

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

**EIA Reference number:** 2022-03-0010

**Project name:** Nyarhi Solar Power Plant

**Project title:** The proposed Nyarhi Solar Power Plant, near Viljoenskroon, Free State province

**Date screening report generated:** 19/04/2022 12:27:46

**Applicant:** Nyarhi Solar Power Plant (RF)(Pty) Ltd

**Compiler:** Environamics Environmental Consultants

**Compiler signature:**

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

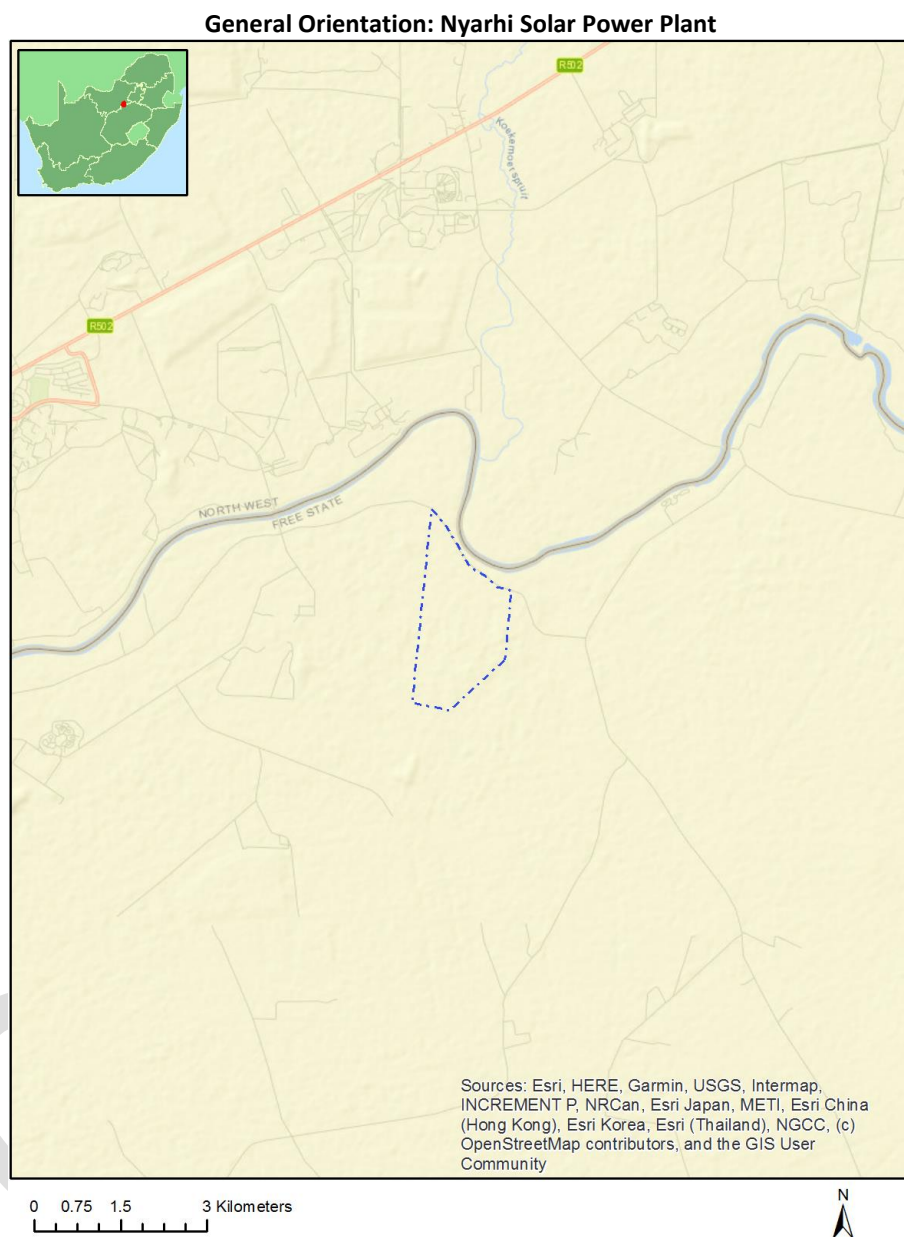


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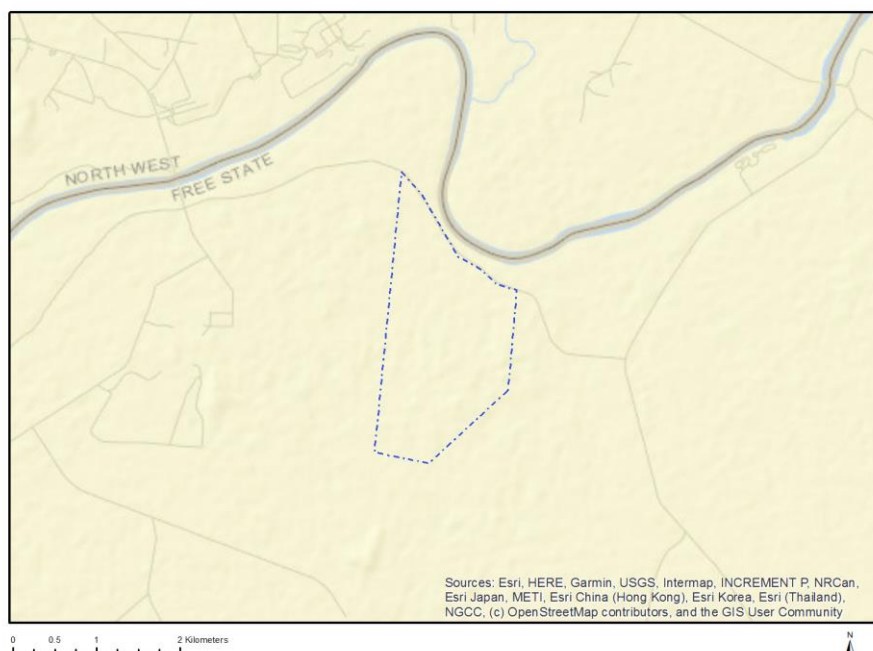
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# Proposed Project Location

## 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  | DIE HOEK      | 114          | 0       | 26°57'44.73S | 26°48'15.43E | Farm          |
| 2  | DOORNKOM-OOST | 447          | 0       | 26°57'47.69S | 26°48'35.09E | Farm          |
| 3  | DOORNPLAATS   | 599          | 0       | 26°59'35.91S | 26°48'55.28E | Farm          |
| 4  | DOORNPLAATS   | 599          | 0       | 26°59'24.4S  | 26°48'54.24E | Farm Portion  |
| 5  | DIE HOEK      | 114          | 1       | 26°57'54.96S | 26°48'20.4E  | Farm Portion  |
| 6  | DOORNKOM-OOST | 447          | 1       | 26°57'48.94S | 26°48'37.28E | Farm Portion  |

Development footprint<sup>1</sup> vertices:

No development footprint(s) specified.

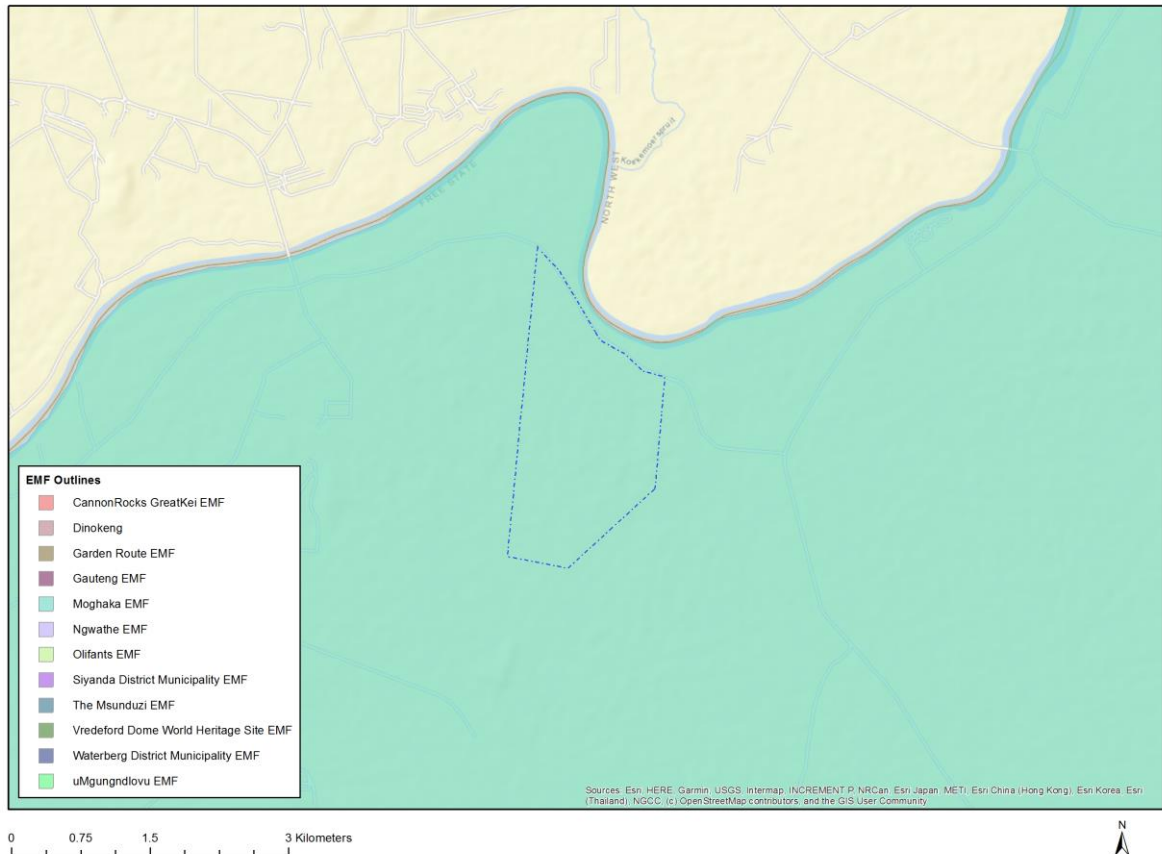
## Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

| No | EIA Reference No | Classification | Status of | Distance from proposed |
|----|------------------|----------------|-----------|------------------------|
|----|------------------|----------------|-----------|------------------------|

<sup>1</sup> "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.

|   |                     |          | application | area (km) |
|---|---------------------|----------|-------------|-----------|
| 1 | 12/12/20/2513/3     | Solar PV | Approved    | 6.8       |
| 2 | 14/12/16/3/3/2/777  | Solar PV | Approved    | 4.6       |
| 3 | 12/12/20/2513/1     | Solar PV | Approved    | 6.8       |
| 4 | 12/12/20/2513/2     | Solar PV | Approved    | 8.9       |
| 5 | 14/12/16/3/3/2/954  | Solar PV | Approved    | 25        |
| 6 | 12/12/20/2513/1/AM3 | Solar PV | Approved    | 6.8       |
| 7 | 12/12/20/2513/4     | Solar PV | Approved    | 6.8       |
| 8 | 14/12/16/3/3/2/778  | Solar PV | Approved    | 6.4       |

## Environmental Management Frameworks relevant to the application



| Environment<br>al<br>Management<br>Framework | LINK  |
|--|---|
| Moghaka EMF                                  | <a href="https://screening.environment.gov.za/ScreeningDownloads/EMF/Moghaka_LM_EMF_-_Final_EMF_Report_Rev2013-06.pdf">https://screening.environment.gov.za/ScreeningDownloads/EMF/Moghaka_LM_EMF - Final_EMF_Report_Rev2013-06.pdf</a> |

## 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:

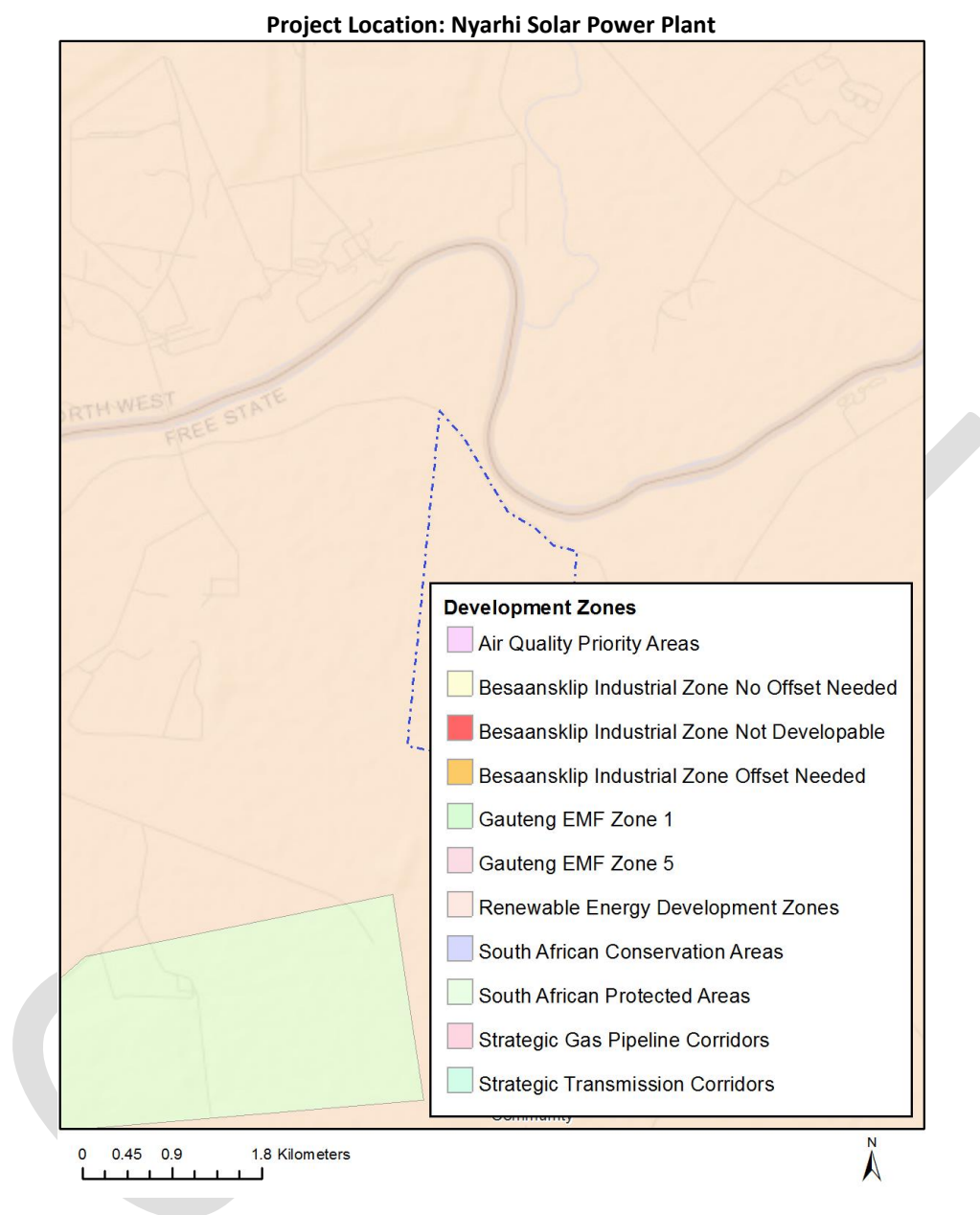
**Utilities Infrastructure | Electricity | Generation | Renewable | Solar | PV.**

### 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 | <a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf</a>   |
| Renewable energy development zones 10-Klerksdorp | <a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_REDZ.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_REDZ.pdf</a> |

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 |
| 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<br>o | Special<br>ist<br>assess<br>ment                       | Assessment Protocol   |
|--------|--|---|
| 1      | Agricultural Impact Assessment                         | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_WindAndSolar_Agriculture_Assessment_Protocols.pdf</a> |
| 2      | Landscape/Visual Impact Assessment                     | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>           |
| 3      | Archaeological and Cultural Heritage Impact Assessment | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>           |
| 4      | Paleontology Impact Assessment                         | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>           |
| 5      | Terrestrial Biodiversity Impact Assessment             | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf</a> |
| 6      | Aquatic Biodiversity                                   | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf</a>         |

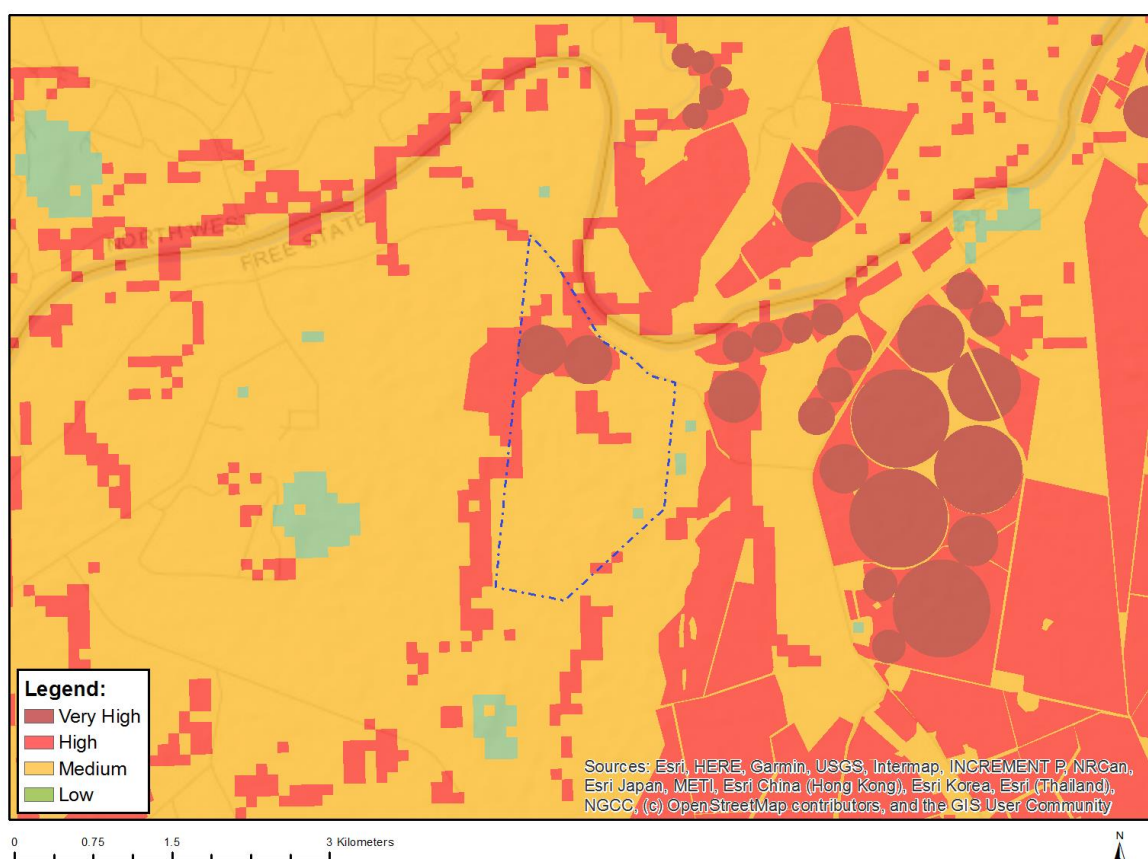


|    |                           |   |
|----|---------------------------|---|
|    | Impact Assessment         |   |
| 7  | Civil Aviation Assessment | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Civil_Aviation_Installations_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Civil Aviation Installations Assessment Protocols.pdf</a> |
| 8  | Defense Assessment        | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Defence Installations Assessment Protocols.pdf</a>               |
| 9  | RFI Assessment            | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>                   |
| 10 | Geotechnical Assessment   | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>                   |
| 11 | Socio-Economic Assessment | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>                   |
| 12 | Plant Species Assessment  | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf</a>                               |
| 13 | Animal Species Assessment | <a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf</a>                             |

## 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

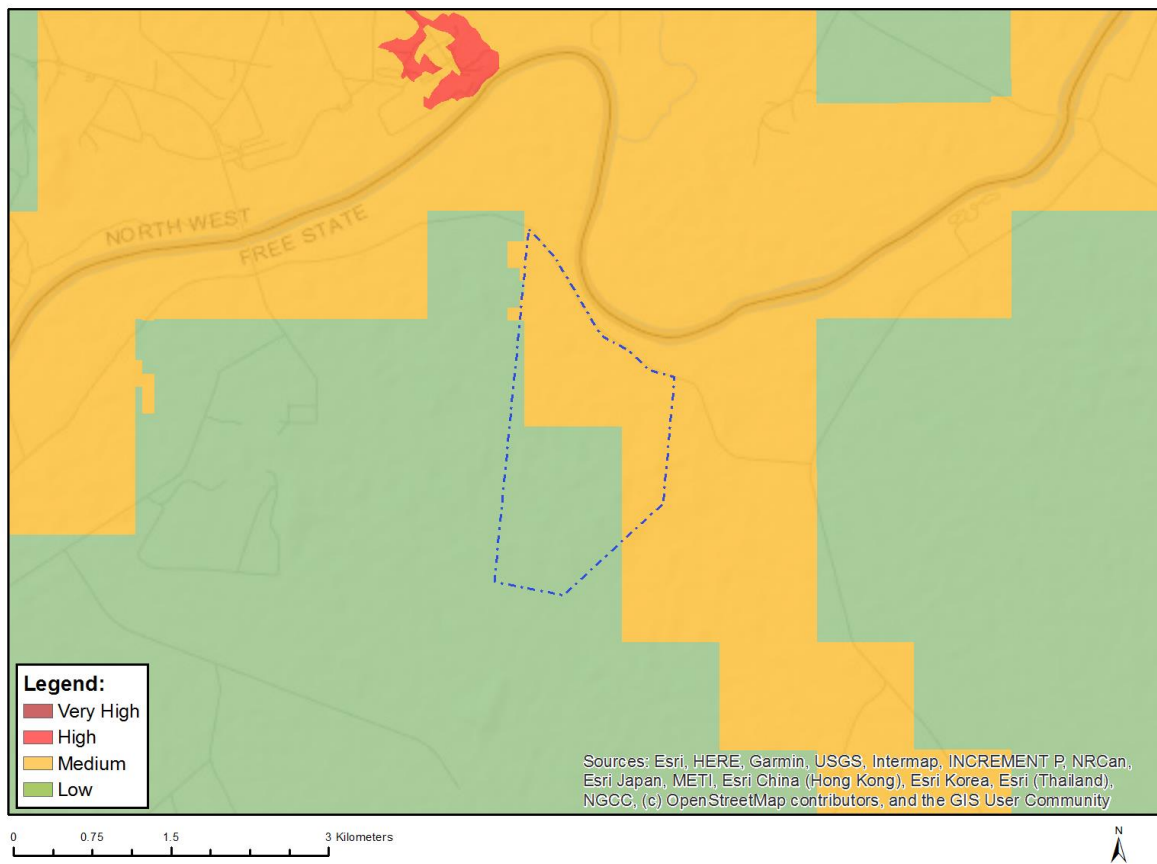


| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
| X                     |                  |                    |                 |

#### Sensitivity Features:

| Sensitivity | Feature(s)   |
|-------------|--|
| High        | 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            |
| Low         | Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low                                |
| Medium      | Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate   |
| Very High   | Pivot Irrigation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate                                    |
| Very High   | Pivot Irrigation;Land capability;09. Moderate-High/10. Moderate-High   |

## MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



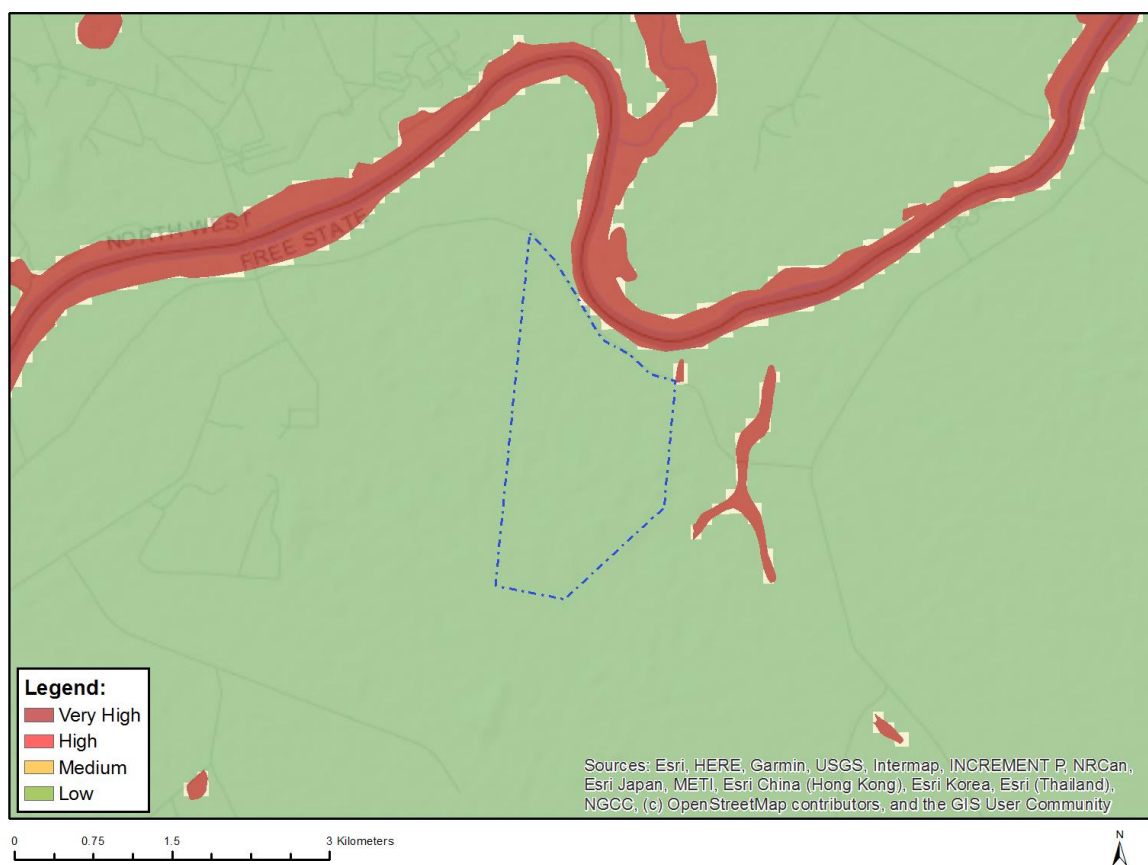
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [eiadatarequests@sanbi.org.za](mailto:eiadatarequests@sanbi.org.za) 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      | Aves-Circus ranivorus          |
| Medium      | Mammalia-Hydricis maculicollis |

## 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 AVIAN THEME SENSITIVITY

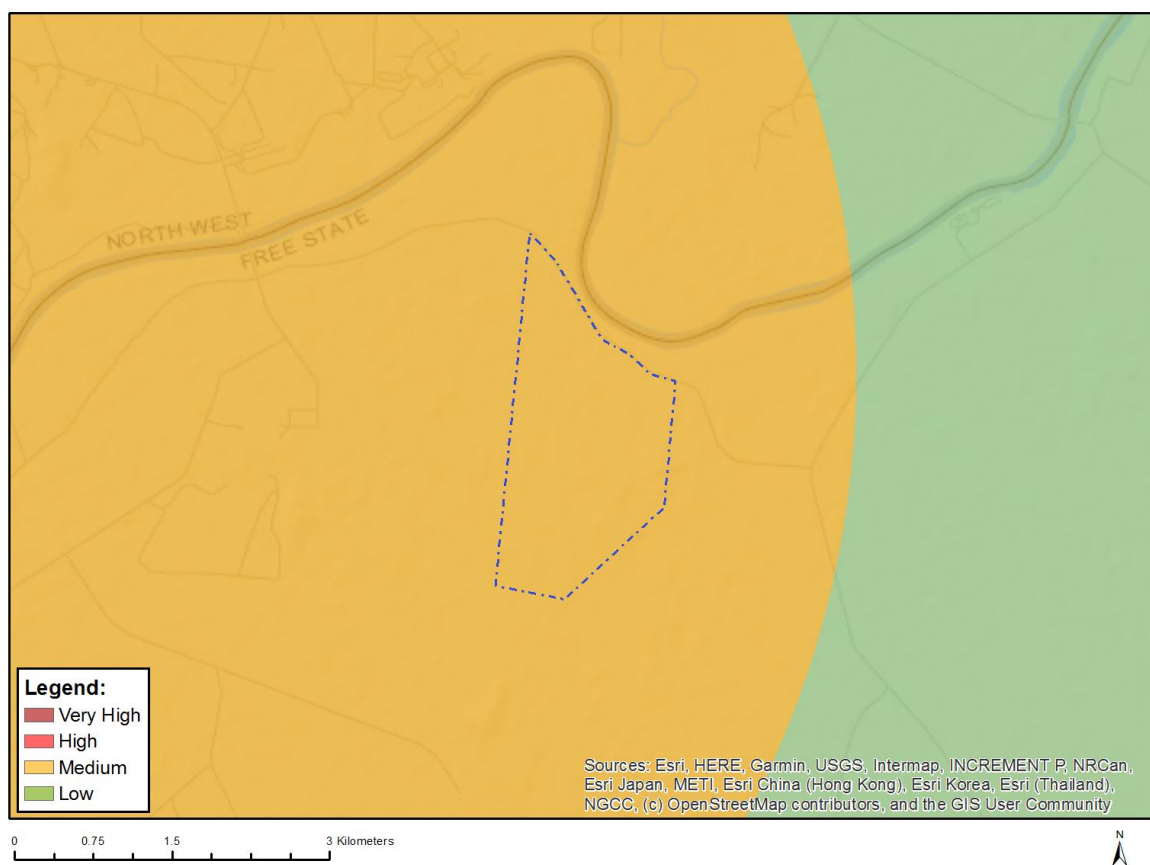


| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
|                       |                  |                    | X               |

### 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)                                       |
|-------------|--|
| Medium      | Within 8 km of an other civil aviation aerodrome |

## MAP OF RELATIVE DEFENCE THEME SENSITIVITY



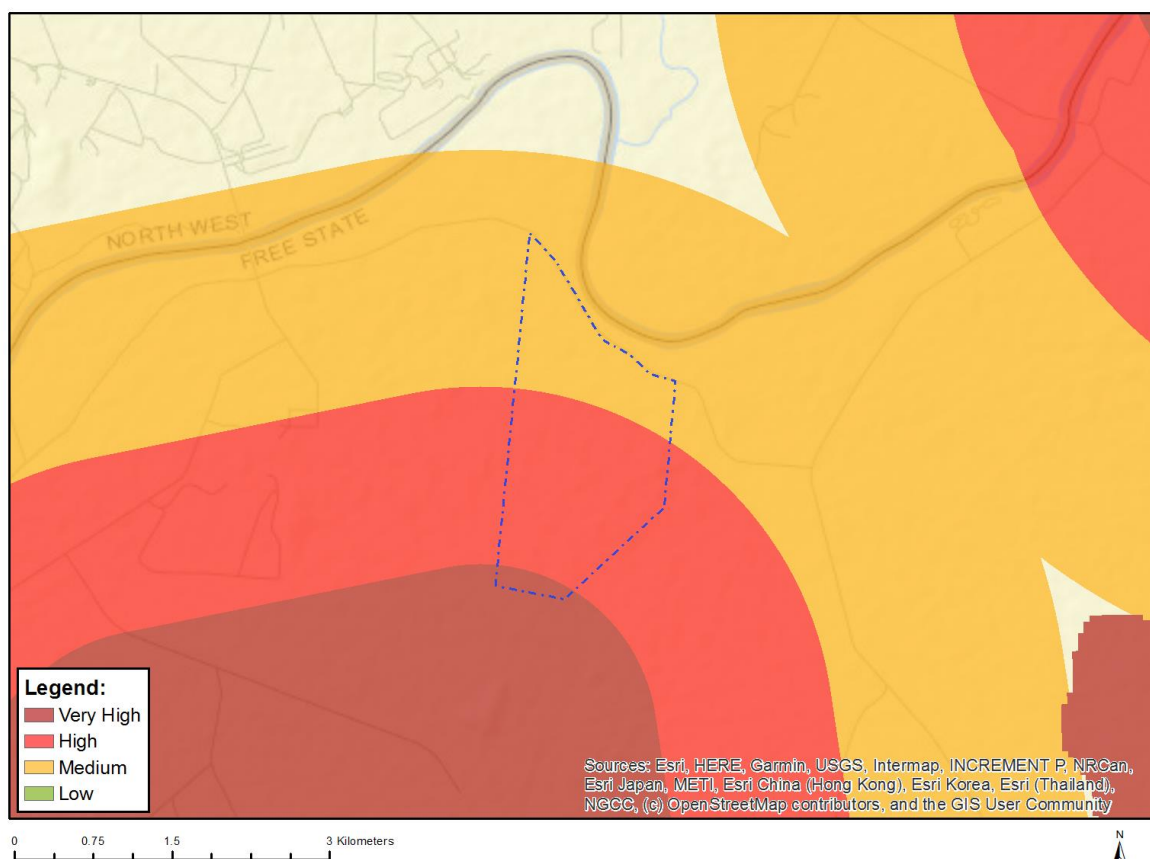
| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
|                       |                  |                    | X               |

### Sensitivity Features:

| Sensitivity | Feature(s)      |
|-------------|-----------------|
| Low         | Low sensitivity |



## MAP OF RELATIVE LANDSCAPE (SOLAR) THEME SENSITIVITY

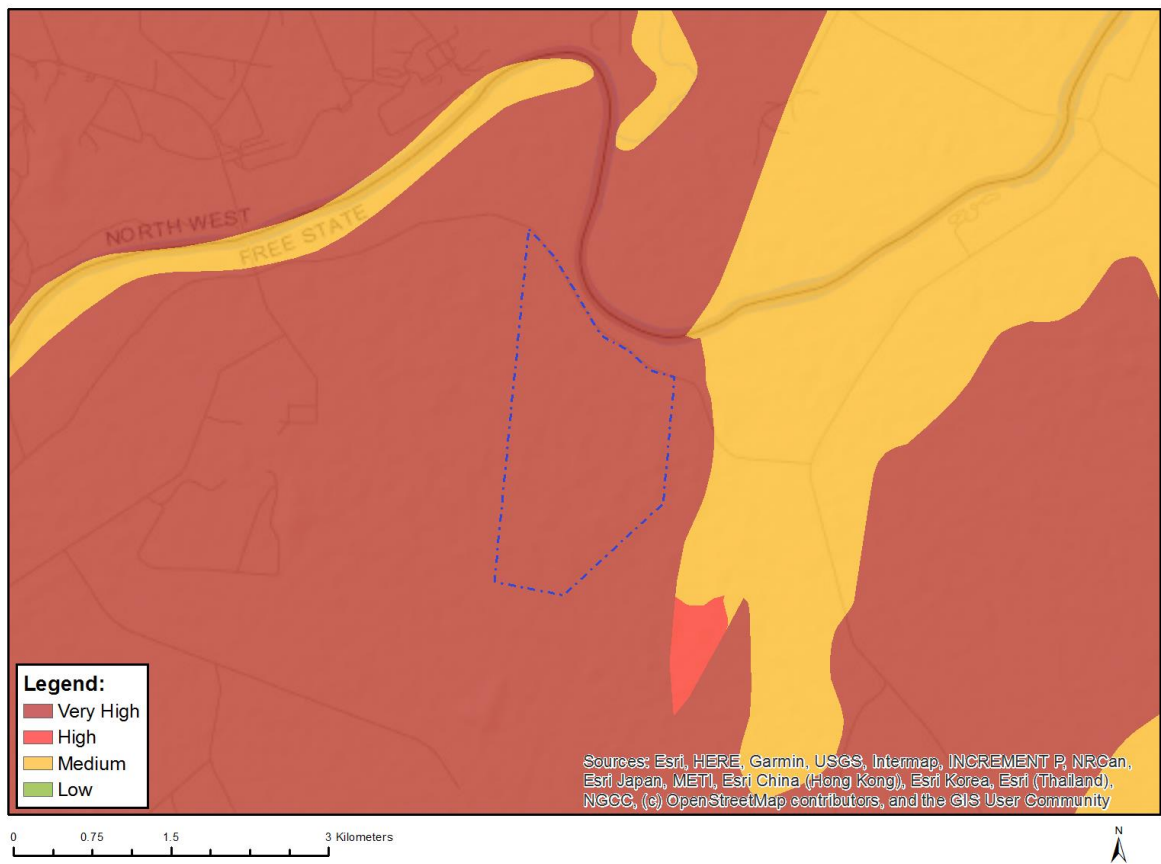


| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
| X                     |                  |                    |                 |

### Sensitivity Features:

| Sensitivity | Feature(s)                               |
|-------------|--|
| High        | Between 1.5 and 3 km of a nature reserve |
| Medium      | Between 3 and 5 km of a nature reserve   |
| Very High   | Within 1.5 km of a nature reserve        |

## MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

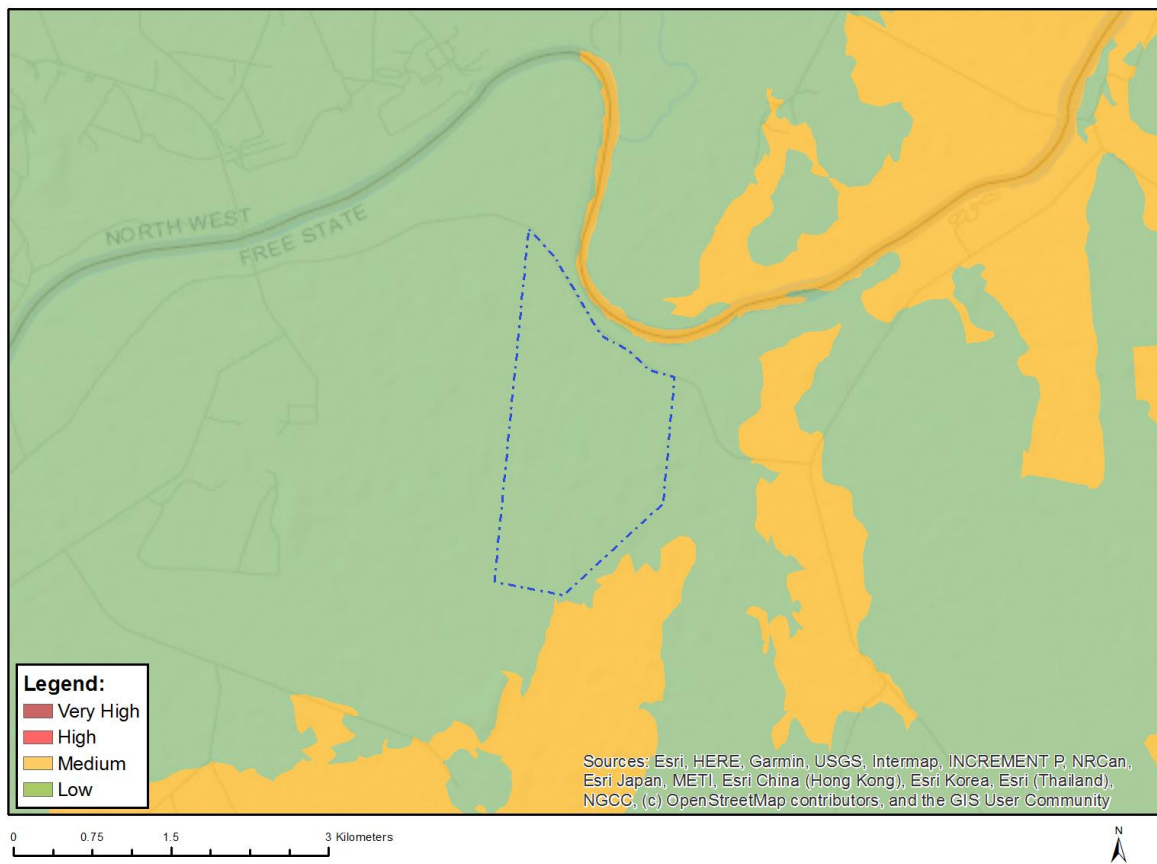


| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
| X                     |                  |                    |                 |

### 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



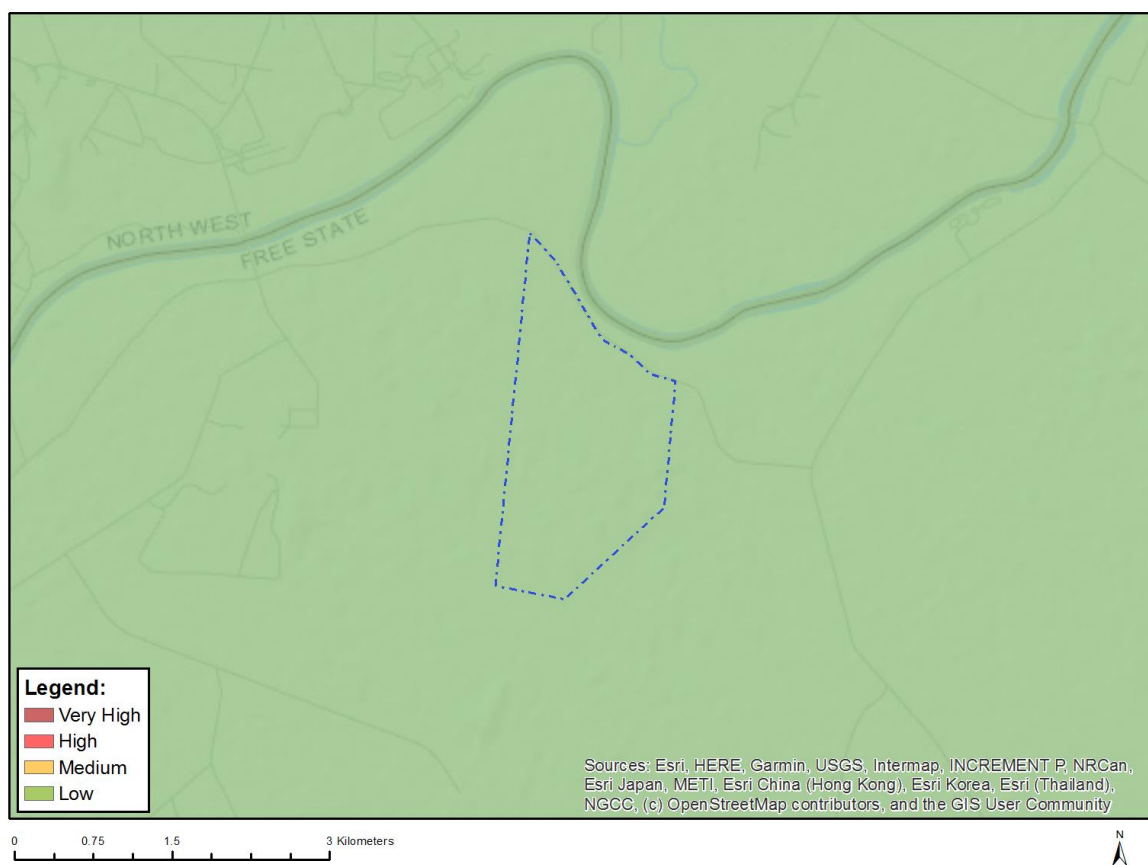
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| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
|                       |                  |                    | X               |

### Sensitivity Features:

| Sensitivity | Feature(s)      |
|-------------|-----------------|
| Low         | Low Sensitivity |

## MAP OF RELATIVE RFI THEME SENSITIVITY

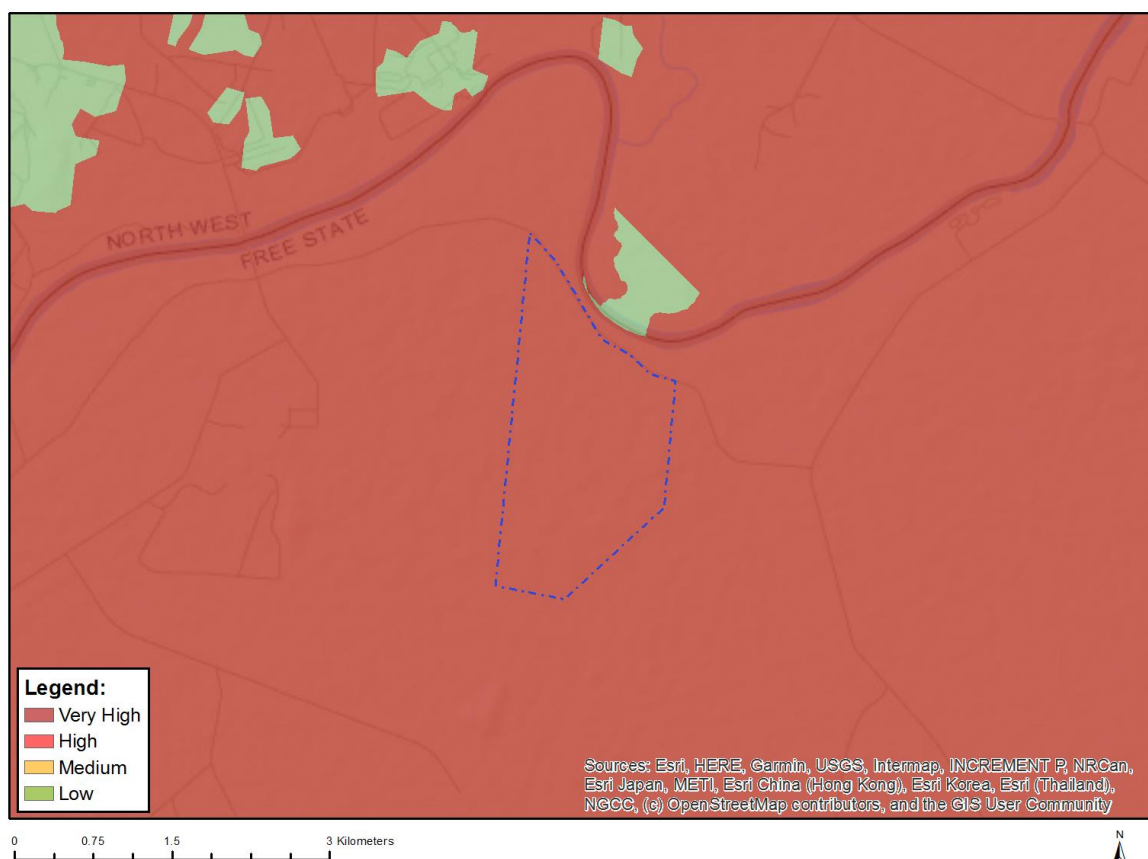


| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
|                       |                  |                    | X               |

### Sensitivity Features:

| Sensitivity | Feature(s)      |
|-------------|-----------------|
| Low         | Low sensitivity |

## MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



| Very High sensitivity | High sensitivity | Medium sensitivity | Low sensitivity |
|-----------------------|------------------|--------------------|-----------------|
| X                     |                  |                    |                 |

### Sensitivity Features:

| Sensitivity | Feature(s)                   |
|-------------|------------------------------|
| Very High   | Critical biodiversity area 1 |
| Very High   | Ecological support area 1    |
| Very High   | Ecological support area 2    |