

Generic EMP: 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	Zaaipiaats 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

Zaaiplaats Solar PV1

7.1.4 Description of the project

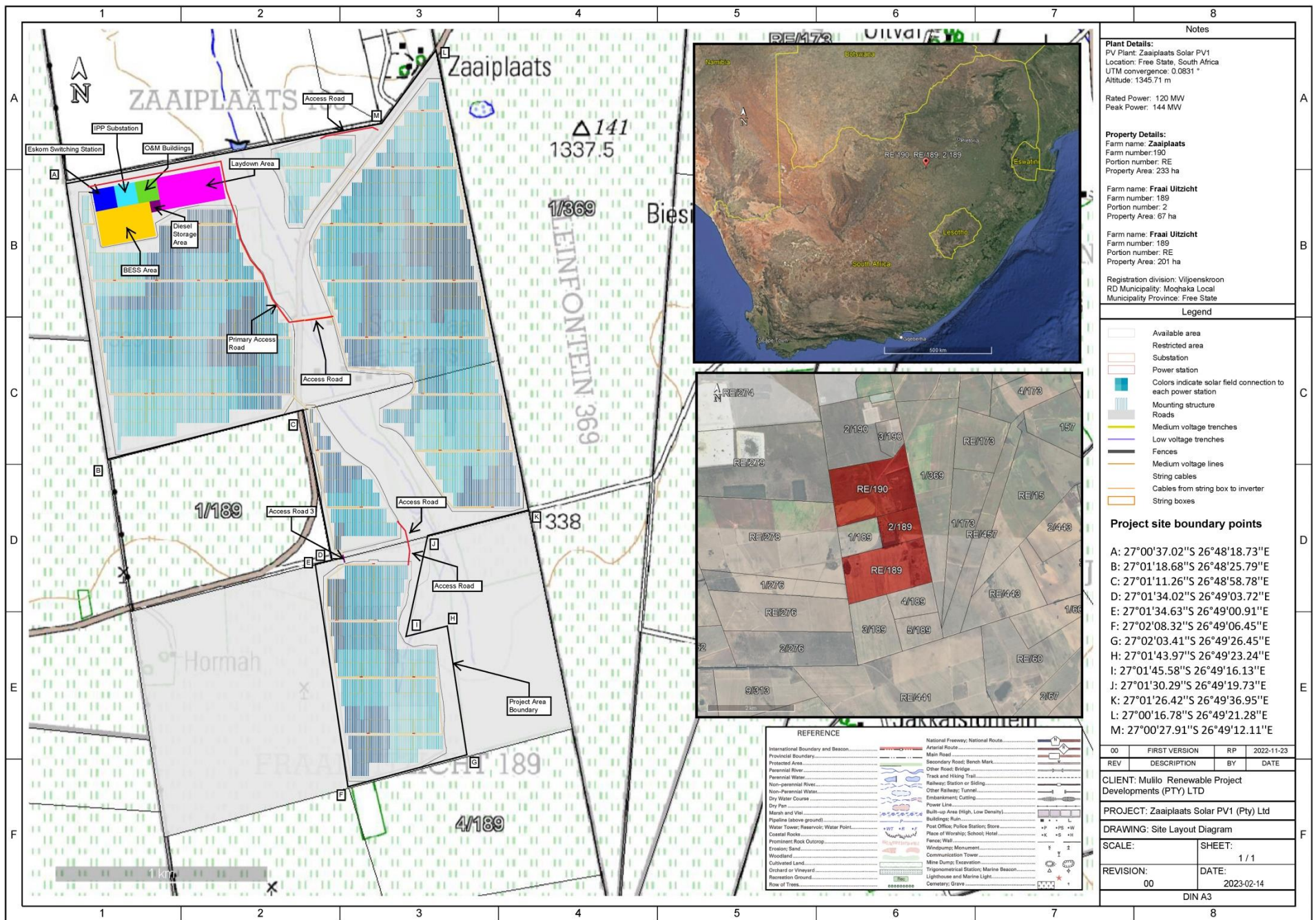
The Zaaiplaats Solar PV1 facility will have a contracted capacity of up to 120MW with a total development footprint of approximately 281 hectares in size.

Infrastructure associated with the Zaaiplaats 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 • Transformers • Cabling between panels • Total project footprint area is approximately 281 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	<p>Access is required for the purpose of the Zaaiplaats Solar PV1 as per the following:</p> <p><u>Primary (Main) access point for road to the IPP substation area</u></p> <ul style="list-style-type: none"> • S729 Coordinates: 27° 0'57.96"S 26°48'58.26"E <p><u>Secondary (Construction & maintenance) access points</u></p> <ul style="list-style-type: none"> ○ S729 – Coordinates: 27° 0'57.96"S 26°48'58.26"E ○ S729 – Coordinates: 27° 0'28.98"S 26°49'12.00"E ○ T3762 – Coordinates: 27° 1'31.31"S 26°49'16.39"E ○ T3762 – Coordinates: 27° 1'31.31"S 26°49'16.39"E <ul style="list-style-type: none"> • The main access road up to the IPP substation area will be approximately 1 500m (1,5km) long and approximately 8m wide. • All proposed access roads will be developed to approximately 8m wide. • All proposed access roads, including the main access point, will align with existing tracks and routes where possible. • 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. • All 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 not exceeding 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

	<p>backup diesel generators at the substation. The 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 Zaaiplaats Solar PV1 provided on the following page. The position of the IPP substation is indicated in light blue.



Notes

Plant Details:
 PV Plant: Zaaiplaats Solar PV1
 Location: Free State, South Africa
 UTM convergence: 0,0831°
 Altitude: 1345,71 m

Rated Power: 120 MW
 Peak Power: 144 MW

Property Details:
 Farm name: Zaaiplaats
 Farm number: 190
 Portion number: RE
 Property Area: 233 ha

Farm name: Fraal Uitzicht
 Farm number: 189
 Portion number: 2
 Property Area: 67 ha

Farm name: Fraal Uitzicht
 Farm number: 189
 Portion number: RE
 Property Area: 201 ha

Registration division: Vrijlenkskroon
 RD Municipality: Mophaka Local
 Municipality Province: Free State

Legend

- Available area
- Restricted area
- Substation
- Power station
- Colors indicate solar field connection to each power station
- Mounting structure
- Roads
- Medium voltage trenches
- Low voltage trenches
- Fences
- Medium voltage lines
- String cables
- Cables from string box to inverter
- String boxes

Project site boundary points

- A: 27°00'37.02"S 26°48'18.73"E
- B: 27°01'18.68"S 26°48'25.79"E
- C: 27°01'11.26"S 26°48'58.78"E
- D: 27°01'34.02"S 26°49'03.72"E
- E: 27°01'34.63"S 26°49'00.91"E
- F: 27°02'08.32"S 26°49'06.45"E
- G: 27°02'03.41"S 26°49'26.45"E
- H: 27°01'43.97"S 26°49'23.24"E
- I: 27°01'45.58"S 26°49'16.13"E
- J: 27°01'30.29"S 26°49'19.73"E
- K: 27°01'26.42"S 26°49'36.95"E
- L: 27°00'16.78"S 26°49'21.28"E
- M: 27°00'27.91"S 26°49'12.11"E

REV	DESCRIPTION	BY	DATE
00	FIRST VERSION	RP	2022-11-23

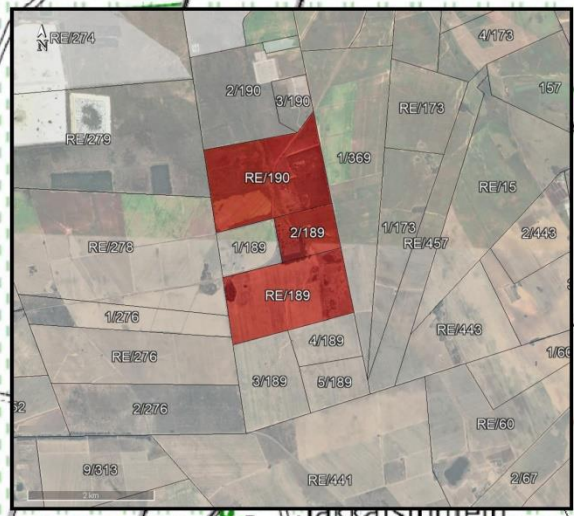
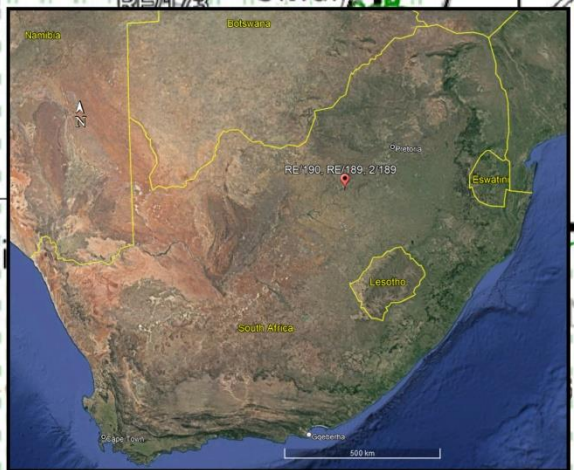
CLIENT: Mulo Renewable Project Developments (PTY) LTD

PROJECT: Zaaiplaats Solar PV1 (Pty) Ltd

DRAWING: Site Layout Diagram

SCALE:	SHEET:	1 / 1
REVISION:	DATE:	2023-02-14

DIN A3



REFERENCE

International Boundary and Beacon	National Freeway; National Route	Animal Route
Provincial Boundary	Main Road	Post Office; Police Station; Store
Protected Area	Secondary Road; Bench Mark	Place of Worship; School; Hotel
Perennial River	Other Road; Bridge	Windup; Monument
Non-perennial River	Track and Hiking Trail	Communication Tower
Non-perennial Water	Railway Station or Sliding	Mine Dumps; Excavation
Dry Water Course	Other Railway; Tunnel	Trigonometrical Station; Marine Beacon
Dry Pan	Embankment; Cutting	Lighthouse and Marine Light
Marsh and Vlei	Power Line	Cemetery; Grave
Pipeline (above ground)	Built-up Area (High, Low Density)	
Water Tower; Reservoir; Water Point	Buildings; Ruin	
Coastal Rocks	Post Office; Police Station; Store	
Prominent Rock Outcrop	Place of Worship; School; Hotel	
Erosion Scarp	Fence; Wall	
Woodland	Windup; Monument	
Cultivated Land	Communication Tower	
Orchard or Vineyard	Mine Dumps; Excavation	
Recreation Ground	Trigonometrical Station; Marine Beacon	
Row of Trees	Lighthouse and Marine Light	
	Cemetery; Grave	

7.1.5 Project location

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

The project is situated on the following two properties:

- The Remainder of Zaaiplaats No 190
- The Remainder of Fraai Uitzicht No 189
- Portion 2 of Fraai Uitzicht No 189

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	1	8	9	0	0	0	0	0
F	0	3	6	0	0	0	0	0	0	0	0	0	1	8	9	0	0	0	0	2
F	0	3	6	0	0	0	0	0	0	0	0	0	1	9	0	0	0	0	0	0

The coordinates of the IPP Substation is as follows:

North-western corner	27°00'37.53"S and 26°48'26.81"E
North-eastern corner	27°00'36.92"S and 26°48'30.34"E
South-eastern corner	27°00'40.05"S and 26°48'31.02"E
South-western corner	27°00'40.66"S and 26°48'27.46"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.

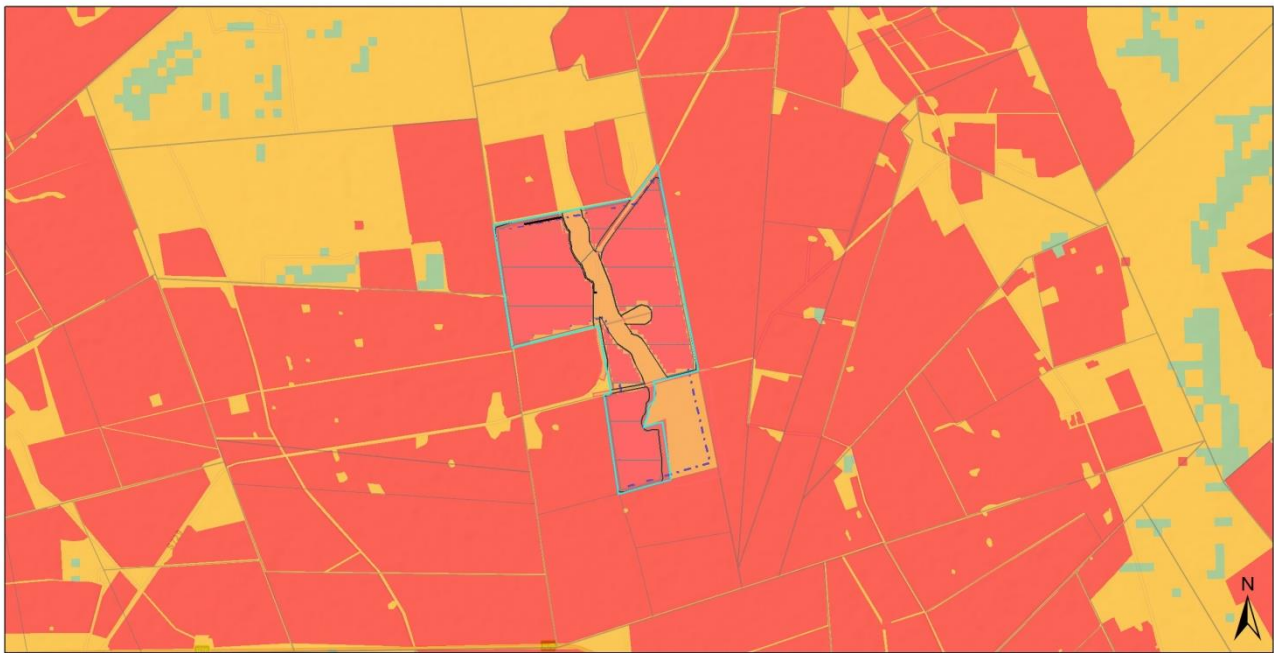
Key results from the Screening Tool Report are as follows:

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 12 October 2022.



Agricultural Sensitivities



12 October 2022

Legend

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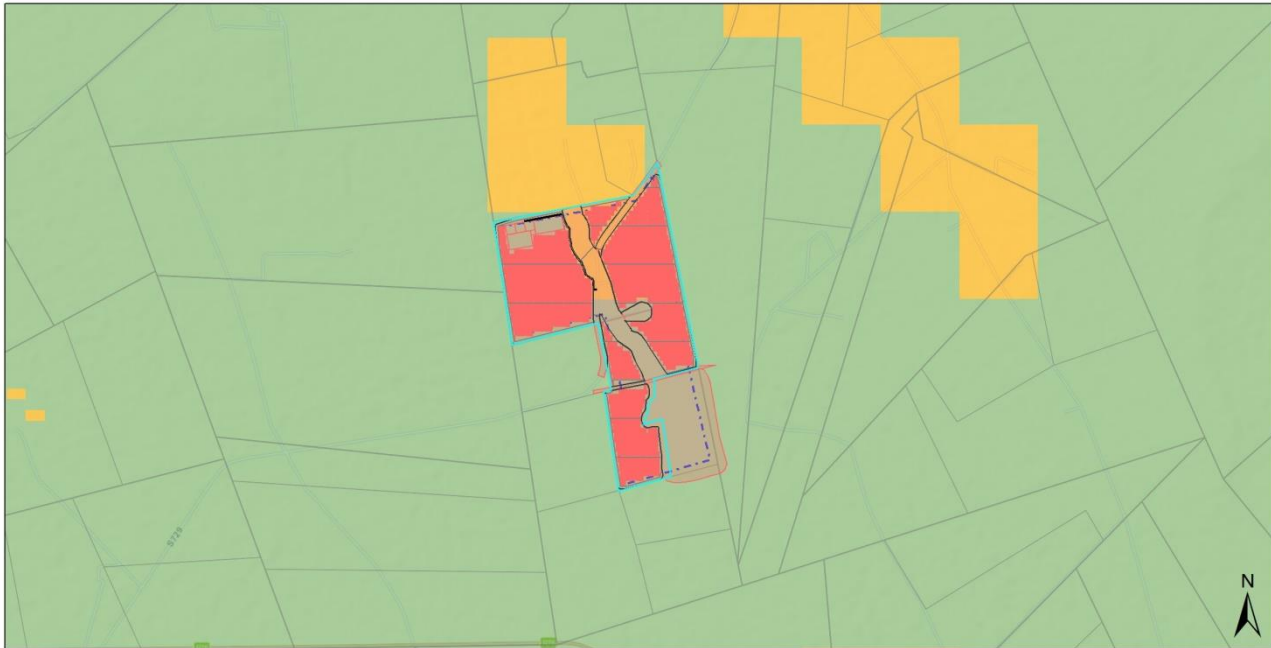
- Site Area
- EIA Application Development Footprint
- EIA Application Site
- National Jurisdiction Area
- Cadastre
- Erven
- Farm Portion
- Farm
- Agri Holding
- Public Place
- Agriculture Combined Sensitivity
- Very High
- High
- Medium
- Low

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

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Animal Species Sensitivities



12 October 2022

Legend

- kml-Zaaipiaats Solar PV1.kmz-045441895518362196
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- Line_CIVIL Roads_width6.011
- Line_CIVIL Fence_width1.021
- kml-Zaaipiaats Solar PV1.kmz-08089620511300266
- Site Area

- EIA Application Development Footprint
 - EIA Application Site
 - National Jurisdiction Area
- Cadastre**
- Erven
 - Farm Portion

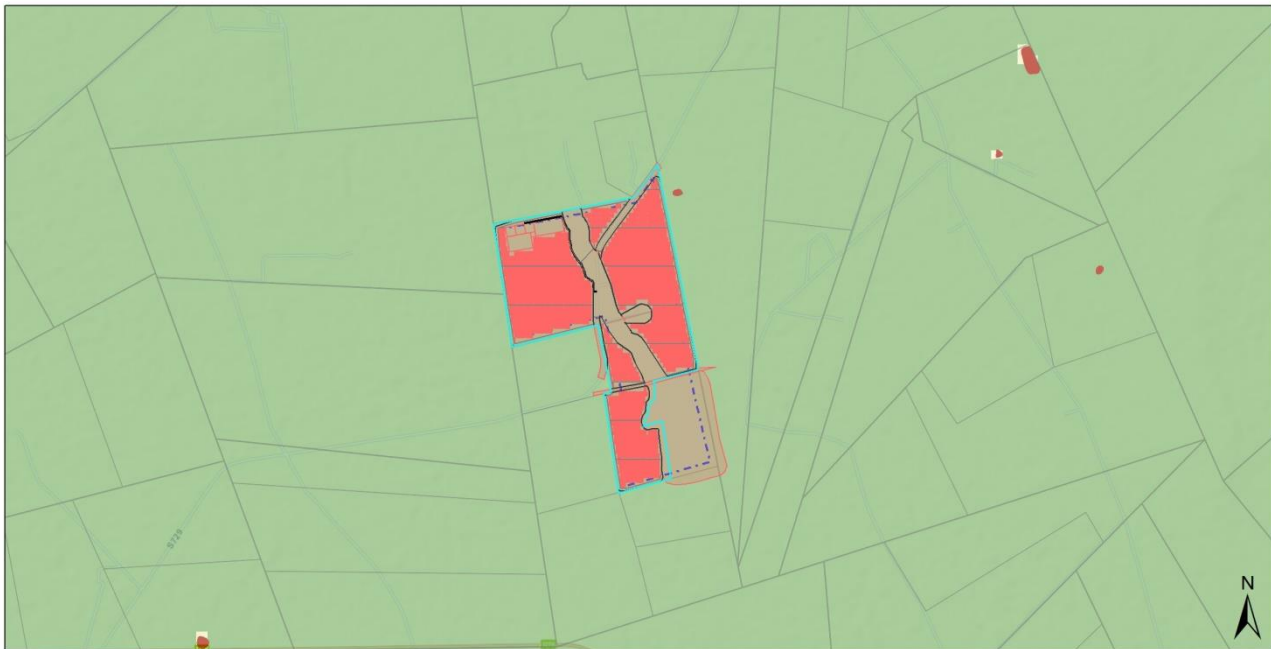
- Farm
 - Agri Holding
 - Public Place
- Animal Species Combined Sensitivity**
- Very High
 - High
 - Medium
 - Low

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

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Aquatic Sensitivities



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Legend

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- Line_CIVIL Fence_width1.021
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- Site Area

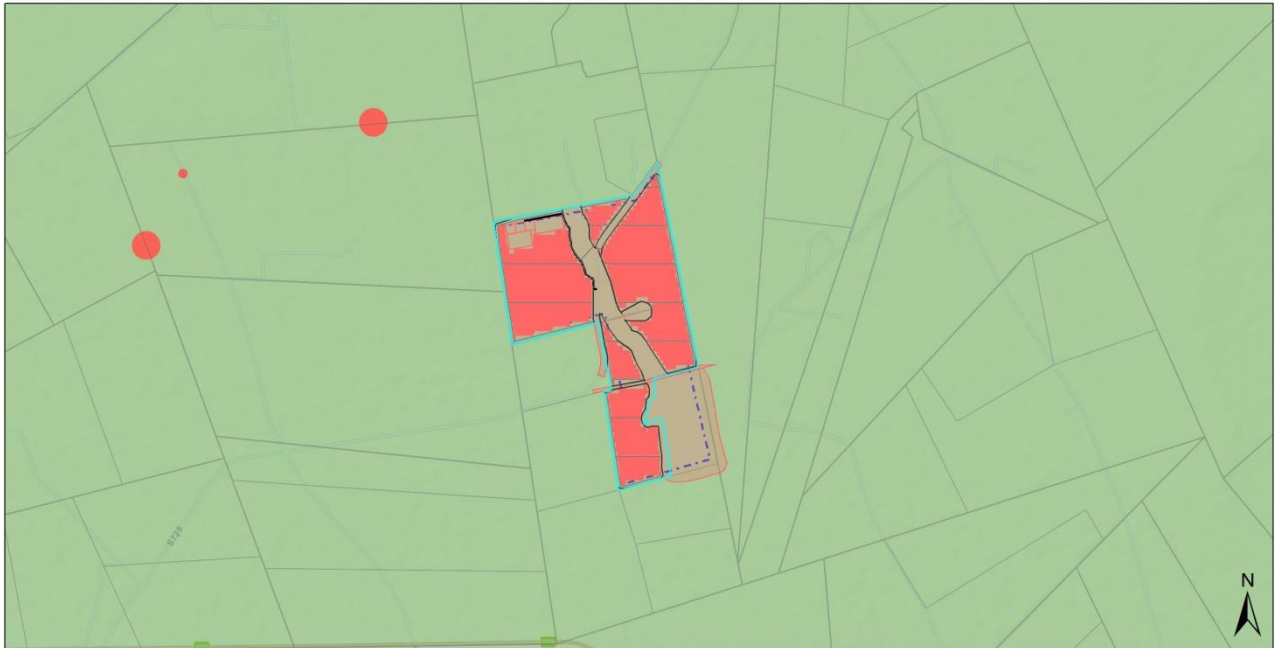
- EIA Application Development Footprint
 - EIA Application Site
 - National Jurisdiction Area
- Cadastre**
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

- Public Place
- Aquatic Biodiversity Combined Sensitivity**
- Very High
 - 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

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- Legend**
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 - s_ylw-pushpin27
 - Line_CIVIL Roads_width6.011
 - Line_CIVIL Fence_width1.021
 - kml-Zaaipplaats Solar PV1.kmz-08089620511300266

- Site Area
- EIA Application Development Footprint
- EIA Application Site
- National Jurisdiction Area

- Cadastral**
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

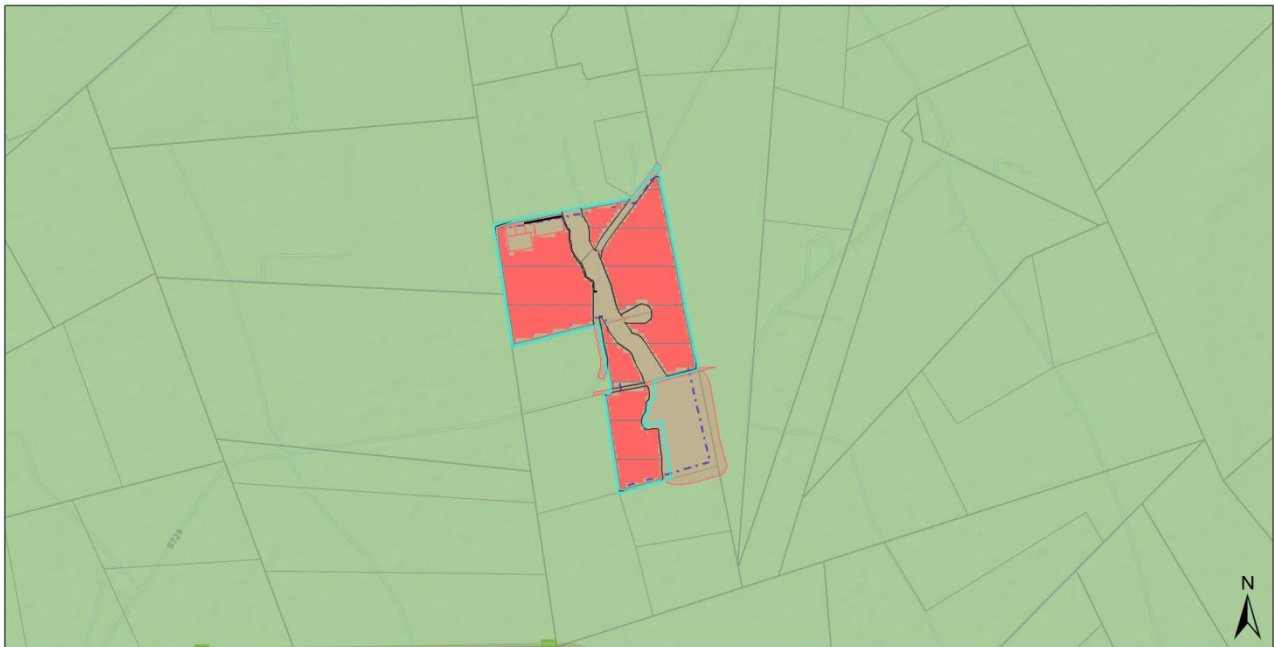
- Public Place

- Archaeological and Cultural Heritage Combined Sensitivity**
- Very High
 - High
 - Low



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- Legend**
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 - Line_CIVIL Fence_width1.021
 - kml-Zaaipplaats Solar PV1.kmz-08089620511300266

- Site Area
- EIA Application Development Footprint
- EIA Application Site
- National Jurisdiction Area

- Cadastral**
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

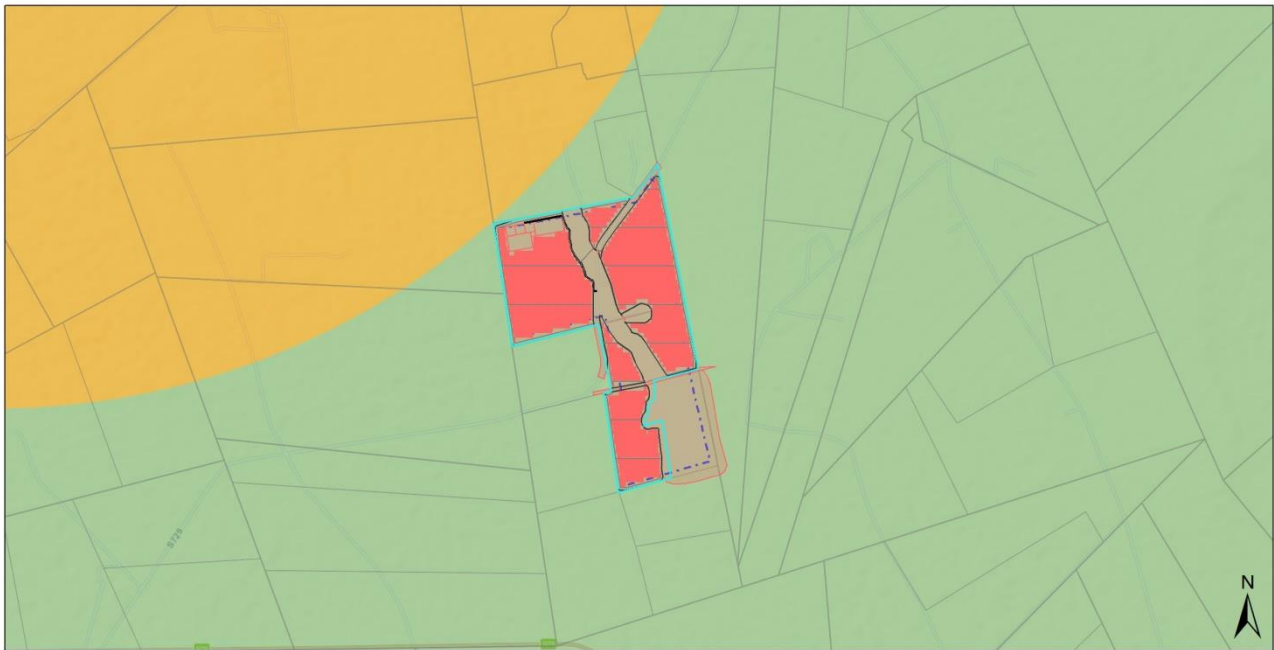
- Public Place

- Avian Combined Sensitivity**
- Very High
 - High
 - Medium
 - Low



Source: 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

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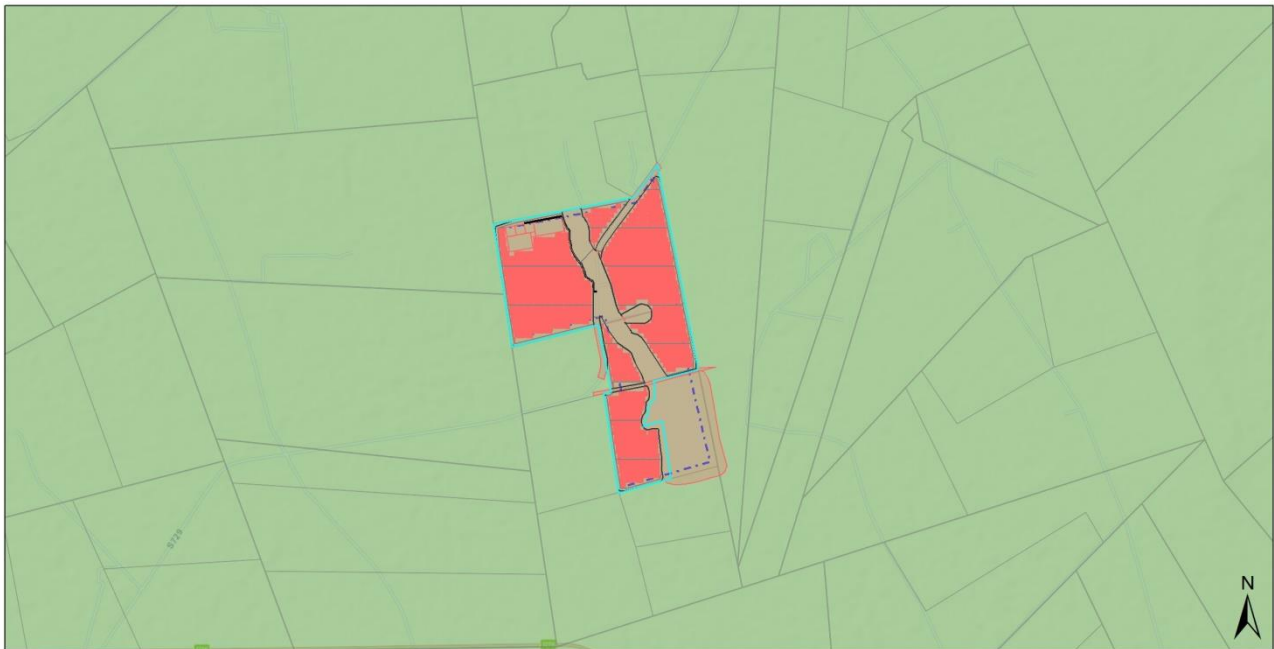
12 October 2022

- Legend**
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 - Line_CIVIL Roads_width6.011
 - Line_CIVIL Fence_width1.021
 - kml-Zaaipplaats Solar PV1.kmz-08089620511300266

- | | | |
|---------------------------------------|--------------|---|
| 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 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

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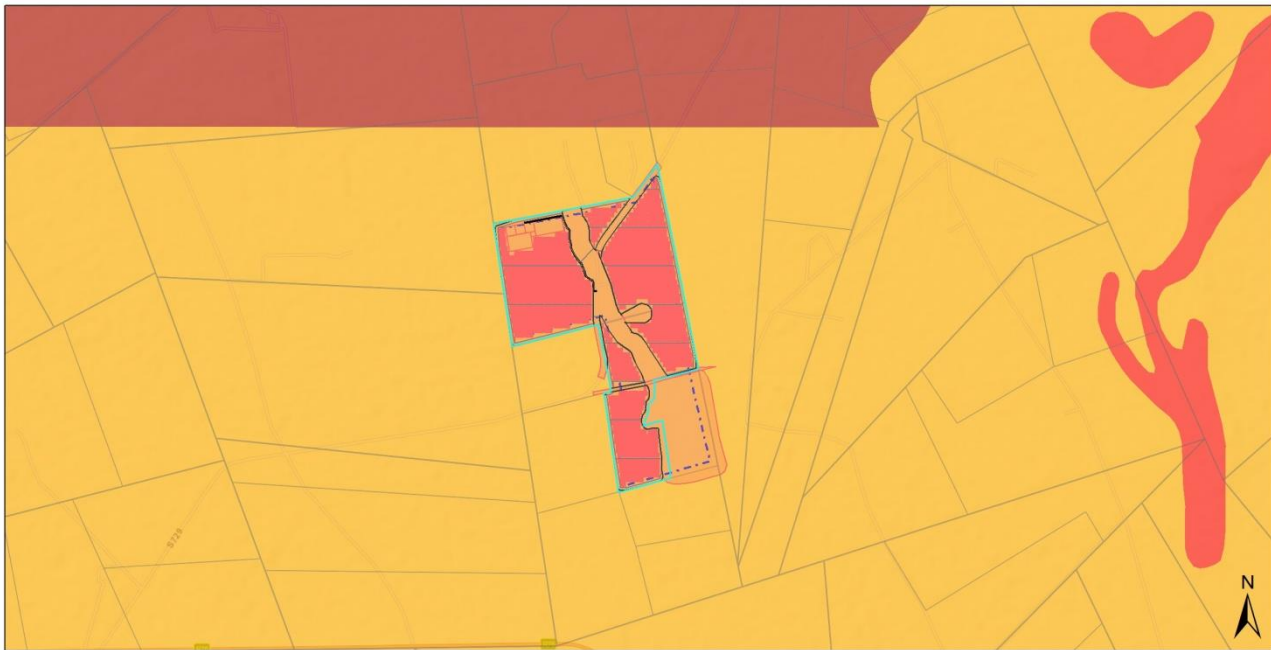
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 - Line_CIVIL Roads_width6.011
 - Line_CIVIL Fence_width1.021
 - kml-Zaaipplaats Solar PV1.kmz-08089620511300266

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

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Paleontological Sensitivities



12 October 2022

Legend

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- s_yfw-pushpin27
- Line_CIVIL Roads_width6.011
- Line_CIVIL Fence_width1.021
- kml-Zaaiplaats Solar PV1.kmz-08089620511300266

- Site Area
- EIA Application Development Footprint
- EIA Application Site
- ⋯ National Jurisdiction Area

- #### Cadastre
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

- #### Public Place
- Public Place

- #### Paleontology Combined Sensitivity
- Very High
 - High
 - Medium

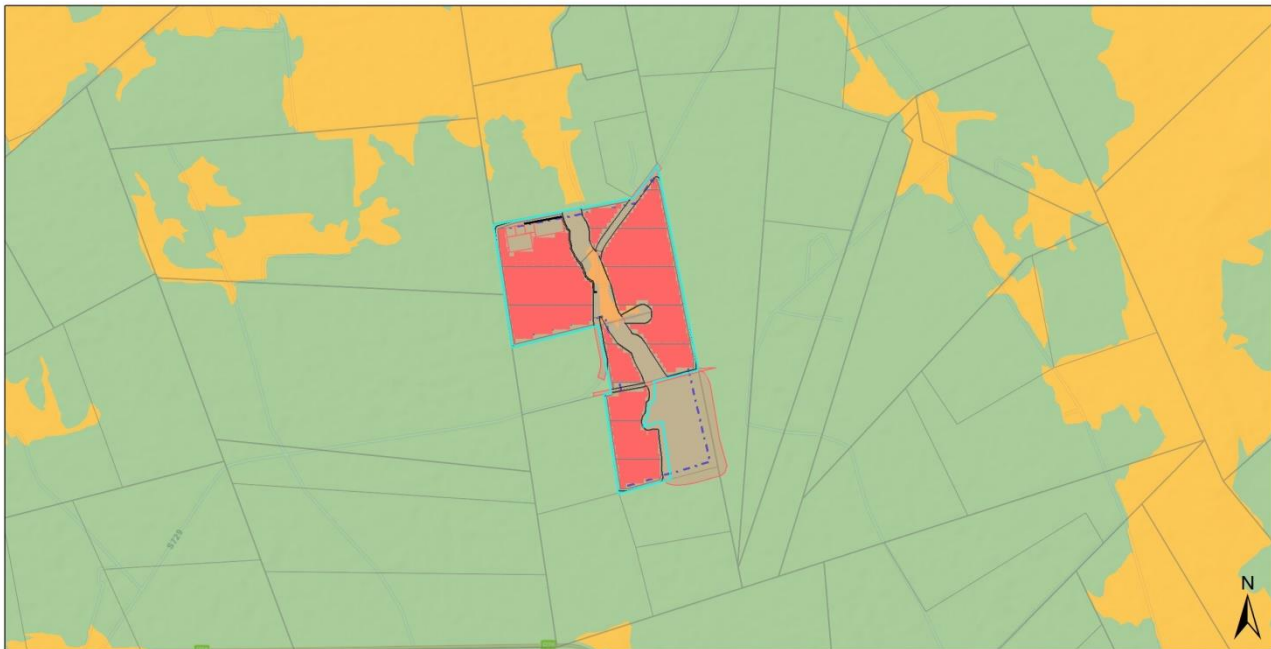
Low

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

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Plant Species Sensitivities



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Legend

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- s_yfw-pushpin27
- Line_CIVIL Roads_width6.011
- Line_CIVIL Fence_width1.021
- kml-Zaaiplaats Solar PV1.kmz-08089620511300266

- Site Area
- EIA Application Development Footprint
- EIA Application Site
- ⋯ National Jurisdiction Area

- #### Cadastre
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

- #### Public Place
- Public Place

- #### Plant Species Combined Sensitivity
- Very High
 - High
 - Medium

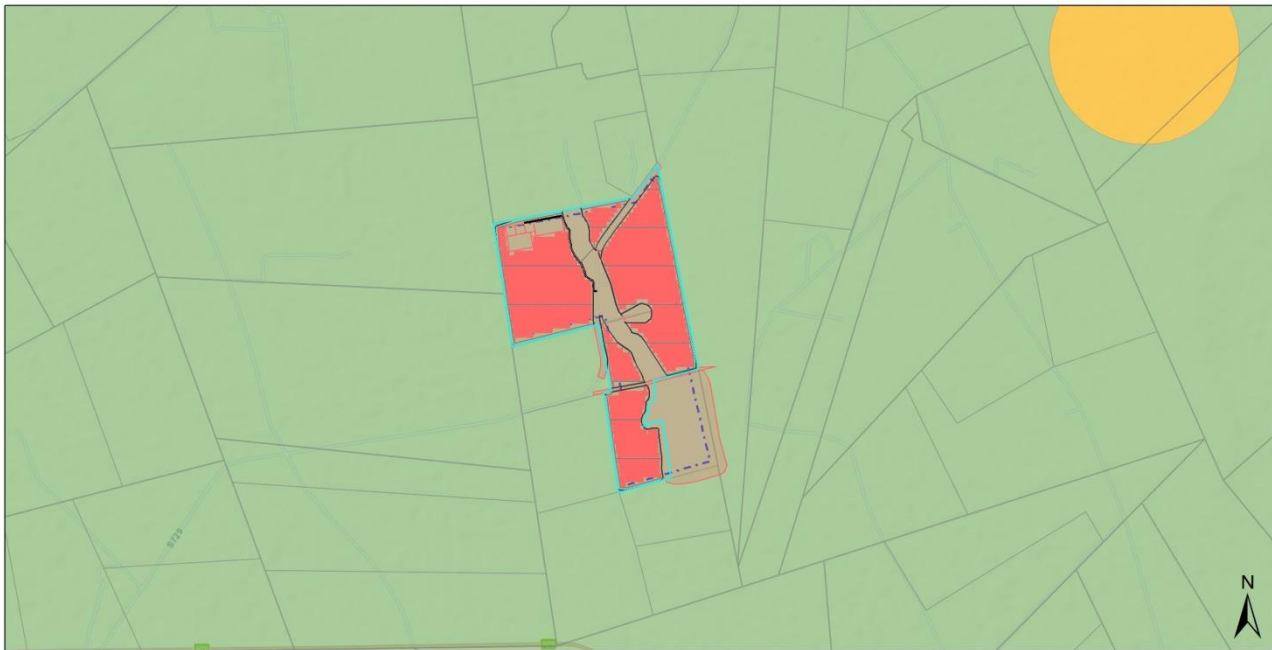
Low

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

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RFI Sensitivities



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Legend

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- s_yfw-pushpin27
- Line_CIVIL Roads_width6.011
- Line_CIVIL Fence_width1.021
- kml-Zaaiplaats Solar PV1.kmz-08089620511300266

- Site Area
- EIA Application Development Footprint
- EIA Application Site
- National Jurisdiction Area

- Cadastre**
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

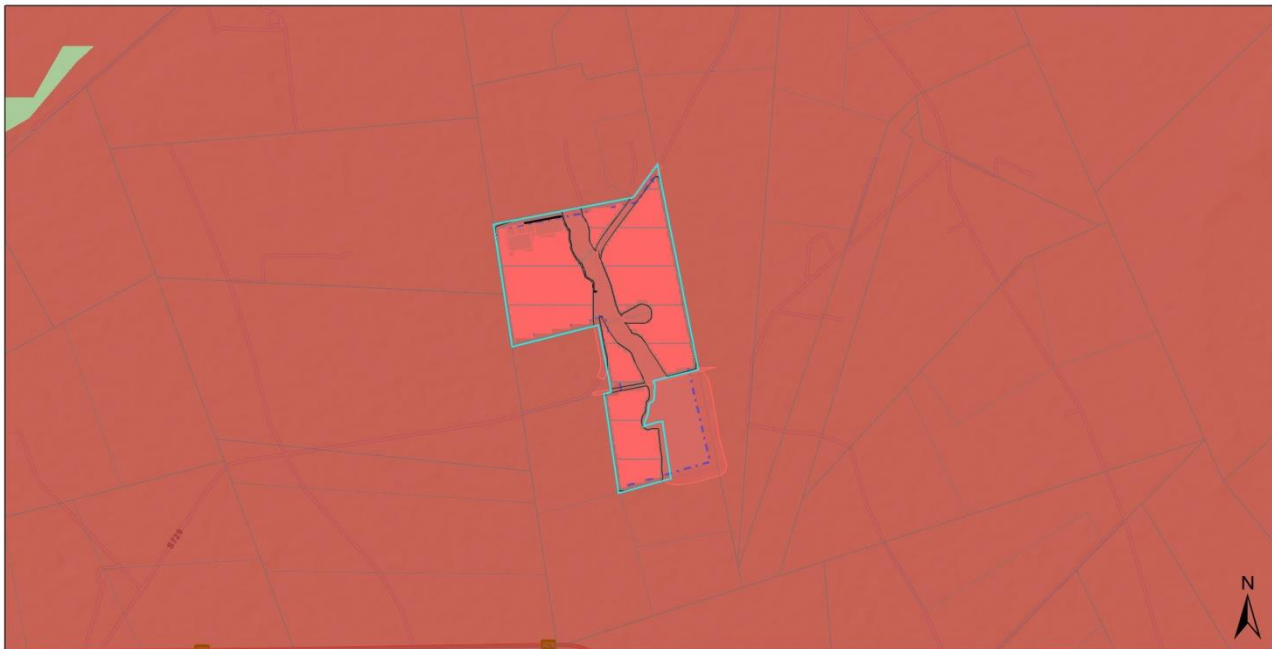
- Public Place
 - ≡ Low
- RFI Combined Sensitivity**
- Very High
 - High
 - Medium

0 1.75 3.5 km

Source: 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

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Terrestrial Biodiversity Sensitivities



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Legend

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- s_yfw-pushpin27
- Line_CIVIL Roads_width6.011
- Line_CIVIL Fence_width1.021
- kml-Zaaiplaats Solar PV1.kmz-08089620511300266

- Site Area
- EIA Application Development Footprint
- EIA Application Site
- National Jurisdiction Area

- Cadastre**
- Erven
 - Farm Portion
 - Farm
 - Agri Holding

- Public Place
 - ≡ Low
- Terrestrial Biodiversity Combined Sensitivity**
- Very High

0 1.75 3.5 km

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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 March 2023

Date