



5 October 2023
581877

Assistant Director

Department of Forestry, Fisheries and the Environment: Integrated Environmental Authorisation
Cnr. Steve Biko and Soutpansberg Road
473 Steve Biko, Arcadia,
Pretoria, 8000

Attention: Mohammad Essop

Dear Mohammed

Environmental Authorisation for the Basic Assessment for the Stilfontein Photovoltaic Facilities Cluster and Associated Infrastructure, North West Province: Site Sensitivity Verification Report for the Main Transmission Substation

1. Introduction

South Africa Mainstream Renewable Power (Pty) Ltd (Mainstream) propose to construct up to nine Photovoltaic (PV) facilities (or “projects”) and associated infrastructure for the Stilfontein PV Cluster. The Stilfontein Cluster is located ~20 km south-west of Potchefstroom and ~6 km north-east of Stilfontein, in the in the City of Matlosana and JB Marks Local Municipalities and Dr Kenneth Kaunda District Municipality (DKKDM) in North West Province (Figure 1-1). The Stilfontein Cluster lies within the Klerksdorp Renewable Energy Development Zone (REDZ).

A Basic Assessment (BA) process in terms of the National Environmental Management Act 107 of 1998, as amended (NEMA) and the EIA Regulations, 2014, as amended, is required to support an application for EA for the project(s). SRK Consulting (South Africa) (Pty) Ltd (SRK) was appointed by Mainstream to undertake the BA processes for each project in the Stilfontein PV Cluster.

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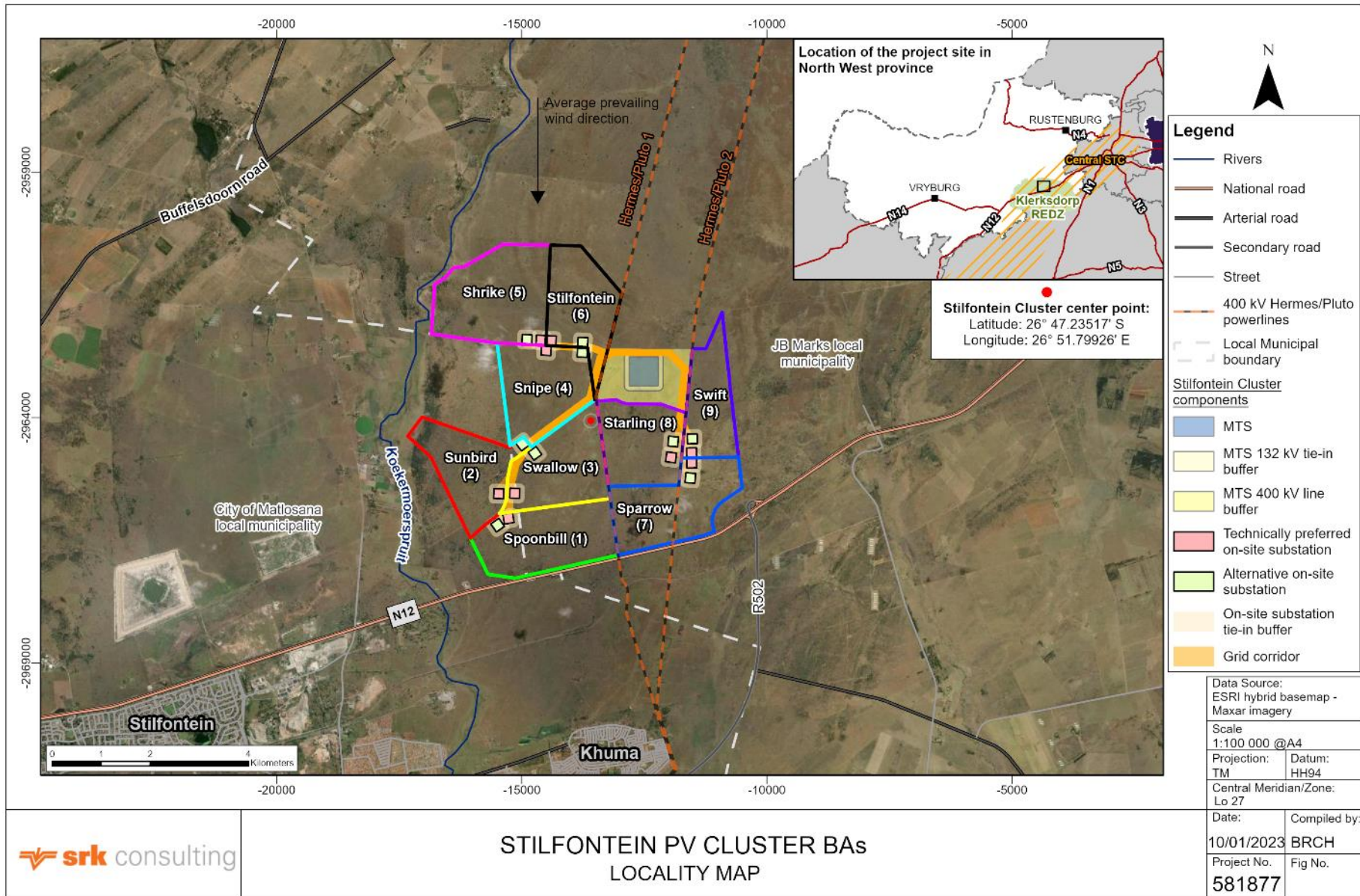
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Revision: A Date: 14 02 2023

Figure 1-1: Locality Map

Separate EAs are to be applied for the individual projects in the Stilfontein Cluster (as well as the associated grid connections):

- 9 x PV facilities, including 11-33 kV transmission lines, each including Battery Energy Storage Systems (BESS), and 9 x Independent Power Producer (IPP)-side on-site substations;
- 9 x Eskom-side on-site substations and 132 kV transmission lines to the Main Transmission Station (MTS); and
- 1 x MTS and 400 kV lines to existing Hermes Pluto transmission lines.

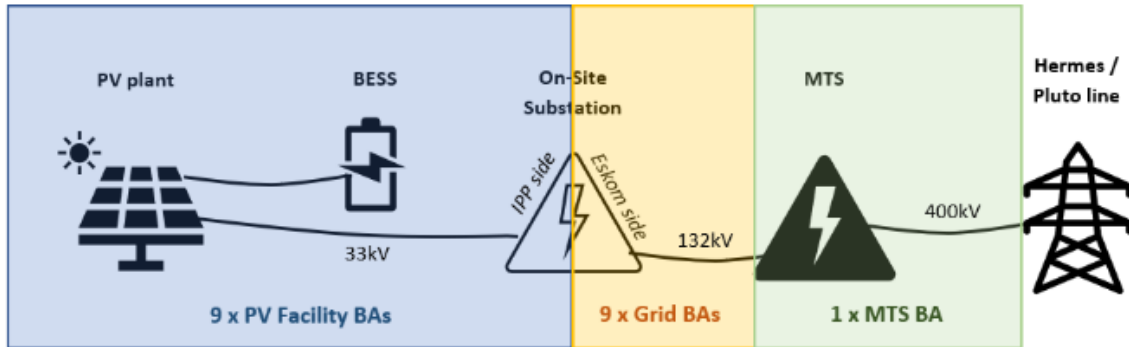


Figure 1-2: Components included in the individual BA processes for the Stilfontein Cluster

In terms of Regulation 16(1)(b)(v) of the NEMA EIA Regulation, 2014, an application for EA must include “the report generated by the national web based environmental screening tool”, and on 5 July 2019, notice was given that that the submission of such a report would be compulsory after 90 days of publication of this notice (i.e. by 4 October 2019 – GN R 960). As such, the national web based environmental screening report is hereby appended for the Main Transmission Substation application.

2. Site Sensitivity Verification

The DFFE have advised that it is the responsibility of the Environmental Assessment Practitioner (EAP) to confirm whether these specialist studies will be conducted or provide a motivation as to why the specialist studies will not be conducted as part of the BA processes. SRK’s opinion in this regard (as presented below) and the proposed specialist studies were discussed and agreed on during the Pre-Application Meeting held on 1 March 2022.

This site sensitivity verification report relates specifically to Main Transmission Substation project.

All specialists, except the Socio-Economic Specialist, conducted site visits in February 2022, and confirmed that it was the appropriate time and season to undertake a site visit to adequately verify the site sensitivity.



Figure 2-1: Photograph of the Stilfontein Cluster from the N12 highway

2.1 Site Sensitivity Verification

An indication of which specialist studies are to be undertaken and a motivation as to why certain specialist studies will not be undertaken, based on site verification, is provided in Table 2-1 below.

Table 2-1: Site sensitivity verification of the MTS

Studies Required in Terms of the Screening Tool	Screening Sensitivity	Sensitivity Verification ¹	Reference / Motivation as to why not conducted
Agricultural Impact Assessment	High	Low	A soil and land capability study has been undertaken and identified that the agricultural sensitivity of the site is Low due to soil, slope, temperatures or rainfall. Non-arable land.
Landscape (solar) Impact Assessment	N/A	High	A Visual Impact Assessment has been undertaken and identified that the site is rated as High landscape (solar) sensitivity due to the proximity of residential areas and receptors, rural nature of the project area and the vast project area.
Archaeological and Cultural Heritage Impact Assessment Paleontology Impact Assessment	Very High	Low	The site is rated as Low heritage sensitivity due to the distance from Grade II heritage sites and of very high paleontological sensitivity. A combined heritage study will be undertaken to address the archaeological and paleontological impact of the development.
Aquatic Biodiversity Impact Assessment	Low	Low	The project site does not overlap with any areas classified as Aquatic Critical Biodiversity Areas (CBA). However, an Aquatic Biodiversity Impact Assessment report, nevertheless has been compiled confirming this.
Terrestrial Biodiversity Impact Assessment	Very High	High	The project site contains a habitat type that has medium conservation importance and high functional integrity. Therefore the specialist confirmed that the terrestrial biodiversity sensitivity is High.
Plant Species Assessment	Medium	Medium	While no SCC was identified on the site, the intact habitat may support the expected SCC.
Animal Species Assessment	Low	Medium	While no SCC was identified on the site, the intact habitat may support the expected SCC.
Avian Assessment	N/A	High	An avian specialist has been appointed by the proponent to compile an impact assessment
Geotechnical Assessment	N/A	N/A	The proponent will obtain geotechnical input for the design of the facility.
Socio-Economic Assessment	N/A	N/A	The development and operation of the facility may result in an increase in revenue and / or jobs and may have regional economic benefits. As such, SRK considers it necessary to conduct a Socio-Economic Impact Assessment.

3. Proposed Specialist Studies

To summarise, SRK has undertaken the following specialist studies to inform this project:

- Biodiversity Impact Assessment (including terrestrial and aquatic ecology);
- Soil and Land Capability Assessment;
- Socio-Economic Assessment;

¹ An EAP or specialist is only required to confirm the sites sensitivity (by means of "site sensitivity verification") for themes for which a Protocol exists, in accordance with the requirements set out in the relevant Protocol. Where N/A is indicated, there is no Protocol and therefore "site sensitivity verification" has not been provided, rather a motivation as to why no specialist study is required.

- Heritage Assessment (including archaeology and palaeontology); and
- Visual Impact Assessment.

Yours faithfully,

SRK Consulting (South Africa) (Pty) Ltd



Kate Steyn
Principal Environmental Consultant

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

EIA Reference number: TBC

Project name: Stilfontein Cluster PV

Project title: Main Transmission Substation and 400kV powerline to existing Hermes Pluto Powerlines, Stilfontein, North West Province, South Africa

Date screening report generated: 16/03/2023 21:40:13

Applicant: Mainstream Renewable Power South Africa (Pty) Ltd

Compiler: SRK Consulting (South Africa) (Pty) Ltd

Compiler signature:

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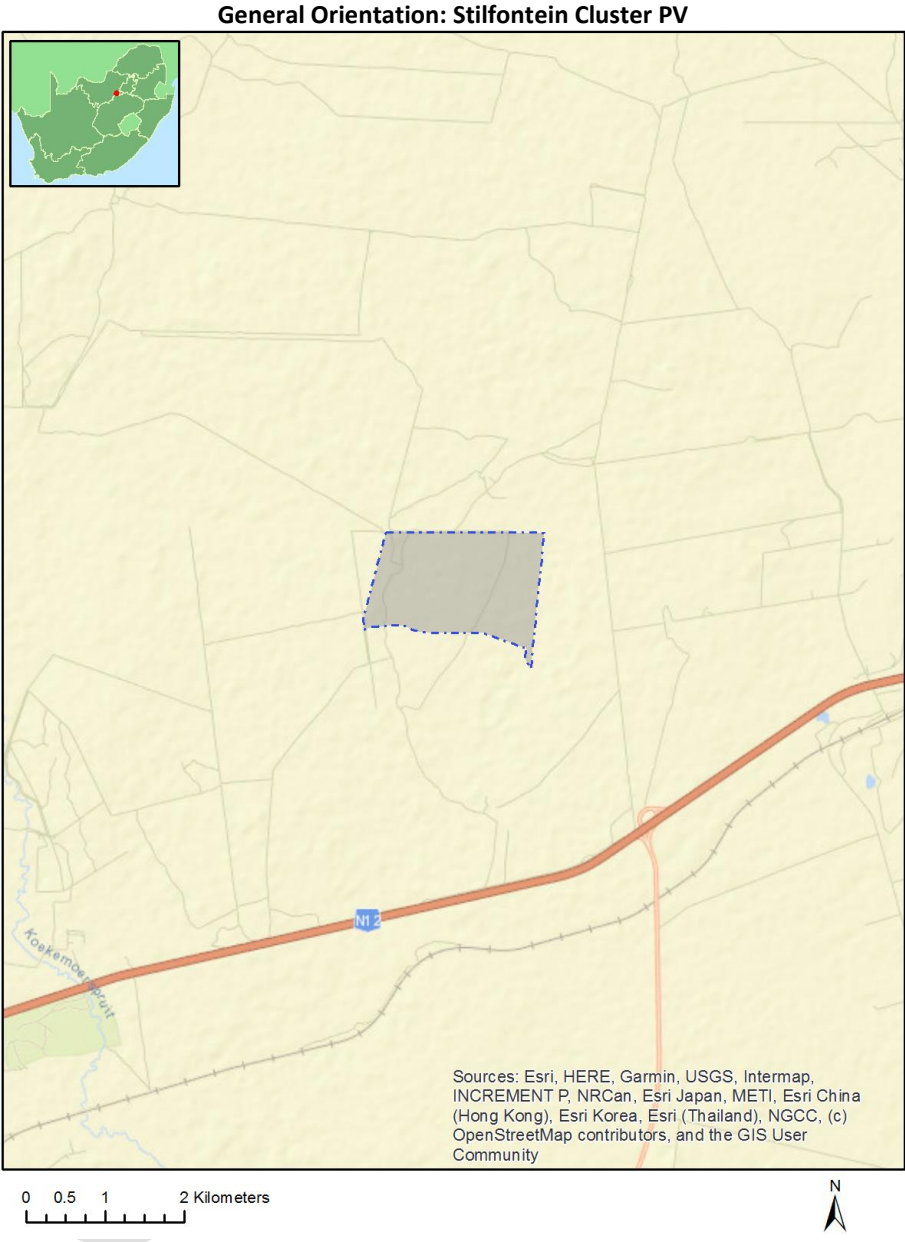
Application Category: Utilities Infrastructure | Electricity | Distribution and Transmission | Substation

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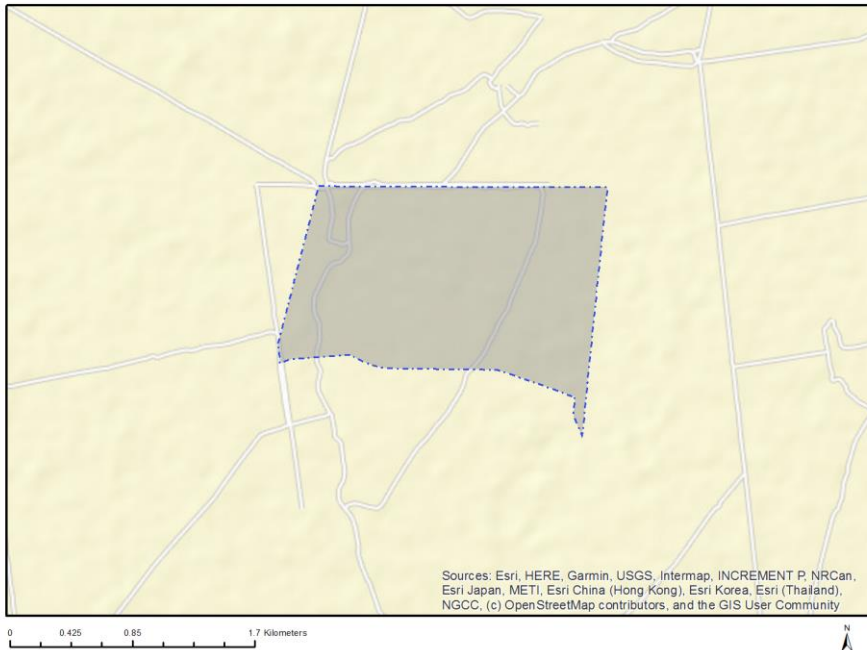
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Proposed Project Location

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	DOORNPLAAT	410	0	26°47'43.21S	26°52'17.45E	Farm
2	DOORNPLAAT	410	3	26°47'30.16S	26°52'38.14E	Farm Portion
3	DOORNPLAAT	410	4	26°47'34.98S	26°51'30.29E	Farm Portion

Development footprint¹ vertices:

Footprint	Latitude	Longitude
1	26°46'58.23S	26°51'50.56E
1	26°46'40.28S	26°51'55.71E
1	26°46'34.93S	26°51'57.25E
1	26°46'26.26S	26°51'59.75E
1	26°46'26.26S	26°51'59.75E
1	26°46'26.26S	26°51'59.85E
1	26°46'26.26S	26°52'0.75E
1	26°46'26.28S	26°52'3.93E
1	26°46'26.28S	26°52'4.48E
1	26°46'26.29S	26°52'6.29E
1	26°46'26.3S	26°52'9.43E
1	26°46'26.4S	26°52'28.92E
1	26°46'26.44S	26°52'50.57E

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.

1	26°46'26.46S	26°53'3.04E
1	26°46'26.46S	26°53'4.5E
1	26°46'28.41S	26°53'4.28E
1	26°46'47.43S	26°53'2.14E
1	26°47'16.31S	26°52'58.89E
1	26°47'12.41S	26°52'56.88E
1	26°47'8.53S	26°52'57.31E
1	26°47'8.44S	26°52'56.86E
1	26°47'7.75S	26°52'54.66E
1	26°47'7.75S	26°52'54.66E
1	26°47'6.93S	26°52'52.03E
1	26°47'6.35S	26°52'50.16E
1	26°47'6.35S	26°52'50.15E
1	26°47'3.69S	26°52'41.62E
1	26°47'3.13S	26°52'39.83E
1	26°47'3.09S	26°52'36.16E
1	26°47'2.88S	26°52'16.81E
1	26°47'2.79S	26°52'15.26E
1	26°47'2.7S	26°52'14.31E
1	26°47'2.46S	26°52'12.96E
1	26°47'2.35S	26°52'12.43E
1	26°47'2.24S	26°52'11.83E
1	26°47'1.61S	26°52'9.92E
1	26°47'1.38S	26°52'9.32E
1	26°47'0.64S	26°52'7.79E
1	26°47'0.41S	26°52'7.27E
1	26°47'0.17S	26°52'6.88E
1	26°47'0.58S	26°52'0.28E
1	26°47'0.83S	26°51'56.37E
1	26°47'0.87S	26°51'55.7E
1	26°47'0.94S	26°51'54.65E
1	26°47'0.95S	26°51'54.4E
1	26°47'1S	26°51'53.67E
1	26°47'1.93S	26°51'50.89E
1	26°46'58.23S	26°51'50.56E

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

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2122	Solar PV	Approved	20.4
2	12/12/20/2513/3	Solar PV	Approved	19.6
3	12/12/20/2629	Solar PV	Approved	20.4
4	14/12/16/3/3/2/778	Solar PV	Approved	10.2
5	12/12/20/2513/1	Solar PV	Approved	19.6
6	12/12/20/2513/2	Solar PV	Approved	25.2
7	12/12/20/2513/1/AM3	Solar PV	Approved	19.6
8	14/12/16/3/3/2/777	Solar PV	Approved	11.9
9	12/12/20/2513/4	Solar PV	Approved	19.6

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 footprint as well as the most environmental sensitive features on the footprint based on the footprint 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 footprint are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Renewable energy development zones 10-Klerksdorp	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_REDZ.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development footprint 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

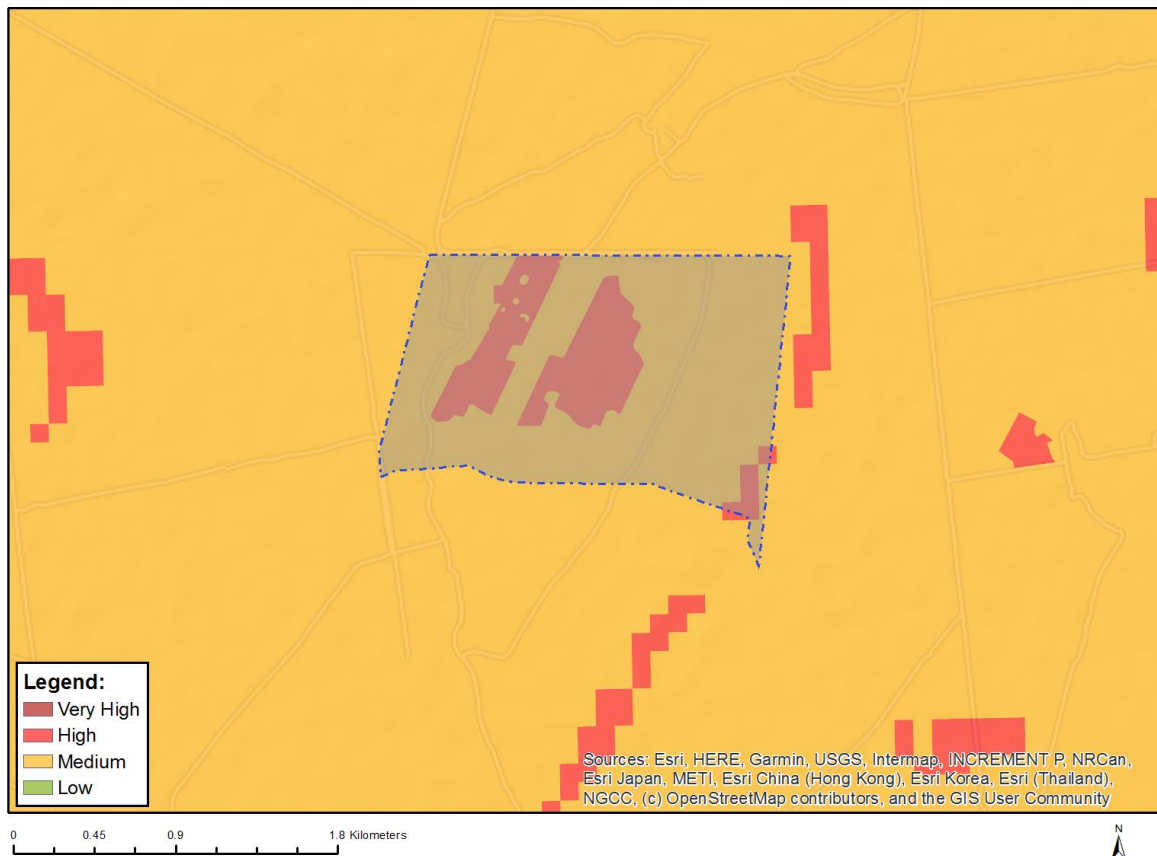
Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the footprint 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 Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
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

Results of the environmental sensitivity of the proposed area.

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

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
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	Subject to confirmation

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

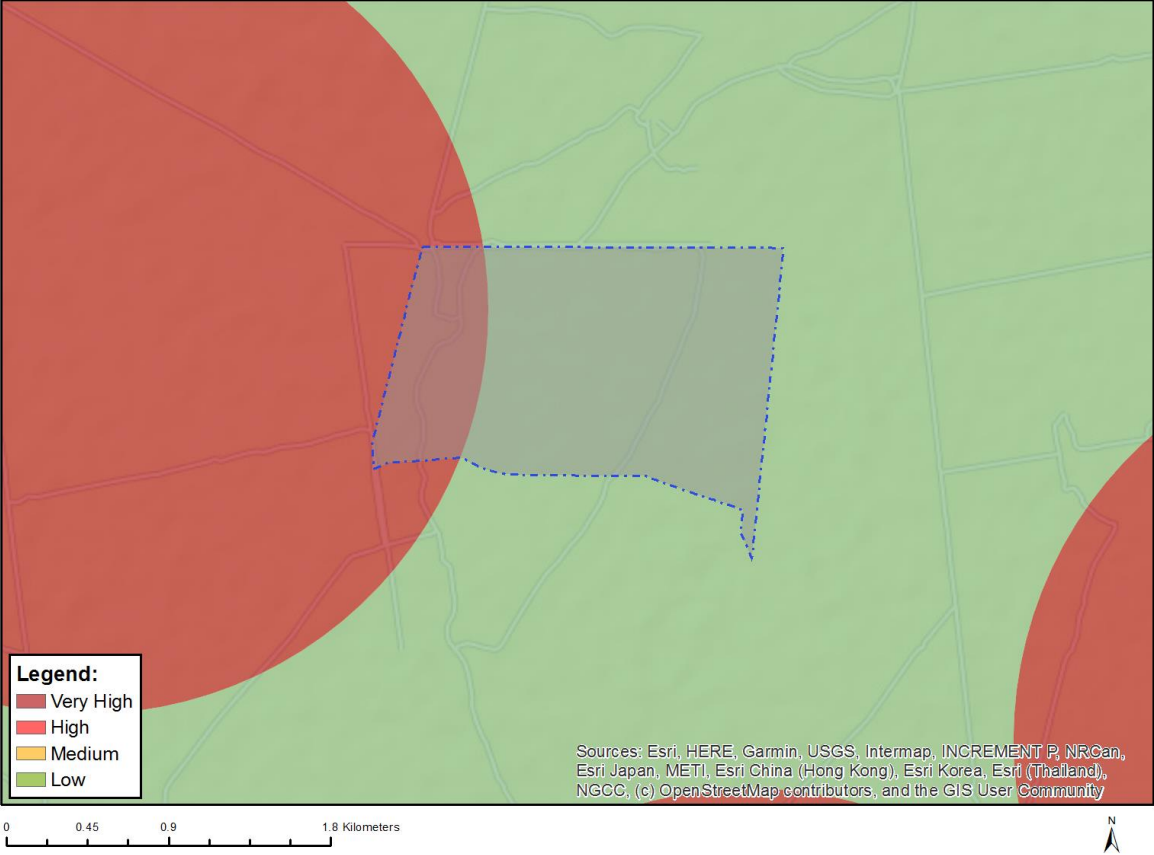


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

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
Very High	Within 2km of a Grade II Heritage site

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

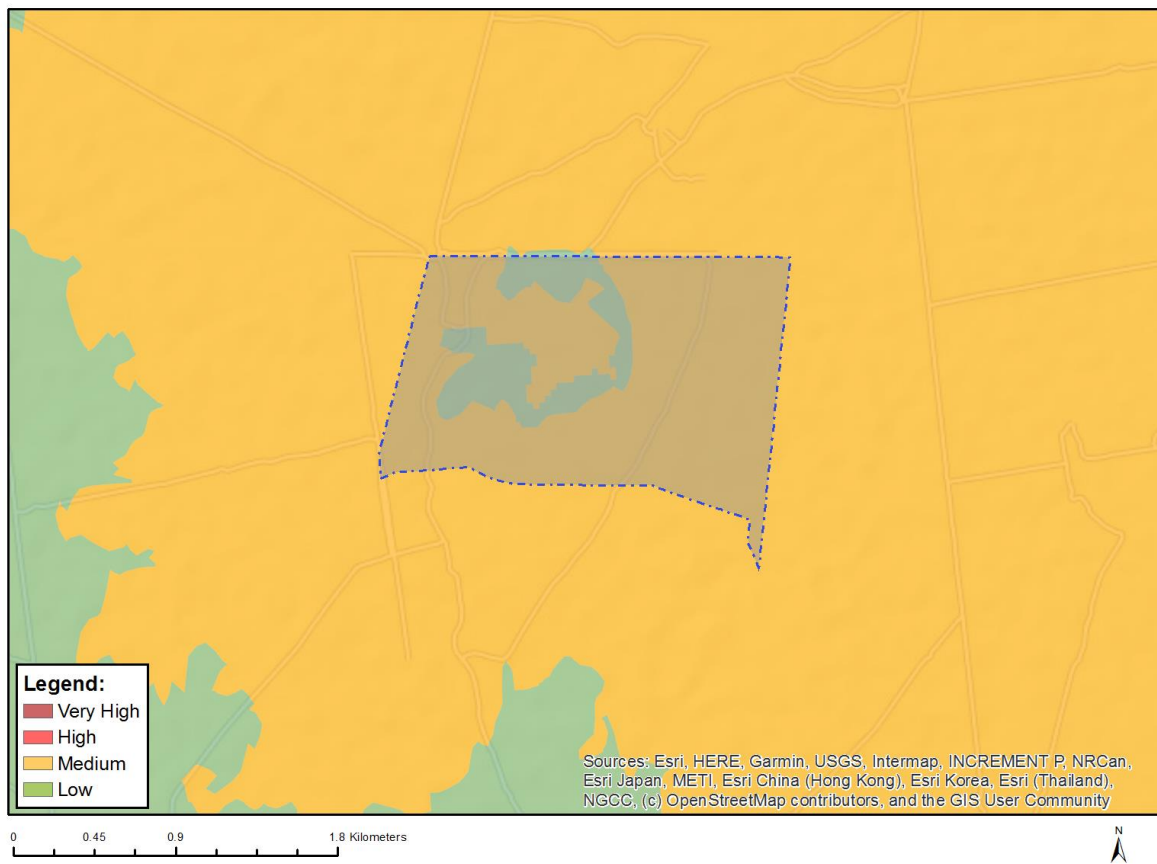


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

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

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



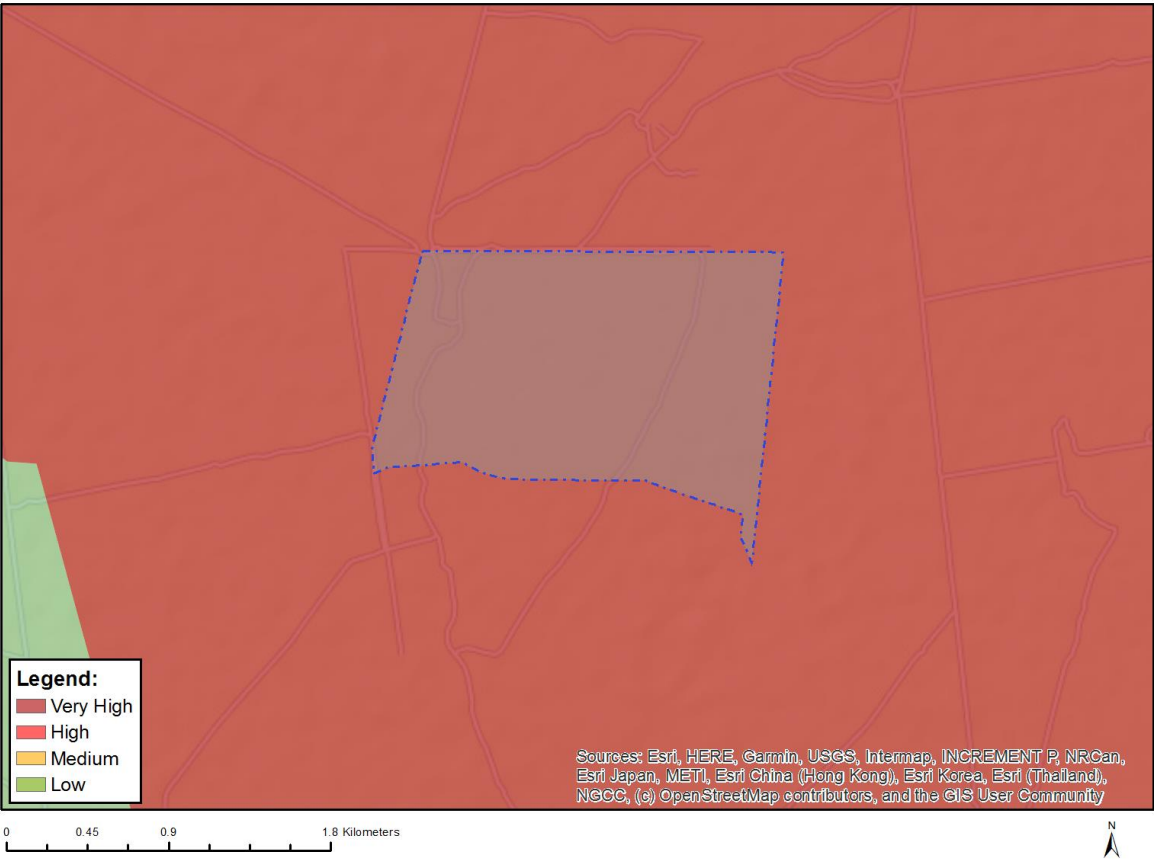
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Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

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

MAP OF RELATIVE 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