

Kleinfontein Solar PV1

on Portion 1 of the Farm Kleinfontein No 369, Free State Province

SITE VERIFICATION REPORT

Background to the Site Verification Sensitivity Report

In terms of the gazetted protocol, a site sensitivity verification report must be submitted that:

- confirms or disputes the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.;
- contains a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity.

The DFFE Screening Tool Report dated 2 June 2023 is attached under Addendum B(1)(a) and should be read with this document.

The following sensitivities identified in the DFFE Screening Tool Report are indicative only and were verified by suitably qualified persons (the EAP or relevant specialist) which guided the extent of specialist assessments undertaken. More details are provided in the relevant specialist reports contained in Appendix E of the Final Basic Assessment Report.

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			

Content of the Site Verification Sensitivity Report

The following is supplied with this document:

- Site Verification Table
- The DFFE Screening Tool Report Sensitivity Maps
- The Combined Environmental Sensitivity Report that resulted from Site Verification

SITE VERIFICATION TABLE

Impact Assessment	Motivation for assessment done or excluded	DFFE Screening Tool Sensitivity	EAP / Specialist Rating : Confirm or dispute the DFFE Screening Tool
Agricultural Impact Assessment	<p>An Agricultural Agro-Ecosystem Specialist Assessment was done (as required in terms of the NEMA protocol) and is summarised in Chapter 6, paragraph 6.6 and is included as Appendix E(8) of this report.</p>	High Sensitivity	<p>Specialist disputes the DFFE Screening Tool Rating</p> <p>All the land that is rated high sensitivity in the DFFE Screening Tool, is rated as such because those fields are classified as cropland in the data set used by the screening tool. The field-verified and updated indication of which lands should be classified as croplands were done. All other land should no longer be classified as cropland or allocated high sensitivity because of it.</p> <p>The whole of the Kleinfontein site has continued to be cropped but is becoming increasingly marginal and high risk. An investigation of the soils across the site shows them to be limited by poor drainage and shallower depths,</p> <p>The PV development will only utilise land that was identified as having insufficient land capability for viable and sustainable crop production and is therefore only good enough for grazing. There is not a scarcity of such agricultural land in South Africa and it is therefore considered to be below the threshold for being prioritised for conservation as agricultural production land.</p> <p>The impact of the proposed developments on the agricultural production capability of the site is assessed as being acceptable (LOW)</p> <p>The specialist report contains a motivation and evidence of different use of the land and environmental sensitivity.</p>

Landscape / Visual Impact Assessment	A <i>Visual Impact Assessment</i> was done and is summarised in Chapter 6, paragraph 6.5.2 and included as Appendix E(7) of this report.	Very High	<p>The Specialist disputes the DFFE Screening Tool Rating</p> <p>No significant landscape or visual resources were located within the project zone of visual influence, with receiving landscape partially degraded by the large Eskom Merensky Main transmission Substation (MTS), numweoure powerlines across the area and background views of degraded mining landscapes. No receptors sensitive to landscape change were identified. The specialist finding is the site should have a visual sensitivity rating of MEDIUM TO LOW.</p> <p>The specialist report contains a motivation and evidence of different use of the land and environmental sensitivity. Refer to Pages 12 to 14 of the specialist assessment.</p>
Archaeological and Cultural Heritage Impact Assessment	A Heritage Impact Assessment which includes an Archaeological Specialist Study was done and is summarised in Chapter 6, paragraph 6.4.1 and included under Appendix E(5) of this report.	Low	<p>Specialist confirms the DFFE Screening Tool Rating</p> <p>No archaeological resources had been identified within the project site .</p> <p>The specialist report contains a motivation and evidence of different use of the land and environmental sensitivity.</p>
Palaeontology Impact Assessment	A Palaeontological Desktop Study was done and is summarised in Chapter 6, paragraph 6.4.2 is and included under Appendix E(5) of this report.	Very high	<p>Specialist disputes the DFFE Screening Tool Rating</p> <p>Based on experience and the lack of any previously recorded fossils from the area, it is extremely unlikely that any fossils would be preserved in the overlying deep soils and sands of the Quaternary. In</p>

			<p>the northernmost section of Kleinfontein farm only north of the proposed grid connection (outside the PV area), there is a very small chance that fossils may occur in the shales below ground of the early Permian Vryheid Formation. The impact on the palaeontological heritage would be LOW, therefore, as far as the palaeontological is concerned, the projects should be authorised.</p>
<p>Terrestrial Biodiversity Impact Assessment</p>	<p><i>A Terrestrial Ecological Assessment</i> was done and is summarised in Chapter 6.3.1 and is included under Appendix E(1) of this report.</p>	<p>Very High</p>	<p>Specialist disputes the DFFE Screening Tool Rating</p> <p>The specialist disputes the rating because the site verification confirmed the terrestrial biodiversity is LOW. This is due mainly to past and current agricultural activities on this site. The entire site is currently being cropped.</p> <p>The specialist report contains a motivation and evidence of different use of the land and environmental sensitivity. Refer also to Page 86.</p>
<p>Plant Species Assessment</p>	<p>This component is addressed under the Terrestrial Ecological Assessment as mentioned above. It is summarised in Chapter 6, paragraph 6.3.1 and is included under Appendix E(1) of this Report.</p>	<p>Low</p>	<p>Specialist confirms the DFFE Screening Tool Rating</p> <p>The specialist agrees with the sensitivity rating.</p> <p>The specialist report contains a motivation and evidence of different use of the land and environmental sensitivity. Refer also to Page 86.</p>
<p>Animal Species Assessment</p>	<p>This component is addressed under the Terrestrial Ecological Assessment</p>	<p>Low</p>	<p>Specialist confirms the DFFE Screening Tool Rating</p>

	<p>as mentioned above. It is summarised in Chapter 6, paragraph 6.3.1 and is included under Appendix E(1) of this Report.</p>		<p>The specialist agrees with the sensitivity rating.</p> <p>The specialist report contains a motivation and evidence of different use of the land and environmental sensitivity. Refer also to Page 86.</p> <p><u>Avifauna</u></p> <p>The medium sensitivity classification is not linked to avifauna. The total assessment area contains no confirmed habitat for species of conservation concern (SCC) as defined in the Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial animal species (Government Gazette No 43855, 30 October 2020, namely listed on the IUCN Red List of Threatened Species or South Africa's National Red List website as Critically Endangered, Endangered or Vulnerable. The absence of SCC was confirmed during the site surveys. Based on these criteria, the study area is correctly classified as LOW sensitivity for avifauna.</p>
<p>Aquatic Biodiversity Impact Assessment</p>	<p><i>An Aquatic Impact Assessment</i> was done and is summarised in Chapter 6, paragraph 6.3.2 and is included under Appendix E(2) of this report.</p>	<p>Very high</p>	<p>Dispute the DFFE Screening Tool Rating</p> <p>The DFFE Screening Tool for Aquatic Biodiversity Combined Sensitivity has mapped the wider study area as being of LOW sensitivity, with only the smaller depression / old farmland on the Kleinfontein site given a very high rating. The specialist however confirmed that this watercourse feature has LOW sensitivity and can be demolished. The buffer zone of the wetland on the south-western boundary of the Kleinfontein PV site which extends onto the Kleinfontein site has a MEDIUM significance but has been excluded from the PV area and is therefore also considered LOW after mitigation.</p>

			Refer to Pages 41 and 42 of the specialist report.
Civil Aviation Assessment	The Civil Aviation Theme was rated as having a Low Sensitivity and therefore no specialist input is proposed. The SA Civil Aviation Authority (SACAA) was approach for comment and further actions will be based on their instructions.	Low	<p>The EAP confirms the sensitivity rating</p> <p>No obvious aviation infrastructure and/or facilities are situated in close proximity to the proposed PV site. No comment was received from the SACAA during the PPP undertaken for this project. There is no reason to dispute the rating of LOW.</p> <p>The EAP is confident that the PV solar farm will not impact negatively on any civil aviation activities.</p>
Defence Assessment	The Defence Theme was rated as having a Low sensitivity, and therefore no specialist input is proposed.	Low	<p>The EAP confirms the sensitivity rating</p> <p>No obvious defence infrastructure and/or facilities are situated in close proximity to the proposed PV site. There is no reason to dispute the rating of LOW.</p> <p>The EAP is confident that the PV solar farm will not impact negatively on any defence activity.</p>
RFI Assessment	The RFI theme was rated as low sensitivity; however an <i>RFI Assessment</i> was done and is summarised in Chapter 7, paragraph 7.3 and is included under Appendix	Low	<p>The specialist confirms the DFFE Screening Tool Rating</p> <p>Both areas identified by the DFFE screening tool are more than 8km from the Kleinfontein Solar PV1 with no direct line of sight from the</p>

F(3) of this report.

Kopanang Gold Plant. Pathloss over this distance is high enough to have no significant RFI or EMI impact on the electrical infrastructure at the gold plant.

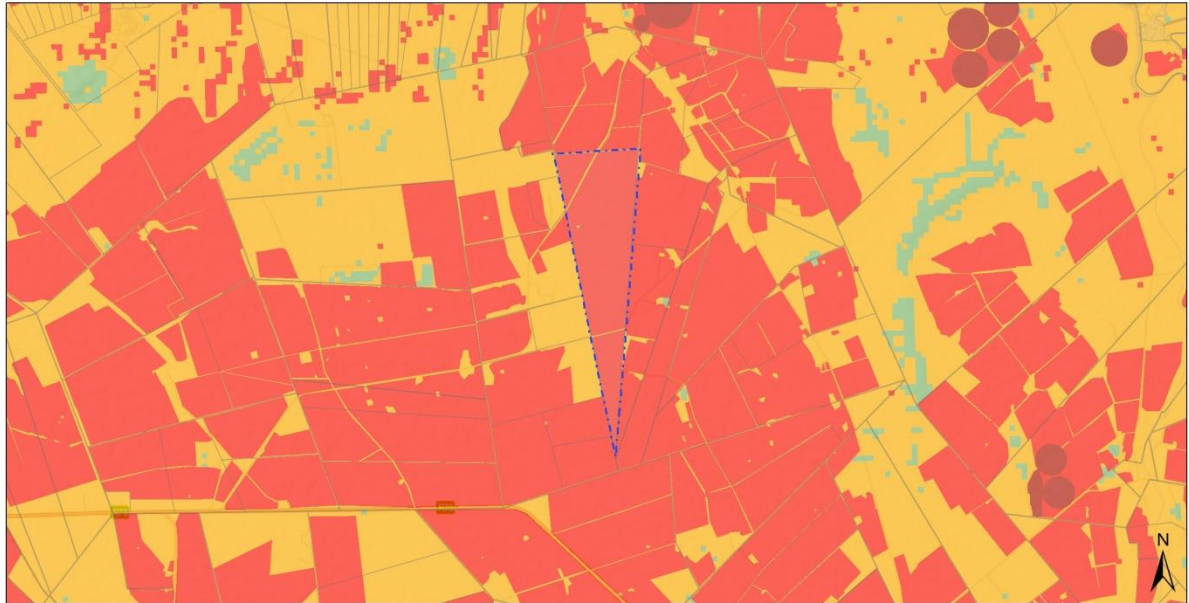
The specialist report contains a more detailed motivation for this recommendation.

The specialist agrees with the sensitivity rating being **LOW**.

DFFE Screening Tool Sensitivity Maps



Agricultural Sensitivities



2 June 2023

Legend

- | | | | |
|---------------------------------------|--------------|---|------|
| Site Area | Erven | Public Place | Low |
| EIA Application Development Footprint | Farm Portion | Agriculture Combined Sensitivity | |
| EIA Application Site | Farm | Very High | High |
| National Jurisdiction Area | Agri Holding | Medium | |

0 2.75 5.5 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



2 June 2023

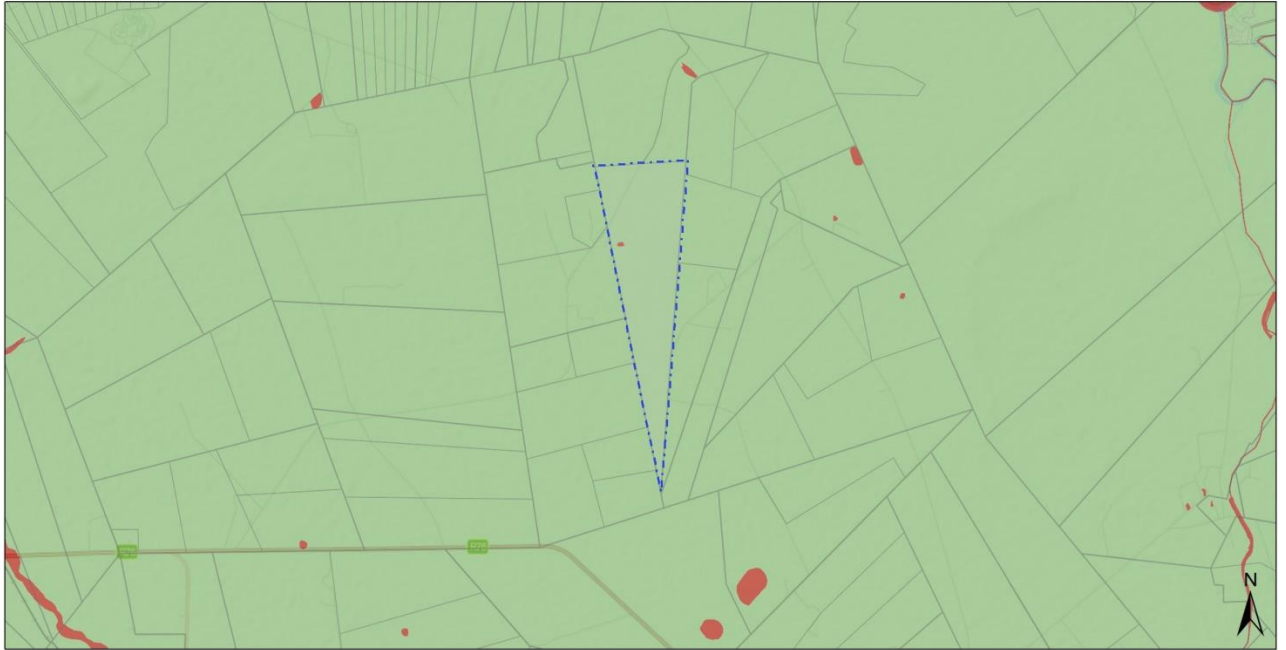
Legend

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

0 2.75 5.5 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



2 June 2023

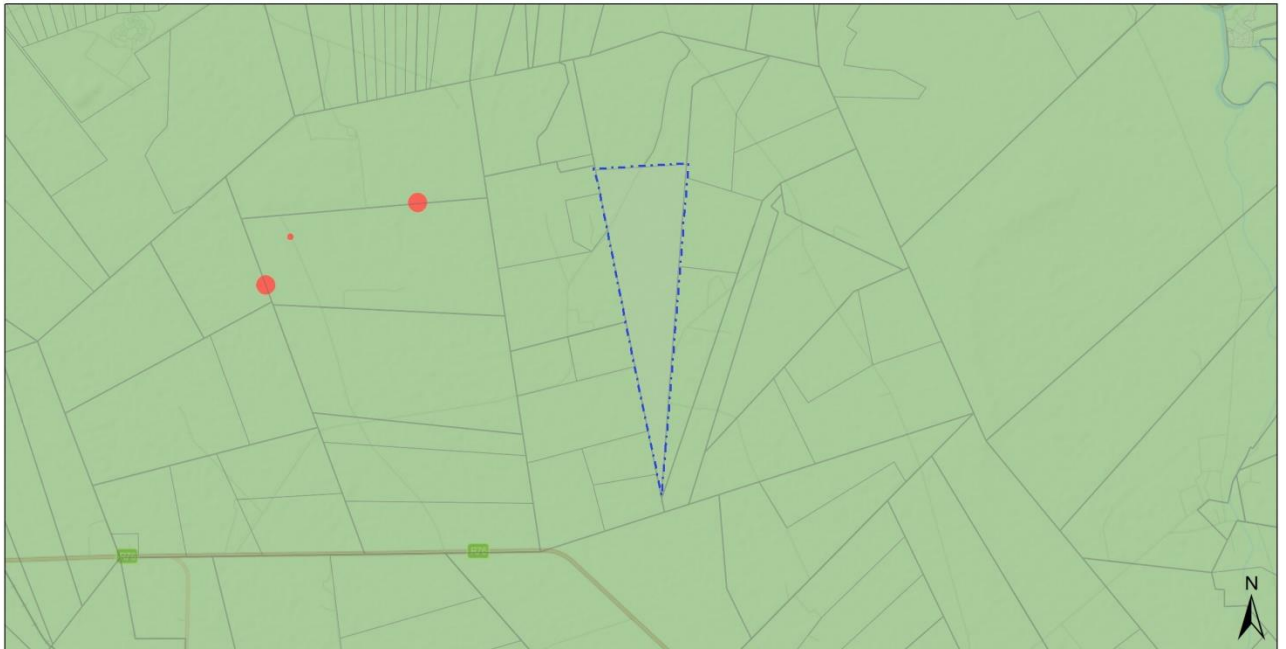
Legend

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

0 2.75 5.5 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

Archaeological and Cultural Heritage Sensitivities



2 June 2023

Legend

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

0 2.75 5.5 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

Avian Sensitivities



2 June 2023

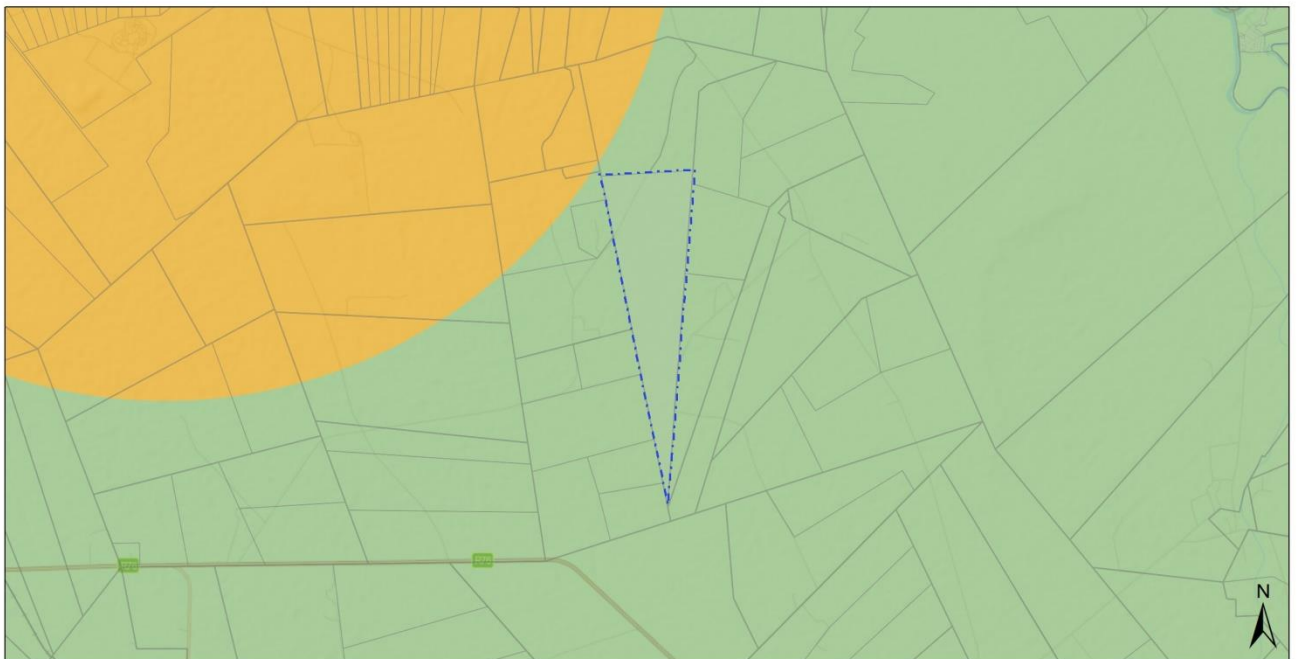
Legend

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

0 2.75 5.5 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

Civil Aviation Sensitivities



2 June 2023

Legend

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

0 2.75 5.5 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

Defence Sensitivities



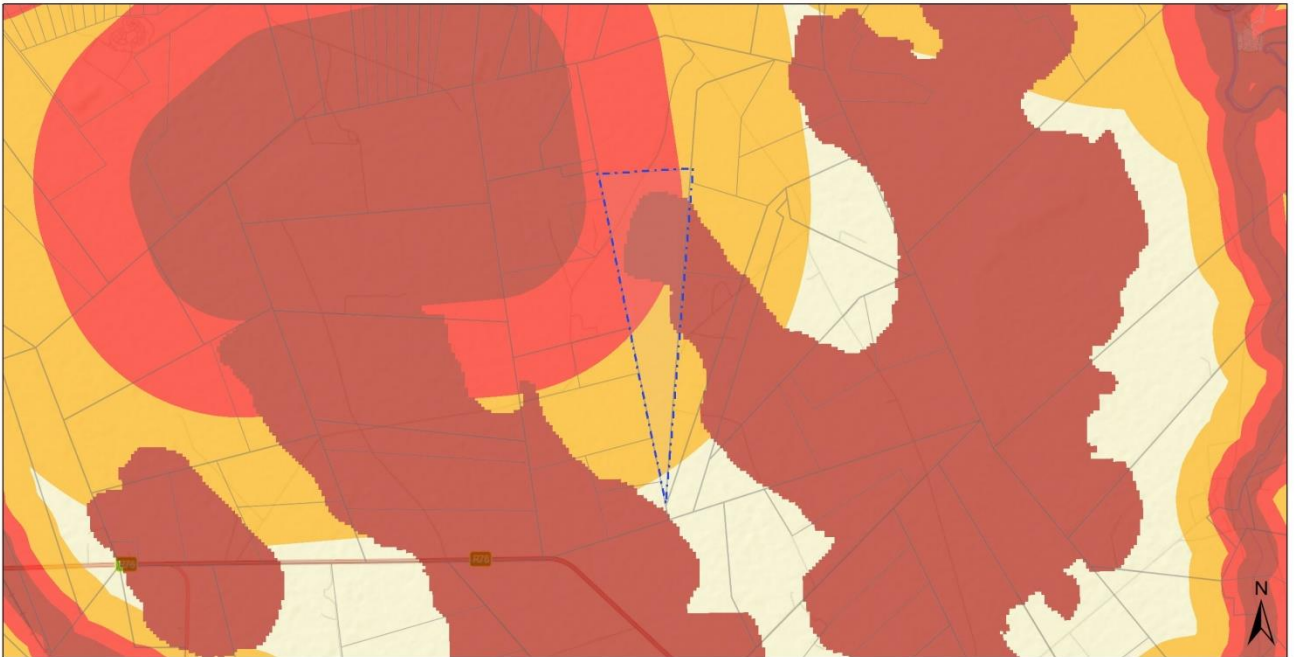
2 June 2023

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

0 2.75 5.5 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



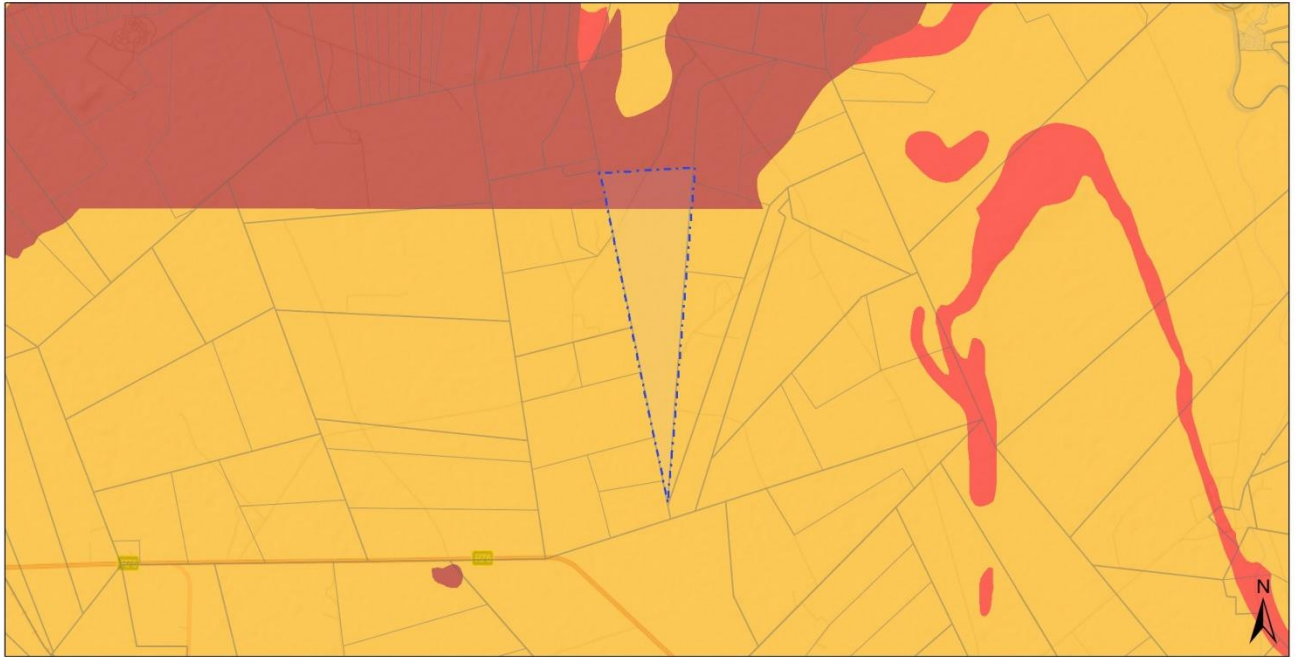
2 June 2023

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

0 2.75 5.5 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



2 June 2023

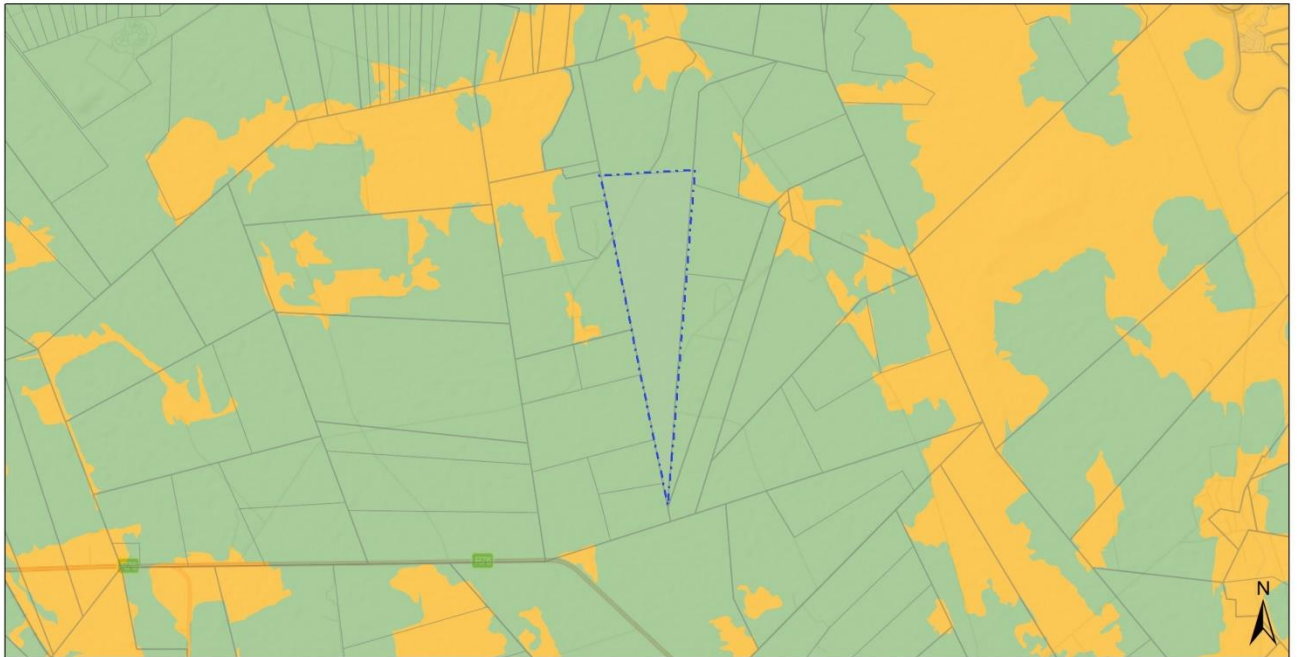
Legend

- | | | | |
|---------------------------------------|--------------|---|-----|
| Site Area | Erven | Public Place | Low |
| EIA Application Development Footprint | Farm Portion | Palaeontology Combined Sensitivity | |
| EIA Application Site | Farm | Very High | |
| National Jurisdiction Area | Agri Holding | High | |
| | | Medium | |

0 2.75 5.5 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



2 June 2023

Legend

- | | | | |
|---------------------------------------|--------------|---|-----|
| Site Area | Erven | Public Place | Low |
| EIA Application Development Footprint | Farm Portion | Plant Species Combined Sensitivity | |
| EIA Application Site | Farm | Very High | |
| National Jurisdiction Area | Agri Holding | High | |
| | | Medium | |

0 2.75 5.5 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



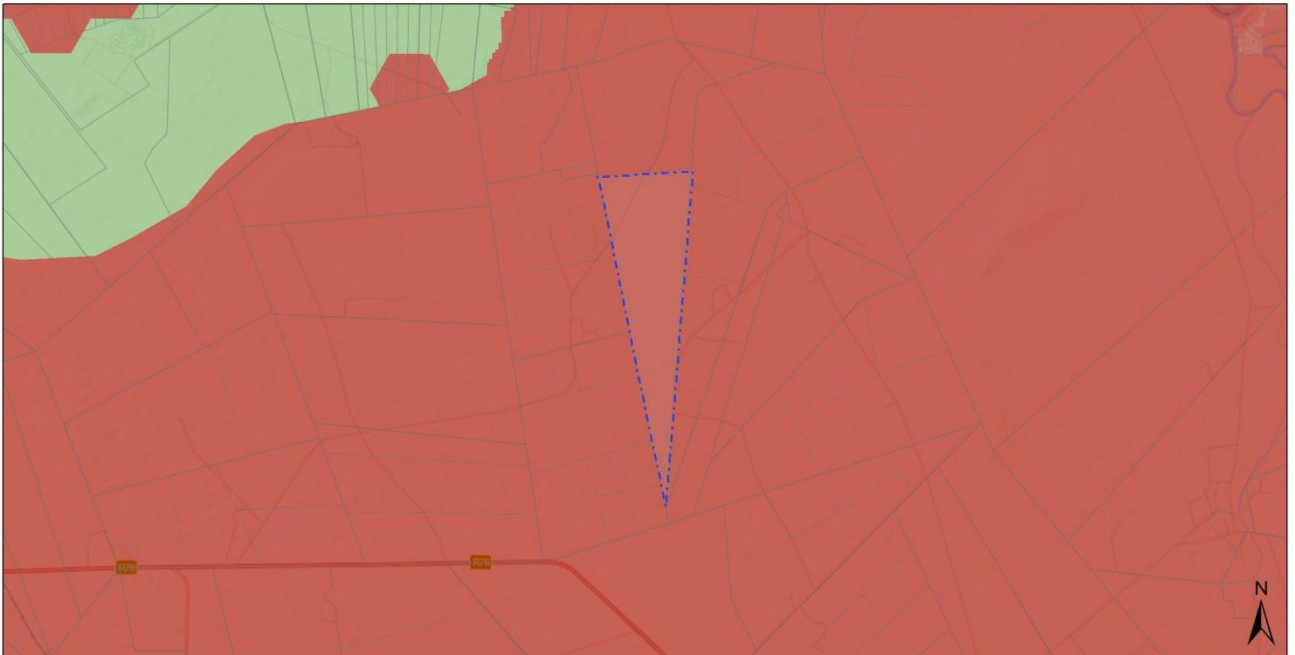
2 June 2023

- | | | | |
|--|---------------------------------------|---|------------------------------------|
| Legend | | | |
| Site Area | <input type="checkbox"/> Erven | <input type="checkbox"/> Public Place | <input type="checkbox"/> Low |
| <input type="checkbox"/> EIA Application Development Footprint | <input type="checkbox"/> Farm Portion | <input type="checkbox"/> RFI Combined Sensitivity | <input type="checkbox"/> Very High |
| <input type="checkbox"/> EIA Application Site | <input type="checkbox"/> Farm | <input type="checkbox"/> High | |
| <input type="checkbox"/> National Jurisdiction Area | <input type="checkbox"/> Agri Holding | <input type="checkbox"/> Medium | |

0 2.75 5.5 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

Terrestrial Biodiversity Sensitivities



2 June 2023

- | | | | |
|--|---------------------------------------|---------------------------------------|--|
| Legend | | | |
| Site Area | <input type="checkbox"/> Erven | <input type="checkbox"/> Public Place | <input type="checkbox"/> Terrestrial Biodiversity Combined Sensitivity |
| <input type="checkbox"/> EIA Application Development Footprint | <input type="checkbox"/> Farm Portion | <input type="checkbox"/> Very High | |
| <input type="checkbox"/> EIA Application Site | <input type="checkbox"/> Farm | <input type="checkbox"/> Low | |
| <input type="checkbox"/> National Jurisdiction Area | <input type="checkbox"/> Agri Holding | | |

0 2.75 5.5 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

Combined Environmental Sensitivity Map resulting from Site Verifications

Mercury Cluster Solar PV Project: Kleinfontein Solar PV1 on Portion 1 of the Farm Kleinfontein No 369, Free State Province

Combined Environmental Sensitivity Map

