

Generic EMPr: Appendix 1 - Substations

PART B: SECTION 2

7. SITE SPECIFIC INFORMATION AND DECLARATION

7.1 Sub-section 1: Contact details and description of the project

7.1.1 Details of the applicant

Applicant name	Vlakfontein Solar PV1 (Pty) Ltd
Contact person	Mr Warren Morse
Physical address	Top Floor Golf Park 4, Raapenberg Rd, Mowbray, 7700
Postal address	PO Box 548, Howard Place, Western Cape, 7450
Email	warren@mulilo.com
Telephone	021 685 3240 / 083 760 9586

7.1.2 Details and expertise of the EAP

EAP Name	Annelize Erasmus
EAP qualifications	<ul style="list-style-type: none"> • BL (Landscape Architecture) Degree – University of Pretoria, 1988 • “Integrated Environmental Management – Theory and Practice”; University of Cape Town, 1992 • Assessor of EAP Applications for registration with EAPASA (since 1 February 2020) • Various workshops and webinars in the environmental consultancy field
Professional affiliation/ registration	<ul style="list-style-type: none"> • EAPASA Registered: Annelize Erasmus (Grobler): 2019/1728 • Member of the IAIASA
Physical address	91 Wenning Street, Groenkloof, Pretoria, 0181
Postal address	PO Box 947, Groenkloof, Pretoria, 0027
Email	info@landscapedynamics.co.za / annelize@landscapedynamics.co.za
Telephone	082 566 4530 / 012 460 6043
Curriculum Vitae	The Landscape Dynamics Company Profile and condensed CV of the EAPS are attached hereto

7.1.3 Project name

Vlakfontein Solar PV1

7.1.4 Description of the project

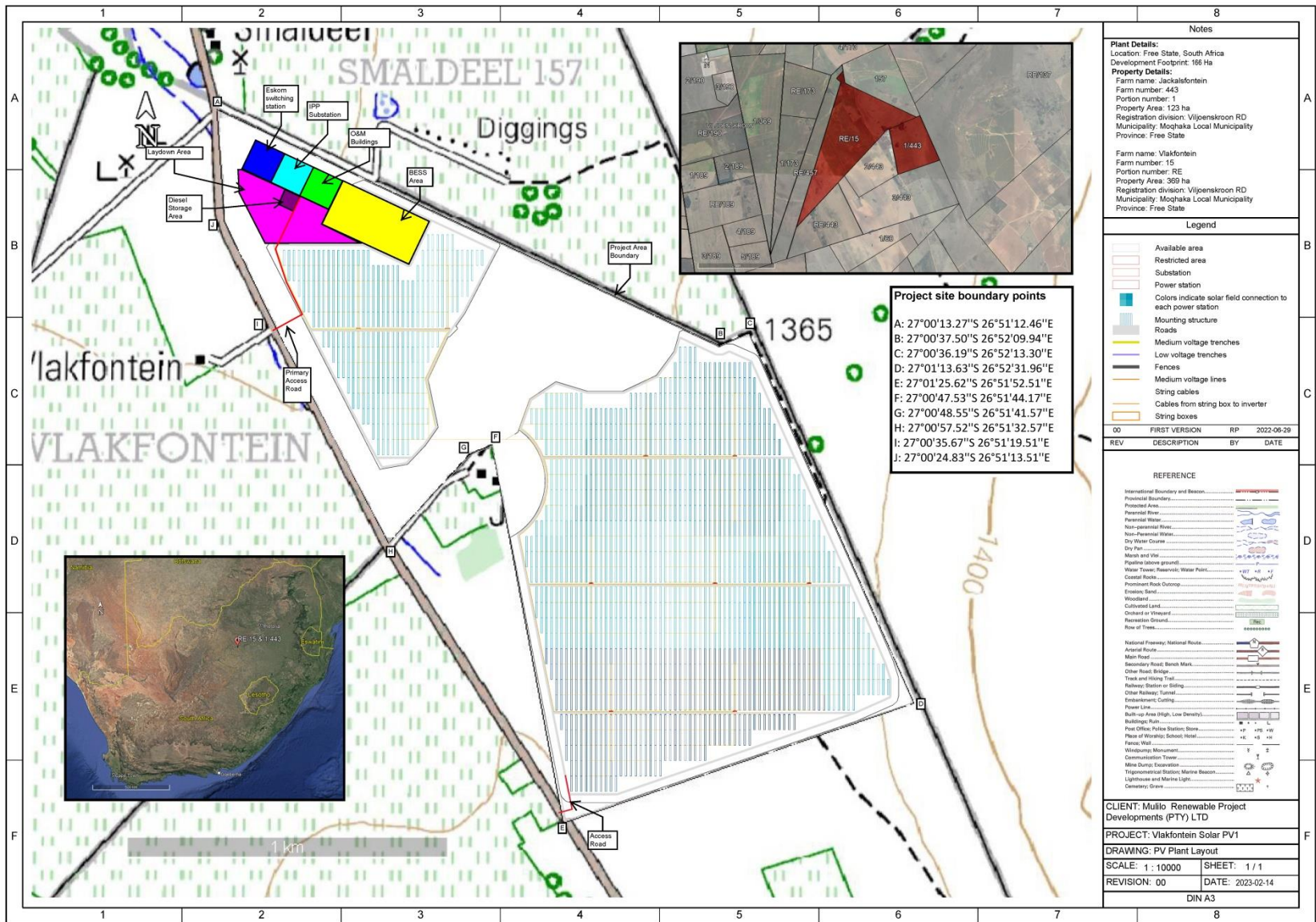
The Vlakfontein Solar PV1 facility will have a contracted capacity of up to 100MW with a total development footprint of approximately 151 hectares in size.

Infrastructure associated with the Vlakfontein Solar PV1 Facility will include the following (relevant to this document is the Onsite 132kV IPP Substation marked in blue below):

Infrastructure	Specifications
Solar PV Array	<p>The Solar PV Array includes the following components:</p> <ul style="list-style-type: none"> • Bifacial PV Modules • Mounting structures using single axis tracking technology • Inverters • Combiner Boxes • Transformers • Cabling between panels • Total PV area is approximately 151 ha.
Onsite 132 kV Independent Power Producer (IPP) Substation	<p>The IPP Substation includes the following components:</p> <ul style="list-style-type: none"> • HV Step-up transformer • MV Interconnection building • Total area approximately 100 m x 100 m (1 ha)
Access and internal roads	<ul style="list-style-type: none"> • Main access to the IPP substation area is required directly off Vermaasdrift Road (S643), approximately 8m wide. The length of the road is approximately 498 m. The coordinates of the access point are: 27° 0'36.07"S 26°51'19.21"E • Existing internal farm roads to be utilised where possible, • Internal roads to be constructed up to 6m wide. • Regraveling of roads to take place if required by the provincial roads authority.
Laydown area	<ul style="list-style-type: none"> • A temporary construction site area of approximately 4ha directly adjacent to the IPP and Eskom substation will be required. • Temporary infrastructure will be rehabilitated following the completion of the construction phase, where it is not required for the operation phase.
Battery Energy Storage System (BESS)	<ul style="list-style-type: none"> • Solid State Batteries (SSB) is the preferred battery technology • It will be constructed on approximately 4.5 ha.
Storage of Dangerous Goods	<ul style="list-style-type: none"> • Storage of dangerous goods (Including lubrications, oils, paints, fuel/diesel, etc.) with a combined capacity of less than 80 cubic metres is required. • Diesel/fuel is generally required for the following purposes: <ul style="list-style-type: none"> ▪ During construction for construction vehicles as well as generators for the construction camp and commissioning whilst waiting for the Eskom grid connection works to be completed ▪ During operations, diesel is required for vehicles at the PV plant as well as for backup diesel generators at the substation. The

	<p>Generators supply auxiliary power to the substation's protection and communications systems, should there be outages on the grid. This is an Eskom requirement together with a battery room at the substations to act as UPS for these critical systems.</p>
<p>Ancillary facilities</p>	<ul style="list-style-type: none"> • Operations and Maintenance Building • Site Offices • Construction camps • Storage Warehouse • Workshop • Guard House • Ablutions with conservancy tanks • During the construction phase, temporary sanitation facilities will be provided (i.e. chemical toilets) and these toilets will be regularly serviced by a licensed company.

Refer to the Site Layout of the Vlakfontein Solar PV1 provided on the following page. The position of the IPP substation is indicated in light blue.



7.1.5 Project location

The development site is situated north of the R76 close to the town of Viljoenskroon in the Free State Province. It falls within the jurisdiction of the Moqhaka Local Municipality (MLM) in the Fezile Dabi District Municipality.

The project is situated on the following two properties:

- Remainder of Vlakfontein No 15
- Portion 1 of Jackalsfontein No 443

The 21 digit codes are as follows:

Major region				Minor region				Farm / Erf number							Portion number					
F	0	3	6	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0
F	0	3	6	0	0	0	0	0	0	0	0	0	4	4	3	0	0	0	0	1

The coordinates of the IPP Substation are as follows:

Northern point	27°00'17.85"S and 26°51'20.64"E
Eastern point	27°00'19.22"S and 26°51'23.85"E
Southern point	27°00'22.16"S and 26°51'22.34"E
Western point	27°00'20.86"S and 26°51'19.11"E

7.2 Sub-section 2: Development footprint site map

This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout. The sensitivity map must be prepared from the national web based environmental screening tool, when available for compulsory use at: <https://screening.environment.gov.za/screeningtool>. The sensitivity map shall identify the nature of each sensitive feature e.g. threatened plant species, archaeological site, etc. Sensitivity maps shall identify features both within the planned working area and any known sensitive features within 50m from the development footprint.

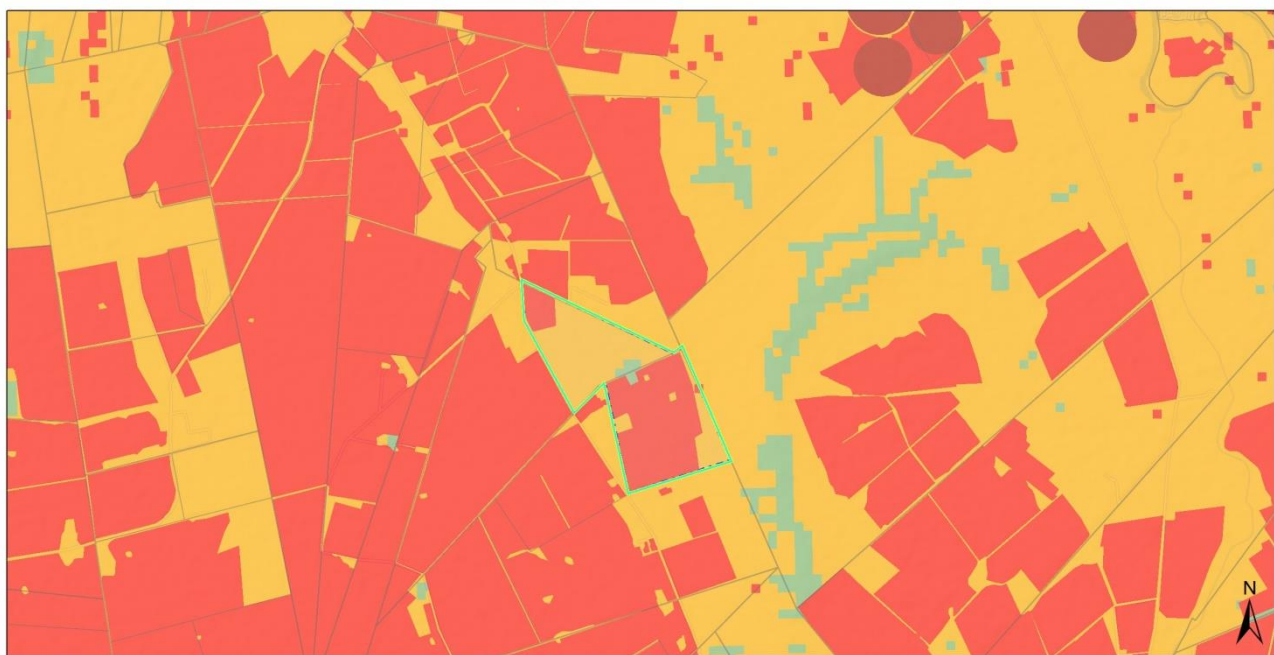
Key results from the Screening Tool Report are as follows:

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
Civil Aviation (Solar PV) Theme				X
Defence Theme				X
Landscape (Solar) Theme	X			
Palaeontology Theme		X		
Plant Species Theme			X	
RFI Theme				X
Terrestrial Biodiversity Theme	X			

The Screening Tool maps provided on the following pages were compiled on 16 May 2023.



Agricultural Sensitivities



16 May 2023

Legend

- Vlaakfontein Solar PV1 Boundaries
- Site Area
- EIA Application Development Footprint
- EIA Application Site
- National Jurisdiction Area

Cadastral

- Erven
- Farm Portion
- Farm
- Agri Holding

Public Place

- Public Place

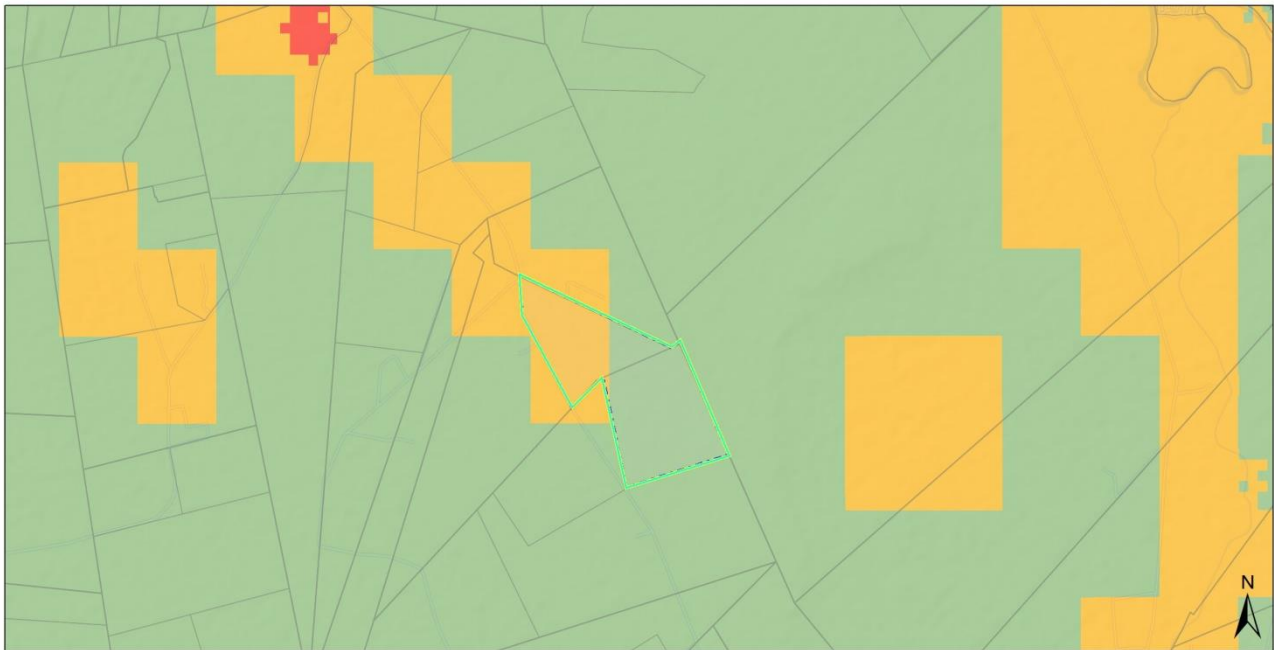
Agriculture Combined Sensitivity

- Very High
- High
- Medium
- Low

0 1.75 3.5 km
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright 2023, National Department of Environmental Affairs, Government of South Africa

Animal Species Sensitivities



16 May 2023

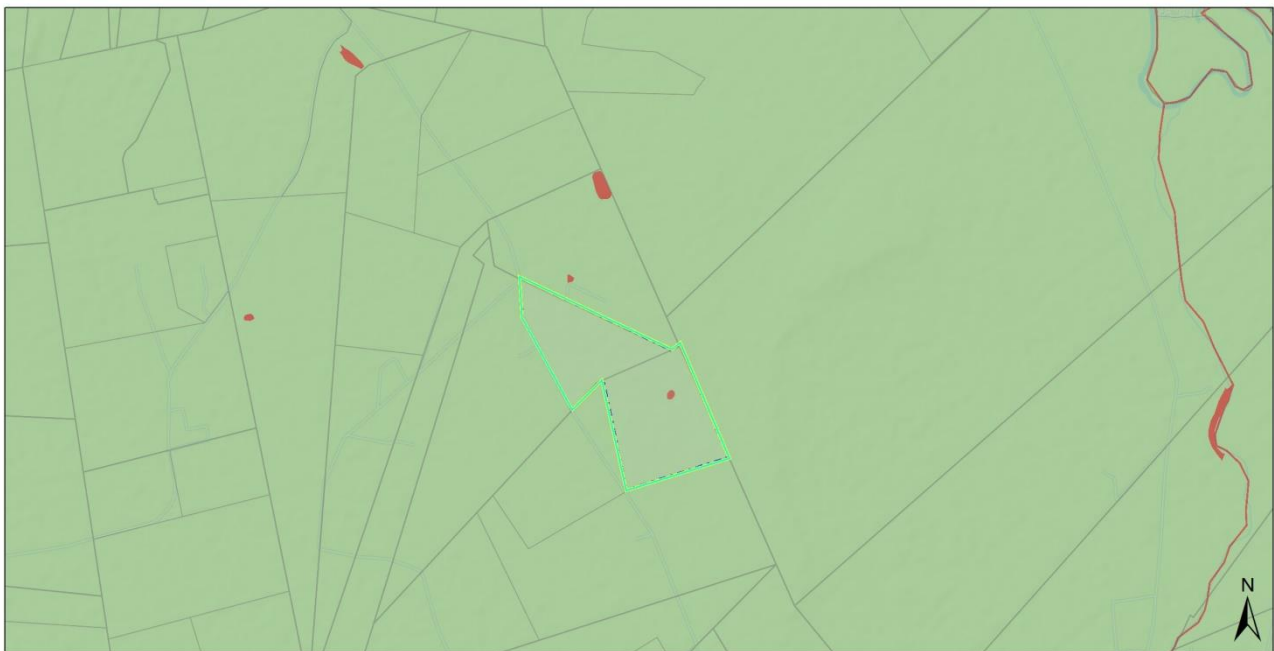
Legend

- | | | | |
|---------------------------------------|------------------|--|-----|
| Vlakfontein Solar PV1 Boundaries | Cadastral | Public Place | Low |
| Site Area | Erven | Animal Species Combined Sensitivity | |
| EIA Application Development Footprint | Farm Portion | Very High | |
| EIA Application Site | Farm | High | |
| National Jurisdiction Area | Agri Holding | Medium | |

0 1.75 3.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright 2023
 National Department of Environmental Affairs,
 Government of South Africa

Aquatic Biodiversity Sensitivities



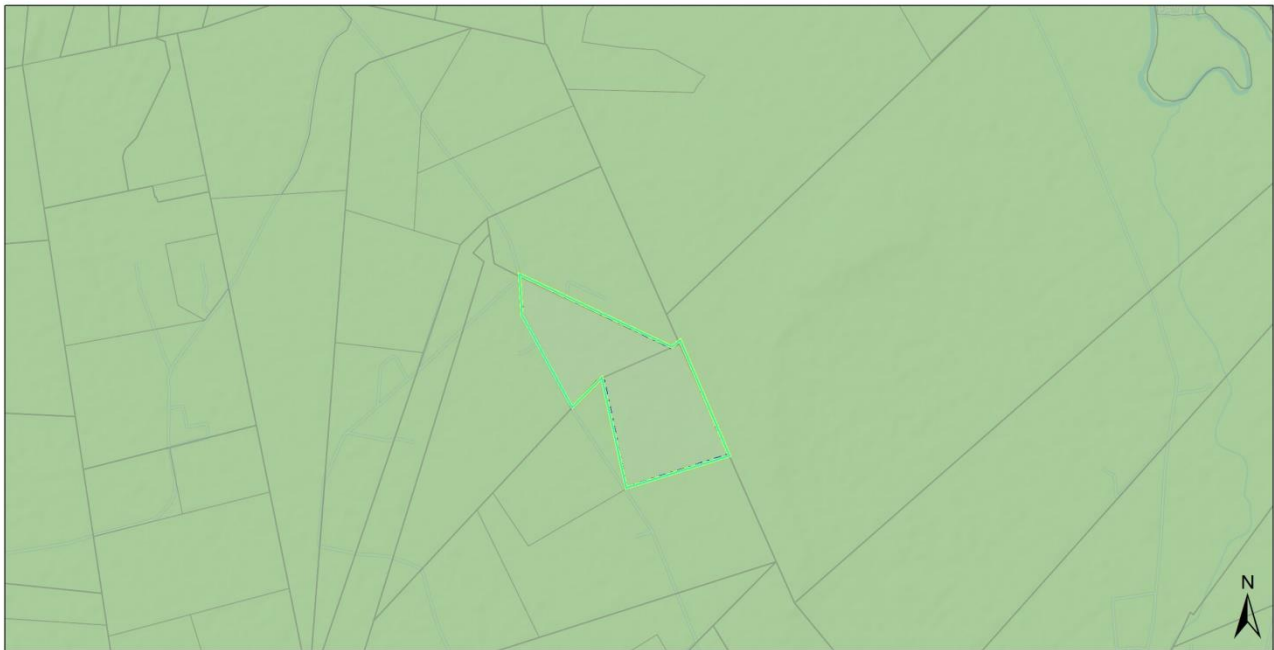
16 May 2023

Legend

- | | | | |
|---------------------------------------|------------------|--|--|
| Vlakfontein Solar PV1 Boundaries | Cadastral | Public Place | |
| Site Area | Erven | Aquatic Biodiversity Combined Sensitivity | |
| EIA Application Development Footprint | Farm Portion | Very High | |
| EIA Application Site | Farm | Low | |
| National Jurisdiction Area | Agri Holding | | |

0 1.75 3.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright 2023
 National Department of Environmental Affairs,
 Government of South Africa



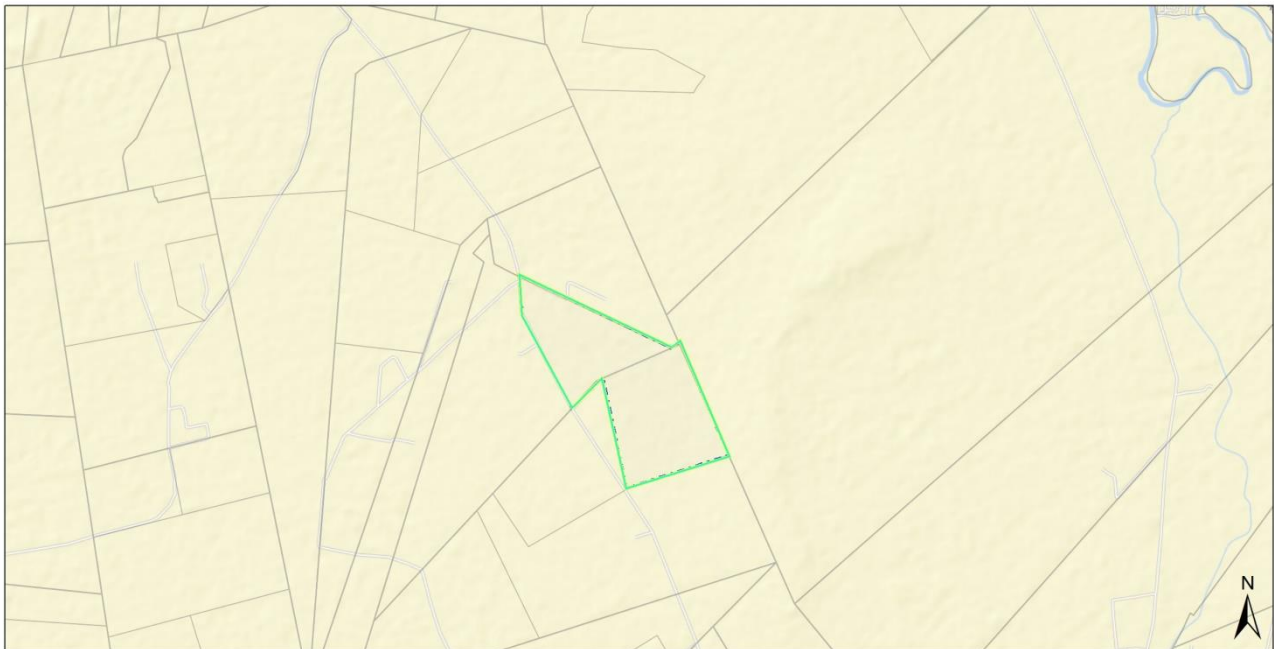
16 May 2023

Legend

- | | | |
|---------------------------------------|------------------|--|
| Viakfontein Solar PV1 Boundaries | Cadastral | Public Place |
| Site Area | Erven | Archaeological and Cultural Heritage Combined Sensitivity |
| EIA Application Development Footprint | Farm Portion | Very High |
| EIA Application Site | Farm | High |
| National Jurisdiction Area | Agri Holding | Low |

0 1.75 3.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright: 2023
 National Department of Environmental Affairs,
 Government of South Africa



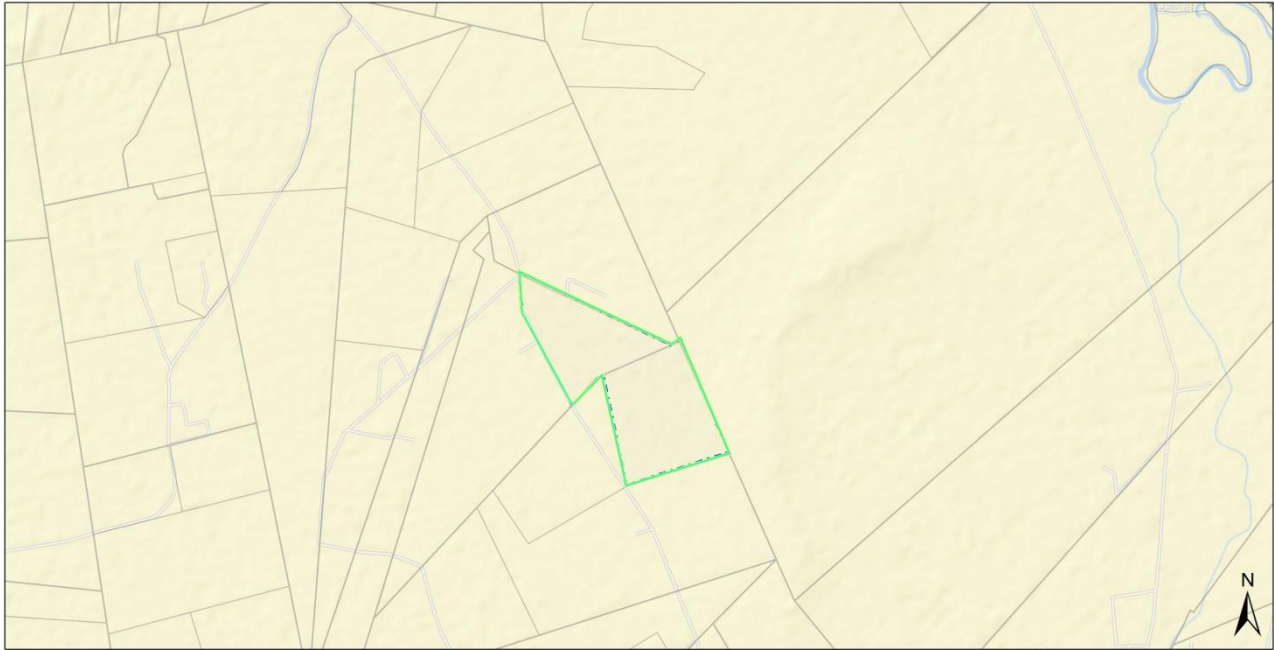
16 May 2023

Legend

- | | | | |
|---------------------------------------|------------------|-----------------------------------|-----|
| Viakfontein Solar PV1 Boundaries | Cadastral | Public Place | Low |
| Site Area | Erven | Avian Combined Sensitivity | |
| EIA Application Development Footprint | Farm Portion | Very High | |
| EIA Application Site | Farm | High | |
| National Jurisdiction Area | Agri Holding | Medium | |

0 1.75 3.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright: 2023
 National Department of Environmental Affairs,
 Government of South Africa



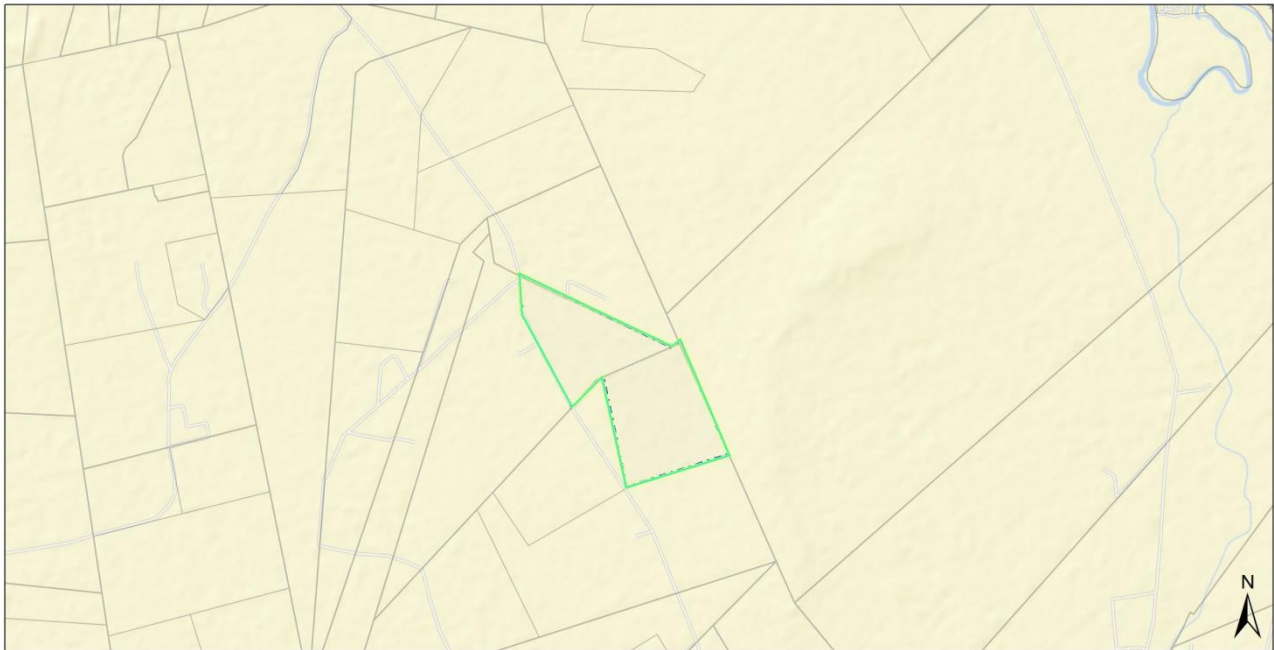
16 May 2023

Legend

- | | | |
|---------------------------------------|--------------|---|
| Viakfontein Solar PV1 Boundaries | Erven | Public Place |
| Site Area | Farm Portion | Civil Aviation (Solar PV) Combined Sensitivity |
| EIA Application Development Footprint | Farm | Medium |
| EIA Application Site | Agri Holding | Low |
| National Jurisdiction Area | | |

0 1.75 3.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright 2023
 National Department of Environmental Affairs,
 Government of South Africa



16 May 2023

Legend

- | | | |
|---------------------------------------|--------------|-------------------------------------|
| Viakfontein Solar PV1 Boundaries | Erven | Public Place |
| Site Area | Farm Portion | Defence Combined Sensitivity |
| EIA Application Development Footprint | Farm | Very High |
| EIA Application Site | Agri Holding | Medium |
| National Jurisdiction Area | | Low |

0 1.75 3.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright 2023
 National Department of Environmental Affairs,
 Government of South Africa

Palaeontological Sensitivities



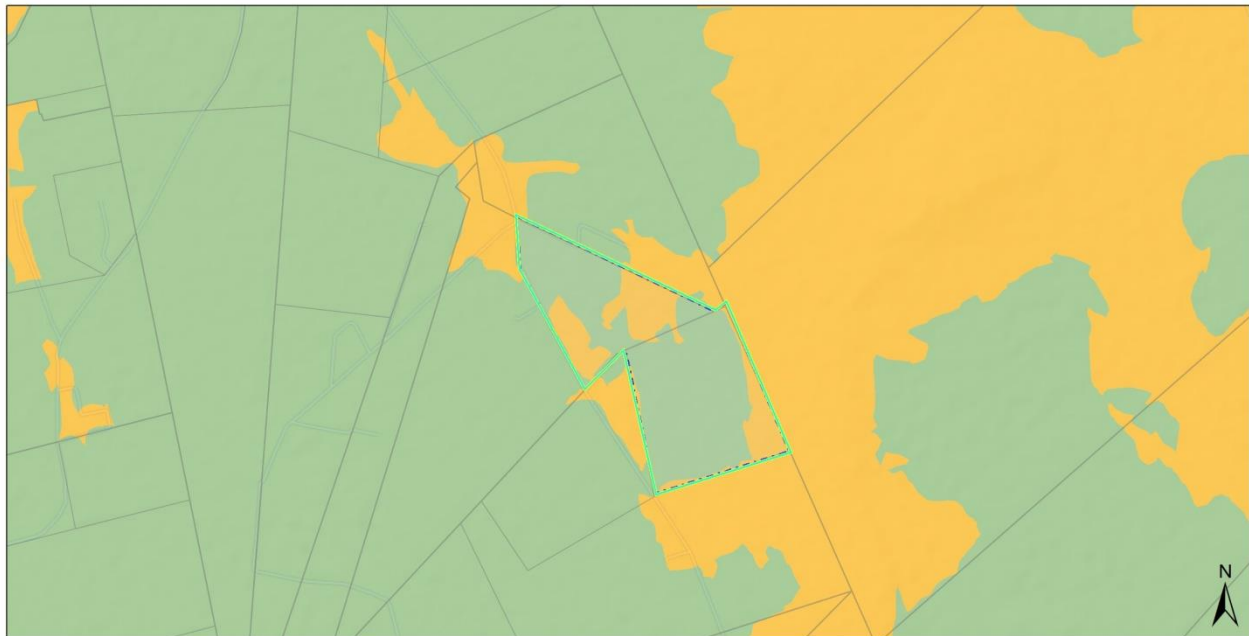
16 May 2023

- Legend**
- | | | | |
|---------------------------------------|-----------------|---|-----|
| Viakfontein Solar PV1 Boundaries | Cadastre | Public Place | Low |
| Site Area | Erven | Palaeontology Combined Sensitivity | |
| EIA Application Development Footprint | Farm Portion | Very High | |
| EIA Application Site | Farm | High | |
| National Jurisdiction Area | Agri Holding | Medium | |

0 1.25 2.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright: 2023
 National Department of Environmental Affairs,
 Government of South Africa

Plant Species Sensitivities



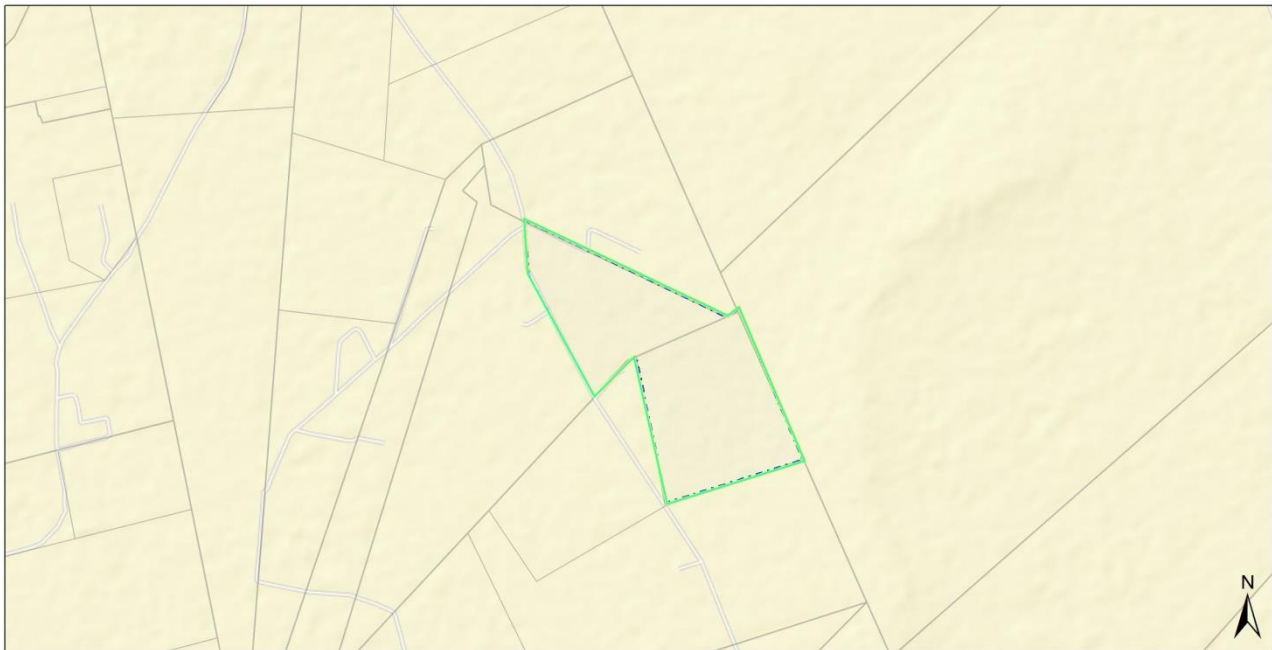
16 May 2023

- Legend**
- | | | | |
|---------------------------------------|-----------------|---|-----|
| Viakfontein Solar PV1 Boundaries | Cadastre | Public Place | Low |
| Site Area | Erven | Plant Species Combined Sensitivity | |
| EIA Application Development Footprint | Farm Portion | Very High | |
| EIA Application Site | Farm | High | |
| National Jurisdiction Area | Agri Holding | Medium | |

0 1.25 2.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright: 2023
 National Department of Environmental Affairs,
 Government of South Africa

RFI Sensitivities



16 May 2023

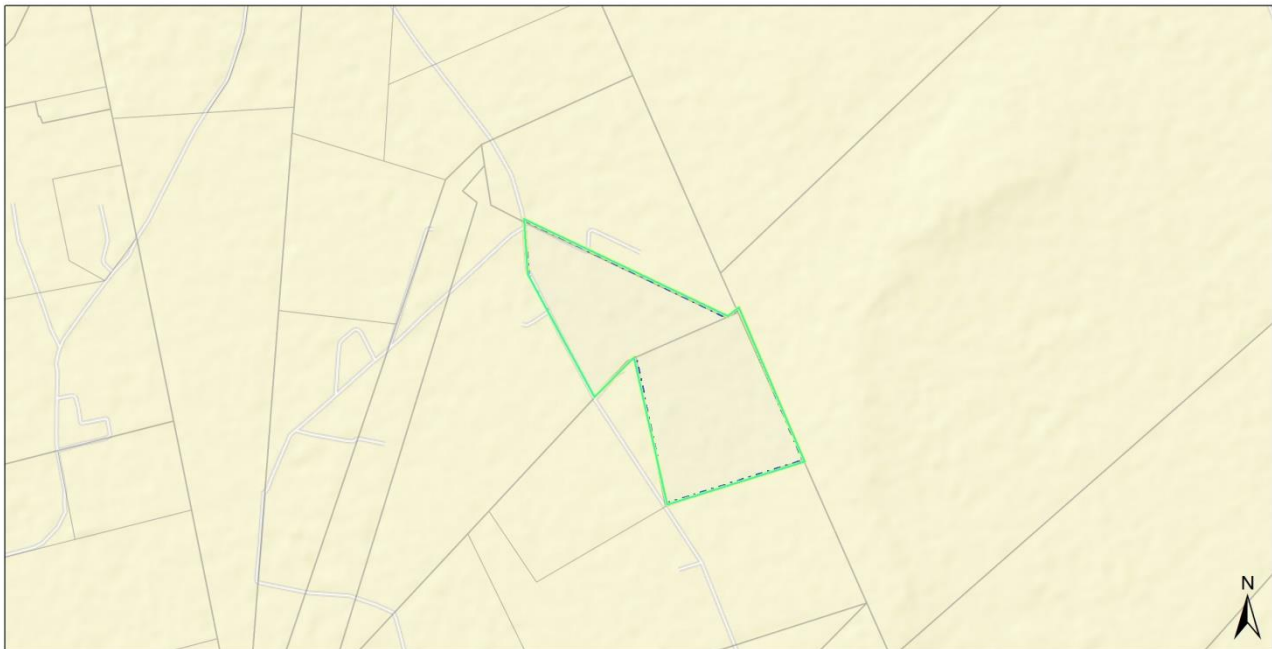
Legend

- | | | |
|---------------------------------------|--------------|--------------------------|
| Viakfontein Solar PV1 Boundaries | Public Place | Low |
| Site Area | Erven | Very High |
| EIA Application Development Footprint | Farm Portion | High |
| EIA Application Site | Farm | Medium |
| National Jurisdiction Area | Agri Holding | RFI Combined Sensitivity |

0 1.25 2.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright: 2023
 National Department of Environmental Affairs,
 Government of South Africa

Landscape Sensitivities



16 May 2023

Legend

- | | | |
|---------------------------------------|--------------|--|
| Viakfontein Solar PV1 Boundaries | Public Place | Low |
| Site Area | Erven | Very High |
| EIA Application Development Footprint | Farm Portion | High |
| EIA Application Site | Farm | Medium |
| National Jurisdiction Area | Agri Holding | Landscape (Solar) Combined Sensitivity |

0 1.25 2.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright: 2023
 National Department of Environmental Affairs,
 Government of South Africa



16 May 2023

- Legend**
- | | | |
|---------------------------------------|------------------|--|
| Viakfontein Solar PV1 Boundaries | Cadastral | Public Place |
| Site Area | Erven | Terrestrial Biodiversity Combined Sensitivity |
| EIA Application Development Footprint | Farm Portion | Very High |
| EIA Application Site | Farm | Low |
| National Jurisdiction Area | Agri Holding | |

0 1.25 2.5 km
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Copyright 2023
 National Department of Environmental Affairs,
 Government of South Africa

7.3 Sub-section 3: Declaration

The proponent/applicant or holder of the EA affirms that he/she will abide and comply with the prescribed impact management outcomes and impact management actions as stipulated in part B: section 1 of the generic EMPr and have the understanding that the impact management outcomes and impact management actions are legally binding. The proponent/applicant or holder of the EA affirms that he/she will provide written notice to the CA 14 day prior to the date on which the activity will commence of commencement of construction to facilitate compliance inspections.

Signature Proponent/applicant/ holder of EA

16 May 2023

Date