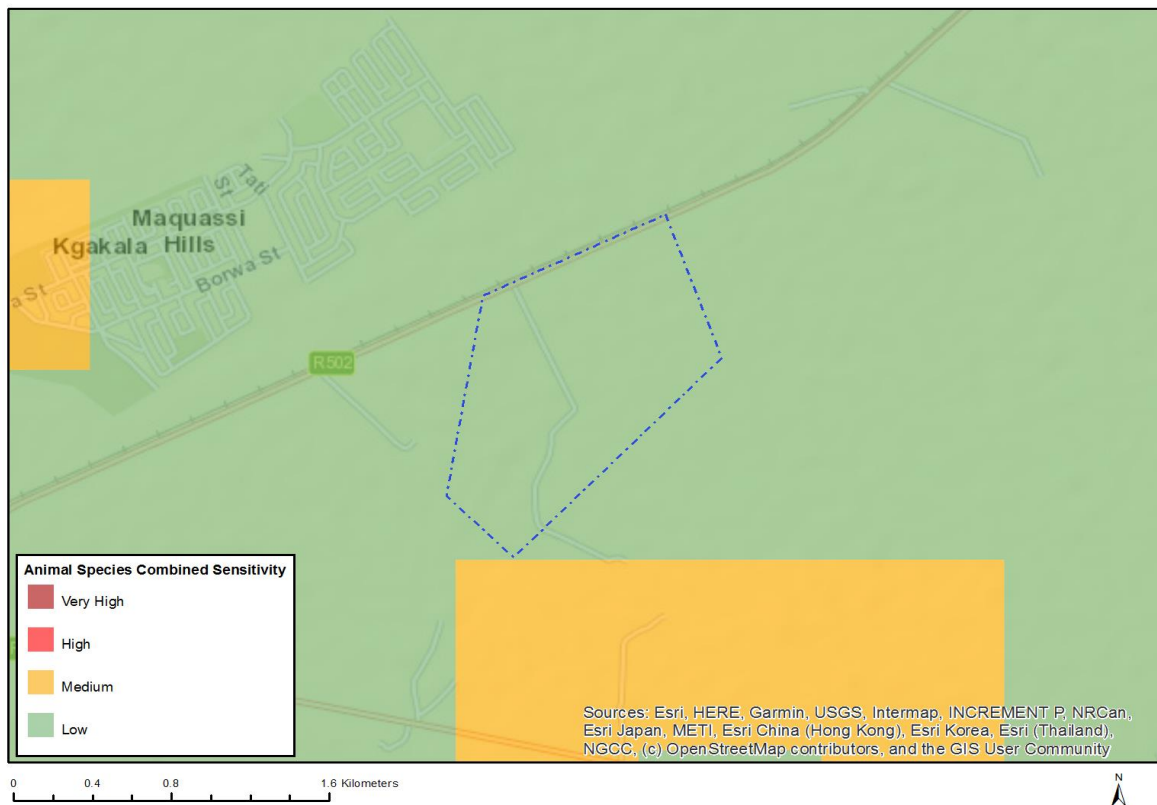


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



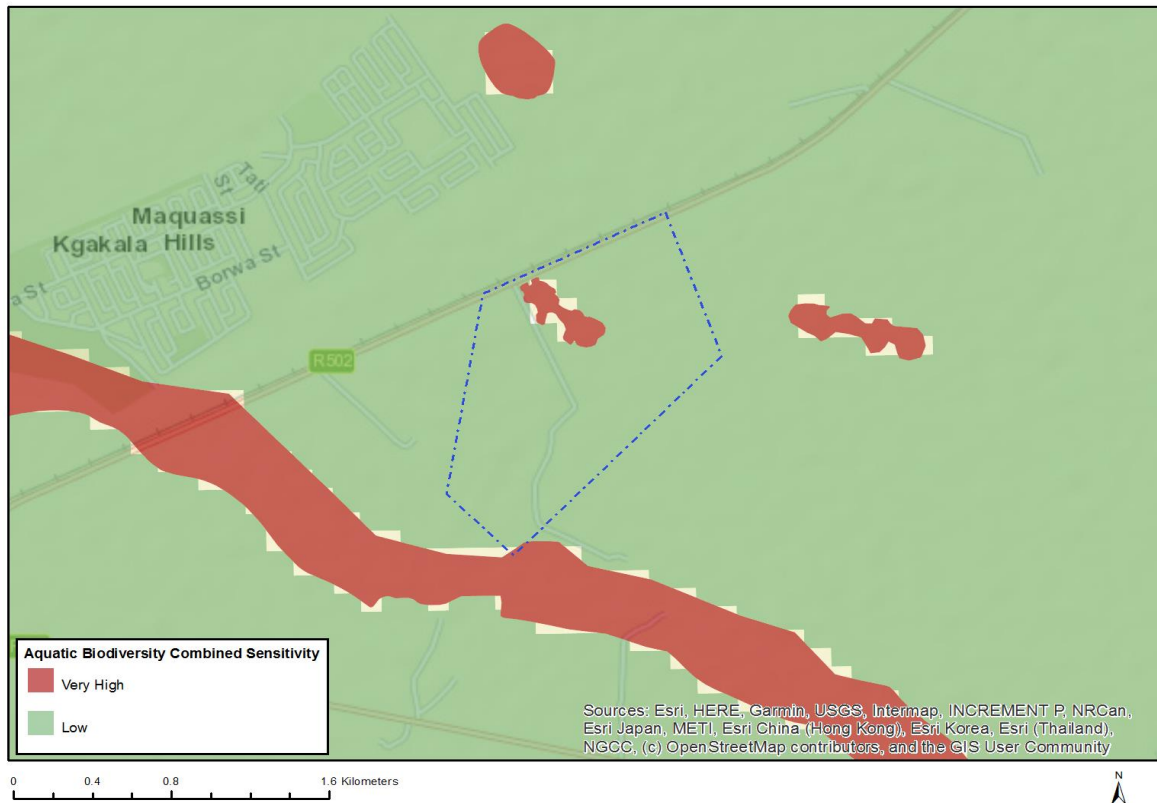
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their 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)
Low	Low sensitivity

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	Aquatic CBAs
Very High	Wetlands and Estuaries

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

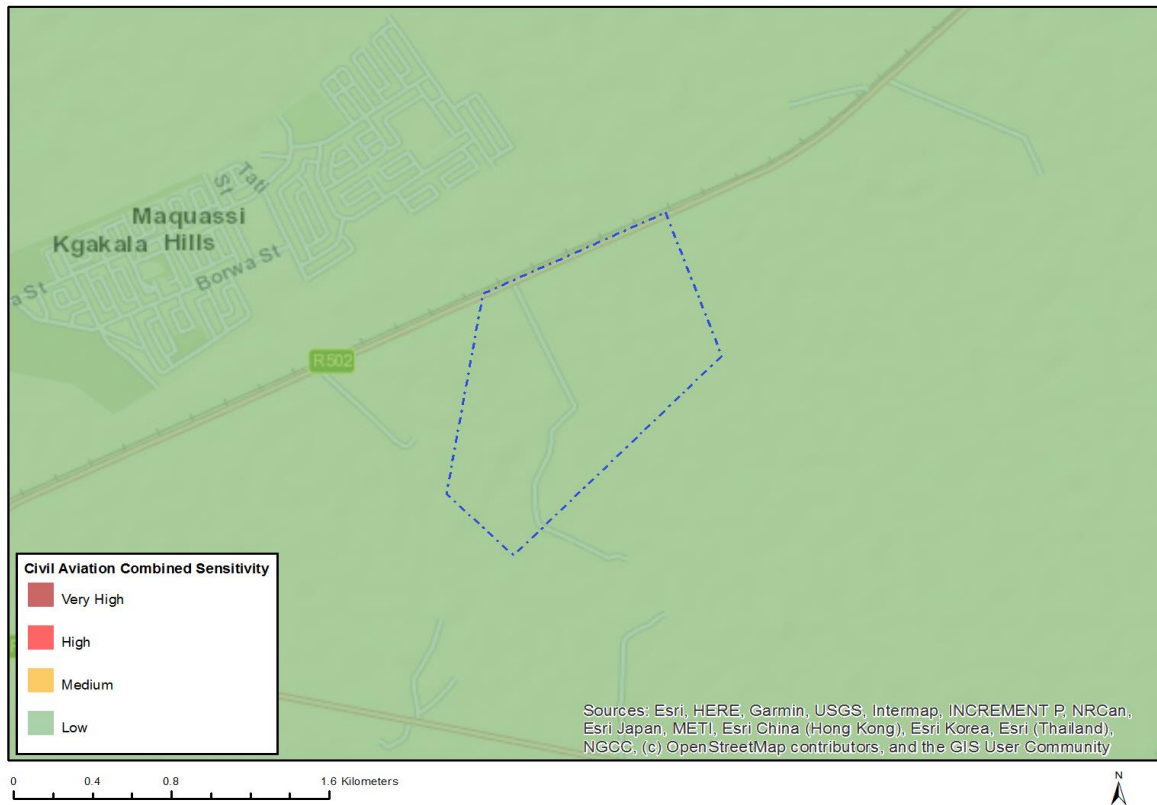


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

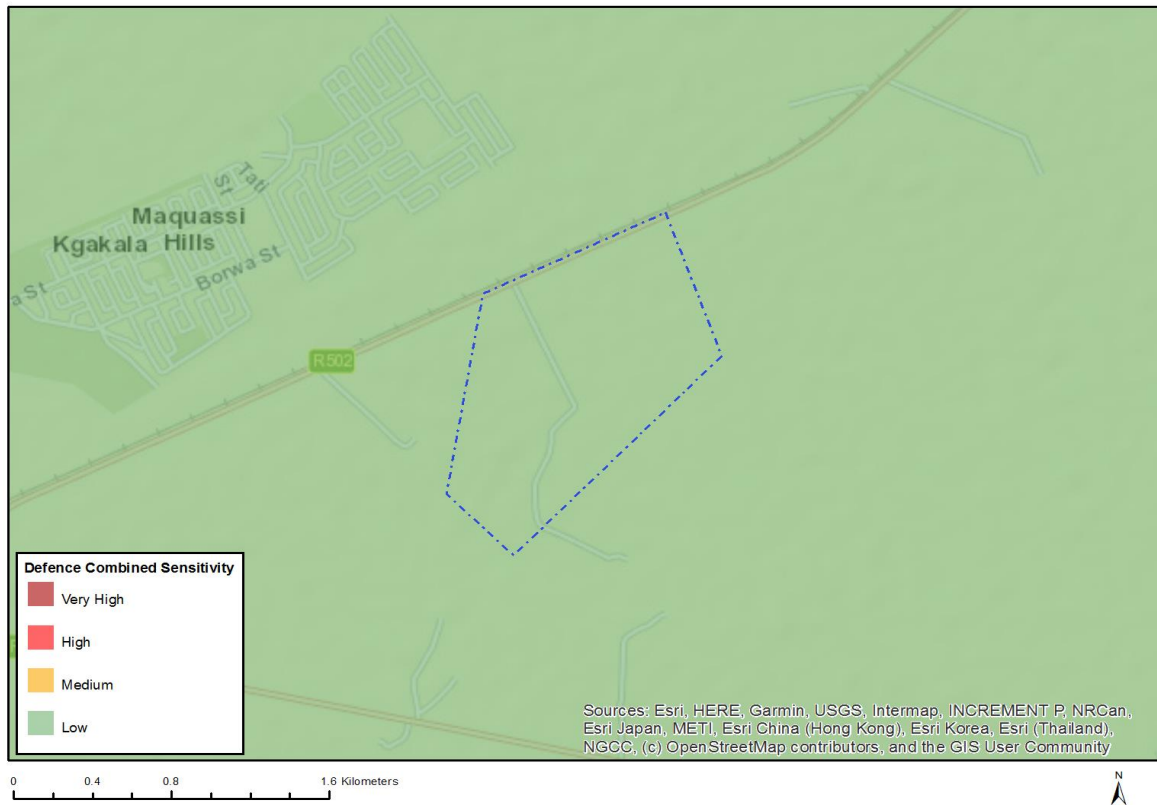


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

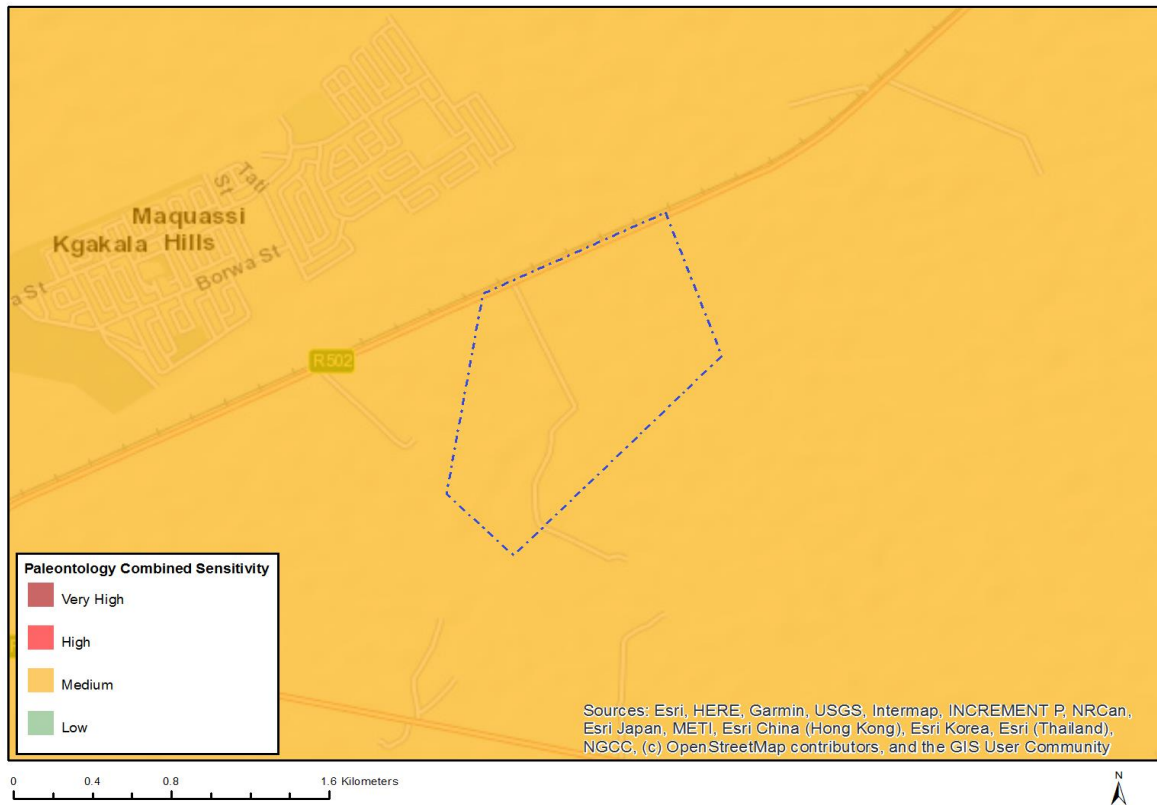


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

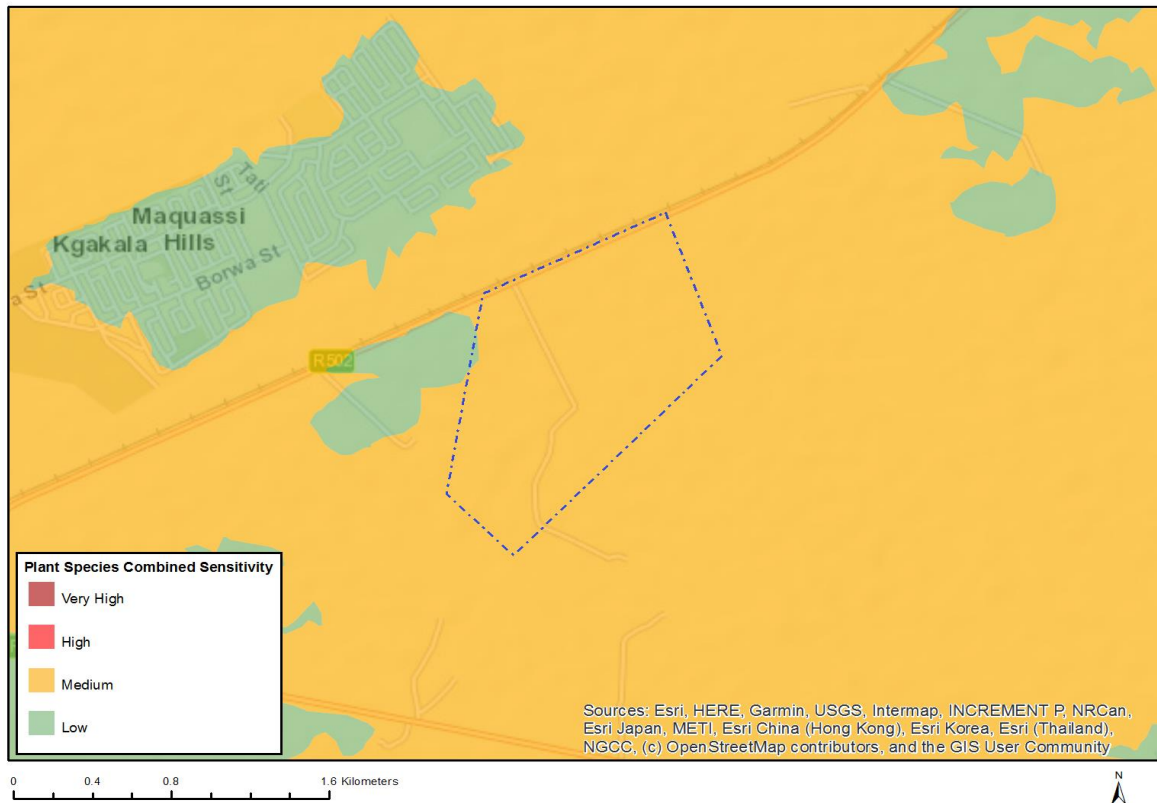


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

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

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



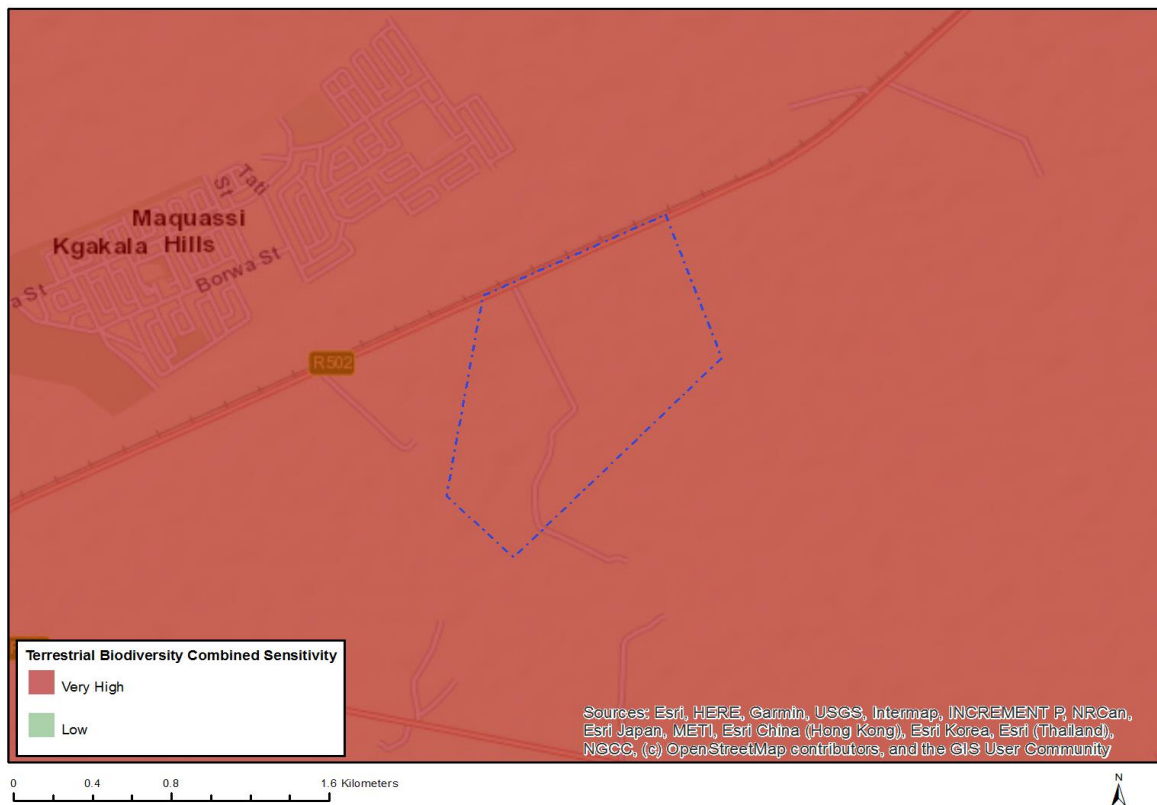
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their 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 1261

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Endangered ecosystem