



**TERRESTRIAL BIODIVERSITY COMPLIANCE  
STATEMENT FOR THE PROPOSED  
ONDERSTEPSPOORT GRID CONNECTION  
INFRASTRUCTURE DEVELOPMENT PROJECT**

**Rustenburg Local Municipality, Bojanala District  
Municipality, North West Province, South Africa**

05/03/2025

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<b>Report Name</b>	<b>TERRESTRIAL BIODIVERSITY COMPLIANCE STATEMENT FOR THE PROPOSED ONDERSTEPOORT GRID CONNECTION INFRASTRUCTURE DEVELOPMENT PROJECT</b>	
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<b>Declaration</b>	<p>The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, Amended. We have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principals of science.</p>	

## Table of Contents

1	Introduction.....	5
1.1	Background .....	5
1.2	Project Description .....	7
1.3	Scope of Work.....	7
1.4	Assumptions and Limitations .....	8
1.5	Legislative Framework .....	8
2	Fieldwork.....	9
2.1	Biodiversity Field Assessment .....	9
3	Results & Discussion .....	11
3.1	Ecologically Important Landscape Features .....	11
3.2	Fauna Species of Conservation Concern .....	11
3.3	Flora Species of Conservation Concern .....	12
3.4	Desktop Ecological Sensitivity .....	13
3.5	Biodiversity Field Survey.....	17
3.6	Site Walkdown.....	20
3.6.1	Walkdown Recommendations and Conclusions.....	22
3.7	Site Sensitivity Verification .....	23
3.7.1	Habitats and Site Ecological Importance (SEI) .....	23
3.7.2	Screening Tool Comparison.....	25
4	Impact Management and Mitigation Plan.....	27
5	Conclusion.....	33
5.1	Impact Statement .....	33
5.2	Specialist Opinion .....	33
6	References .....	34
7	Appendix Items.....	35
7.1	Appendix A: Methods .....	35
7.1.1	Desktop Dataset Assessment .....	35
7.2	Appendix B: Terrestrial Site Ecological Importance.....	37
7.3	Appendix C: Specialist Declaration of Independence .....	41
7.4	Appendix D: Specialist CVs .....	44

## List of Tables

Table 1-1	Terrestrial Biodiversity Compliance Statement information requirements as per the relevant protocol, including the location of the information within this report. ....	9
Table 3-1	Summary of relevance of the proposed project to ecologically important landscape features.....	11
Table 3-2	Threatened fauna species that are expected to occur within the PAOI. EN = Endangered, VU = Vulnerable, and LC = Least Concern.....	12
Table 3-3	Threatened flora species that are expected to occur within the PAOI. CR = Critically Endangered, and VU = Vulnerable. ....	13
Table 3-4	Summary of field survey conducted within the PAOI. ....	17
Table 3-5	Protected flora recorded during the field survey and site walkdown. LC = Least Concern.....	20
Table 3-6	Summary of habitat types and associated SEIs delineated within the PAOI.....	23
Table 3-7	Summary of the screening tool vs specialist assigned sensitivities. ....	25
Table 4-1	Project specific mitigation measures including requirements for timeframes, roles, and responsibilities.....	28
Table 7-1	Summary of Conservation Importance (CI) criteria.....	37
Table 7-2	Summary of Functional Integrity (FI) criteria.....	38
Table 7-3	Matrix used to derive Biodiversity Importance (BI) from Functional Integrity (FI) and Conservation Importance (CI).....	38
Table 7-4	Summary of Receptor Resilience (RR) criteria. ....	39
Table 7-5	Matrix used to derive Site Ecological Importance from Receptor Resilience (RR) and Biodiversity Importance (BI).....	39
Table 7-6	Guideline for interpreting Site Ecological Importance in the context of proposed activities.....	40

## List of Figures

Figure 1-1	Map illustrating the regional context of the Project Area of Influence (PAOI).....	6
Figure 1-2	Map depicting the proposed layout of the PAOI. ....	6
Figure 2-1	Map illustrating the surveyed Points of Interest (POI) and associated tracks recorded during the field survey.....	10
Figure 3-1	Map depicting the relative terrestrial biodiversity theme sensitivity for the PAOI as generated for by the environmental screening tool.....	14
Figure 3-2	Map depicting the relative animal theme sensitivity for the PAOI as generated for by the environmental screening tool. ....	15
Figure 3-3	Map depicting the relative plant theme sensitivity for the PAOI as generated for by the environmental screening tool. ....	16
Figure 3-4	Photographs illustrating the two protected species detected within the PAOI. A: Pellaea calomelanos; B: Boscia albitrunca. ....	20
Figure 3-5	Heat maps and specific locations of protected flora species (A) Boscia albitrunca, and (B) Pellaea calomelanos. Areas depicted in dark red are predicted to house a high density of protected species, with blue illustrating areas of predicted low density.....	21
Figure 3-6	Map depicting the Site Ecological Importance (SEI) sensitivity for the PAOI. ....	24
Figure 3-7	Map depicting the habitat types defined within the PAOI.....	24

## 1 Introduction

### 1.1 Background

The Biodiversity Company was appointed by Onderstepoort Grid (Pty) Ltd to undertake a terrestrial biodiversity assessment for the proposed Onderstepoort Grid Connection Infrastructure development project near Boshhoek in the Bojanala District Municipality, North West Province of South Africa.

Onderstepoort Solar 1 (Pty) Ltd proposes the construction and operation of a grid connection solution for the proposed Onderstepoort Solar 1 (DFFE Reference: 14/12/16/3/3/2/2319) and Onderstepoort Solar 2 (DFFE Reference: 14/12/16/3/3/2/2320) Photovoltaic (PV) facilities. The boundaries of the northern and southern alternative corridors were assessed collectively, and are referred to as the Project Area of Influence (PAOI) from hereon in. A map depicting the regional locality of the PAOI is depicted in Figure 1-1, and a map illustrating the proposed layout of the PAOI can be seen in Figure 1-2.

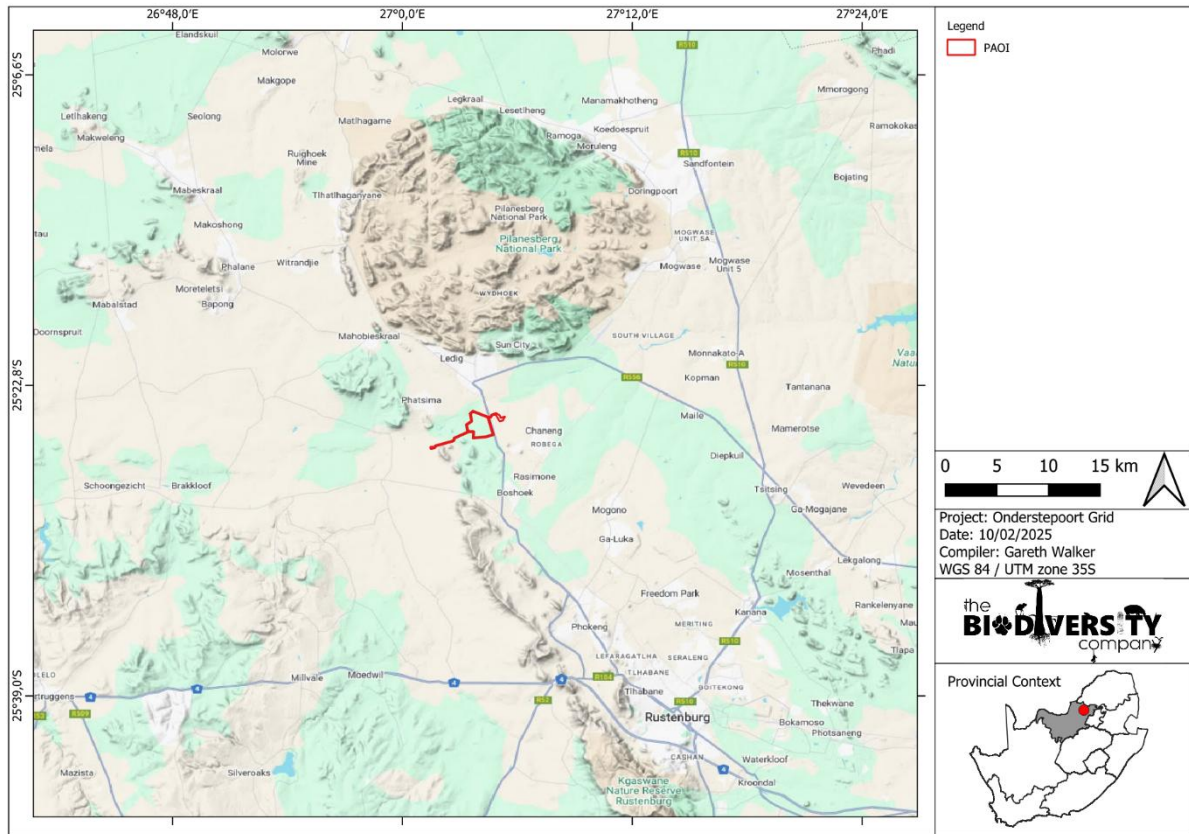
To determine the baseline ecological state of the PAOI and to present a detailed description of the receiving environment, a desktop assessment, and field survey and site walkdown (conducted between the 4<sup>th</sup> and 5<sup>th</sup> of February 2025) were completed in tandem. The desktop assessment, field survey and site walkdown involved the detection, identification, and description of any locally relevant sensitive receptors. The potential risks that the proposed development would have on the sensitive features was also investigated.

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations, 2014 (No. 326, 7 April 2017) of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998). The approach has taken cognisance of the recently published Government Notice 320 in terms of NEMA dated 20 March 2020 as well as the Government Notice 1150 in terms of NEMA dated 30 October 2020: "Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation". The National Web based Environmental Screening Tool has characterised the terrestrial biodiversity theme for the PAOI as:

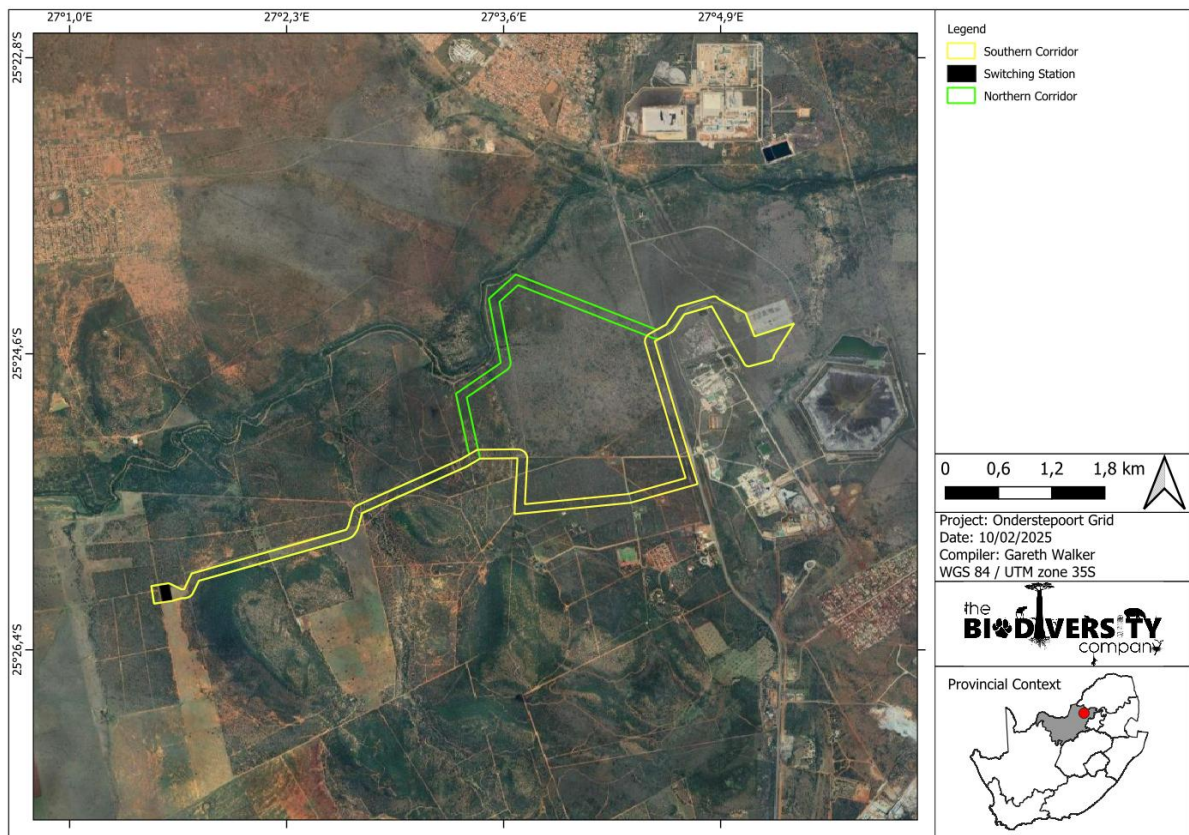
- Terrestrial Biodiversity Theme Sensitivity: Very High
- Animal Species Theme Sensitivity: High
- Plant Species Theme Sensitivity: Medium

The purpose of conducting the specialist study is to provide relevant input into the Environmental Authorisation application process, with a focus on the proposed activities and the impacts associated with the project. This report, after taking into consideration the findings and recommendations provided for by the specialist stipulated herein, should inform, and guide the Registered Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making as to the ecological viability of the proposed project.

Onderstepoort Grid Connection Infrastructure



**Figure 1-1** Map illustrating the regional context of the Project Area of Influence (PAOI).



**Figure 1-2** Map depicting the proposed layout of the PAOI.

## 1.2 Project Description

Onderstepoort Grid (Pty) Ltd proposes the construction and operation of a grid connection solution for the proposed Onderstepoort Solar 1 (DFFE Reference: 14/12/16/3/3/2/2319) and Onderstepoort Solar 2 (DFFE Reference: 14/12/16/3/3/2/2320) PV facilities, near Boshhoek in the North West Province of South Africa. The grid connection solution will include the development of a double-circuit 132 kV power line and collector substation to connect the proposed solar PV facilities to the national grid via the existing Ngwedi Main Transmission Substation (MTS). Other associated infrastructure will also be required for the grid connection solution; including access tracks/roads, administrative buildings and laydown areas.

A 100 m wide corridor approximately ~11 km in length is being assessed to allow for the optimisation of the grid and associated infrastructure, and to accommodate for any environmental sensitivities. The grid infrastructure will be developed within the assessed corridor. The height of the powerline pylons will be approximately ~32 m and the servitude width of the power line will be 31 m. The extent of the collector substation will be 100 m x 200 m and the capacity of the substation will be 132 kV. Two grid route alternatives are being considered (i.e., southern and northern corridor; Figure 1-2).

The 100 m corridor traverses twelve affected properties:

- Remaining Extent of Portion 2 the Farm ONDERSTEPOORT No. 98;
- Portion 13 (a portion of Portion 2) of the Farm ONDERSTEPOORT No. 98;
- Remaining Extent of Portion 3 the Farm ONDERSTEPOORT No. 98;
- Portion 8 the Farm ONDERSTEPOORT No. 98;
- Remaining Extent of Portion 2 the Farm FRISCHGEWAAGD No. 96;
- Portion 19 of the Farm FRISCHGEWAAGD No. 96;
- Portion 45 of ELANDSFONTEIN No. 102;
- Portion 24 of the Farm FRISCHGEWAAGD No. 96;
- Portion 23 of the Farm FRISCHGEWAAGD No. 96;
- Portion 7 of the Farm FRISCHGEWAAGD No. 96;
- Portion 14 of the Farm FRISCHGEWAAGD No. 96; and
- Portion 10 of the Farm FRISCHGEWAAGD No. 96.

## 1.3 Scope of Work

The aim of the biodiversity assessment was to provide information to guide the risk of the proposed development on the current state of the associated ecosystems within the PAOI. This was achieved through the following:

- Desktop assessment to identify the ecologically important terrestrial features within the PAOI;
- Desktop assessment to identify possible Species of Conservation Concern (SCC) that may occur within the PAOI;
- Field survey to identify and record flora and fauna species, (especially SCC) within the PAOI. Further, a site walkdown of both the southern and northern corridors was conducted to detect any potential fauna and flora SCC and protected species that might be impacted by the proposed development;



- Determine the Site Ecological Importance (SEI) - also commonly referred to as the sensitivity – of the PAOI; and
- The prescription of mitigation measures for identified risks associated with the proposed development.

#### 1.4 Assumptions and Limitations

The following assumptions and limitations are applicable for this assessment:

- It is assumed that all information received from the client and landowner is accurate;
- All datasets accessed and utilised for this assessment are considered to be representative of the most recent and suitable data for the intended purposes;
- The assessment area (PAOI) was based on the footprint areas as provided for by the client, and any alterations to the area and/or missing GIS information pertaining to the assessment area would have affected the area surveyed and hence the results of this assessment;
- A single site survey and walkdown – conducted between the 4<sup>th</sup> and 5<sup>th</sup> of February 2025, constituting a late wet season survey – was completed. Therefore, this assessment does not consider temporal/seasonal trends. It is, however, important to note that a report drafted by Gerhard Botha (Nkurukuru, 2024) - who covered the original route - potentially accounting for seasonal/temporal constraints. Combined, it is the opinion of the specialist stipulated herein that both the desktop and field data collected are sufficient enough to derive a meaningful baseline;
- Whilst every effort was made to cover as much of the PAOI as possible, representative sampling was completed. Consequently, it is possible that some fauna and flora species present within the PAOI may have not been recorded during the field survey; and
- The GPS used in the assessment has an accuracy of 5 m and consequently any spatial features may be offset by up to 5 m.

#### 1.5 Legislative Framework

In line with the protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity, as per Government Notice 320 published in terms of NEMA, dated 20 March 2020: "Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation" – section 3, subsection 1:

- An applicant intending to undertake an activity identified in the scope of the protocol, on a site identified by The Screening Tool as being of a 'Very High' terrestrial biodiversity sensitivity, is required to submit a Terrestrial Biodiversity Specialist Assessment; however
- Where the information gathered from the site sensitivity verification differs from the designation of 'Very High' terrestrial biodiversity sensitivity on the screening tool and is instead found to be of a 'Very Low or Medium' sensitivity, then a Terrestrial Biodiversity Compliance Statement must be submitted;
- In the case of a linear activity, confirmation from the terrestrial biodiversity specialist that, in their opinion, based on the mitigation and remedial measures proposed, the land can be returned to the current state within two years of completion of the construction phase.

The information obtained from a site sensitivity verification, which involved both a desktop assessment as well as a field survey (including a site walkdown of the southern and northern corridors), confirmed

that most of the PAOI consists of habitats of 'Medium' sensitivity. Given the limited developmental footprint and the linear structure as highlighted above, however, it is assumed that through the implementation of viable mitigation and remediation measures, the PAOI will return to its current ecological state within two years post development. Therefore, this report constitutes a Terrestrial Biodiversity Compliance Statement.

As per sections 2 and 3 of the protocol discussed above, a Terrestrial Biodiversity Compliance Statement must contain the information as presented in Table 1-1 below.

**Table 1-1** *Terrestrial Biodiversity Compliance Statement information requirements as per the relevant protocol, including the location of the information within this report.*

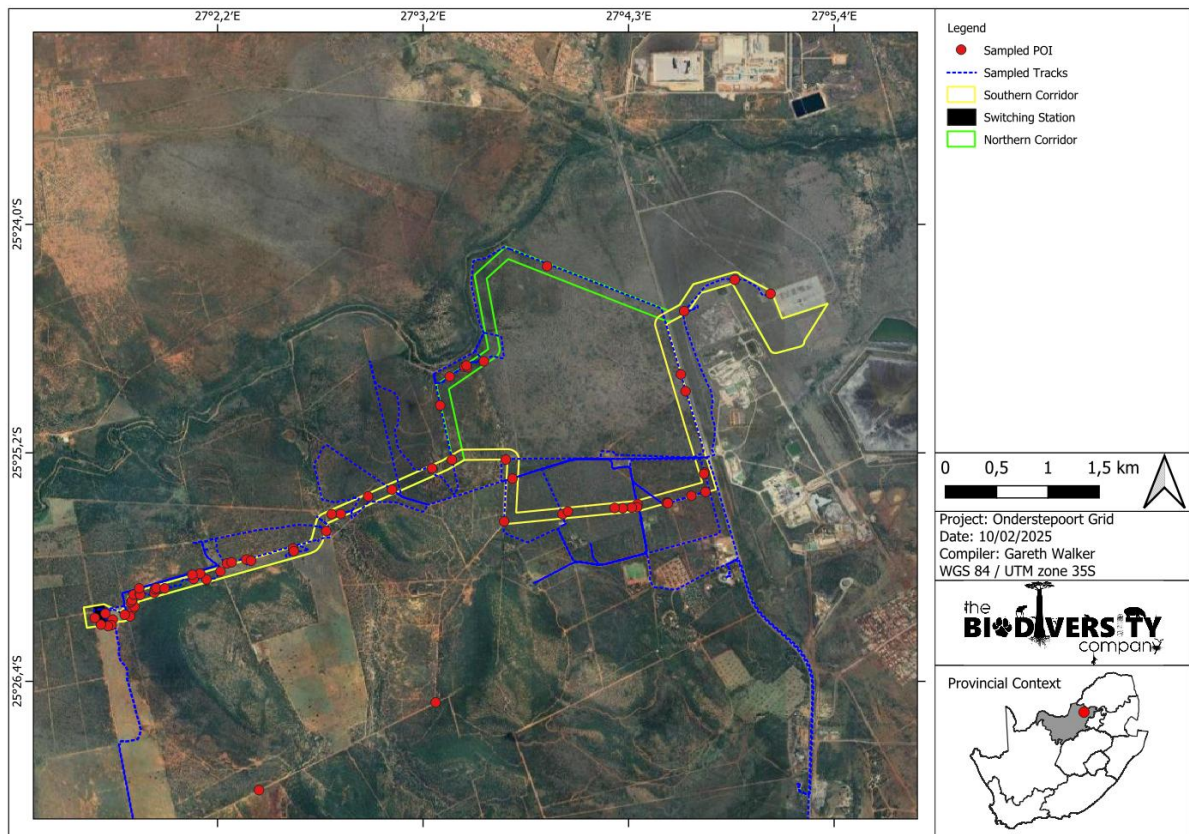
Information to be Included (as per GN 320, 20 March 2020)	Report Section
Methodology used to undertake the site assessment and survey, and prepare the compliance statement, including relevant equipment and modelling used.	7.1
Description of the assumptions and any uncertainties or gaps in knowledge or data.	1.4
A baseline profile description of biodiversity and ecosystems of the site.	3.2 & 3.3
Site sensitivity verification: desktop analysis using satellite imagery and available information.	3.1
A statement on the duration, date, and season of the site inspection.	2.1
Site sensitivity verification: onsite inspection, including a description of current land use and vegetation found on-site.	3.6
Site sensitivity verification: photographic evidence of environmental sensitivity.	3.6
Screening tool confirmation/dispute: the assessment must verify the "Very Low to Medium" sensitivity of the site, in terms of plant, animal, and terrestrial biodiversity themes.	3.7.2
Proposed impact management outcomes or monitoring requirements for inclusion in the Environmental Management Programme (EMPr).	4
Indicate whether the proposed development will have any impact on the terrestrial environment, animals and/or plants.	5
A signed statement of independence by the specialist.	7.3
Specialist details, including copied of specialist CVs.	7.4

A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

## 2 Fieldwork

### 2.1 Biodiversity Field Assessment

A single season field survey and site walkdown was conducted from the 4<sup>th</sup> until the 5<sup>th</sup> of September 2025 – constituting a late wet season survey – to delineate the various habitat types and determine their associated sensitivities, and to determine the presence of any local fauna and flora SCC within the PAOI. Every effort was made to cover all the respective habitat types present in the PAOI within the limits of time, accessibility, and security. Further, a survey conducted by Gerhard Botha (Nkurukuru, 2024) of the original route was conducted prior to this survey. Combined, the site visits conducted are considered sufficient for the proposed project (Figure 2-1).



**Figure 2-1** Map illustrating the surveyed Points of Interest (POI) and associated tracks recorded during the field survey.

### 3 Results & Discussion

#### 3.1 Ecologically Important Landscape Features

Table 3-1 below has been produced from the spatial data collected and analysed as provided for by relevant sources. It presents a summative breakdown of the ecological boundaries considered and the associated relevance that each has to the region or PAOI.

**Table 3-1 Summary of relevance of the proposed project to ecologically important landscape features.**

Desktop Information Considered	Relevance	Reasoning
Ecosystem Threat Status	Relevant	The entirety of the PAOI overlaps with Least Concern (LC) ecosystems.
Ecosystem Protection Level	Relevant	The PAOI overlaps with Moderately Protected (MP) and Poorly Protected (PP) ecosystems.
Provincial Conservation Plan	Relevant	A large portion of the PAOI overlaps with Critical Biodiversity Areas (CBA 2), with the remainder overlapping with Ecological Support Areas (ESA 1 and 2).
South African Protected Areas Database (SAPAD) & South African Conservation Areas Database (SACAD)	Relevant	The PAOI is located 990 m away from the Pilanesberg National Park.
National Protected Areas Expansion Strategy (NPAES)	Relevant	Sections of the PAOI overlap with Priority Focus Areas.
Key Biodiversity Areas (KBAs)	Relevant	The PAOI is located 990 m to the west of the Pilanesberg National Park.
South African Inventory of Inland Aquatic Ecosystems (SAIIAE)	Relevant	The PAOI overlaps with Critical (CR) wetland inland aquatic systems.
Strategic Water Source Areas (SWSAs)	Irrelevant	The PAOI does not overlap with any SWSAs.
National Freshwater Priority Area (NFEPA)	Relevant	A section of the southern corridor overlaps with an NFEPA Unclassified Unchannelled Valley Bottom.
Renewable Energy Distribution Zone (REDZ)	Irrelevant	The PAOI is approximately 130 km away from the Klerksdorp REDZ.
Powerline Corridor	Irrelevant	The PAOI does not overlap with any powerline corridors.

#### 3.2 Fauna Species of Conservation Concern

The Screening Tool indicates that four (4) mammalian, one (1) reptilian and three (3) avifauna SCC are predicted to occur within the PAOI. Specific information pertaining to the three avifauna species can be reviewed in the accompanying avifauna report (TBC, 2025). Moreover, two sensitive SCC are predicted to occur within the PAOI. Please note that the Screening Tool report includes lists of bird, mammal, reptile, amphibian, invertebrate, and plant SCC known or expected to occur within the proposed development footprint. Some of these SCC are sensitive to illegal harvesting. Such species have had their names obscured and are listed as sensitive plant unique number / sensitive animal unique number. As per the best practise guideline that accompanies the protocol and screening tool, please, the **name of the sensitive species may not appear in the final EIA report nor any of the specialist reports released into the public domain**. It should be referred to as *sensitive plant* or *sensitive animal* and its threat status may be included, e.g. critically endangered sensitive plant or endangered sensitive animal.

Despite the limited size of the developmental footprint, there are patches of suitable habitat that have the potential to support certain fauna SCC. Consequently, the likelihood of each fauna SCC occurring within the PAOI varies from Low to Moderate (Medium) (Table 3-2). Having said this, however, it is improbable that the proposed development will have a significantly adverse effect on any fauna species (including SCC).

**Table 3-2** *Threatened fauna species that are expected to occur within the PAOI. EN = Endangered, VU = Vulnerable, and LC = Least Concern.*

Group	Taxonomic Name	Common Name	Regional Conservation Status (SANBI)	Global Conservation Status (IUCN)	Screening Tool Sensitivity	Likelihood Of Occurrence	Reason
Mammalia	<i>Redunca fulvorufula</i>	Mountain reedbuck	EN	EN	High	Low	There is no suitable habitat present within the PAOI to support this species. Mountain Reedbuck live on ridges and hillsides in broken rocky country and high-altitude grasslands (often with some tree or bush cover), from 1500 - 5000m.
Mammalia	<i>Crocidura maquassiensis</i>	Makwassie musk shrew	VU	LC	Medium	Low	Lack of suitable habitat present within the PAOI. <i>C. maquassiensis</i> occurs in rocky, mountain habitats.
Mammalia	<i>Dasymys robertsii</i>	Robert's shaggy rat	VU	Unlisted	Medium	Low	Lack of suitable habitat present within the PAOI. The species is patchily distributed in the lowveld of northern South Africa.
Mammalia	<i>Lycaon pictus</i>	African wild dog	EN	EN	Medium	Low	The species occurs almost exclusively in protected and conservation areas in southern Africa.
-	Sensitive Species 2	-	VU	VU	Medium	Low	Lack of suitable habitat present within the PAOI.
-	Sensitive Species 5	-	VU	VU	Medium	Low	Lack of suitable habitat present within the PAOI.
Reptilia	<i>Kinixys lobatsiana</i>	Lobatse hinge-backed tortoise	VU	VU	Medium	Medium	Patches of suitable habitat present. <i>Kinixys lobatsiana</i> is a savanna species that inhabits rocky hillsides in habitats of mixed <i>Acacia</i> and <i>Combretum</i> woodland, tropical Bushveld and Thornveld where vegetation ranges from dense, short shrubland to open tree savanna. It is vital that authorised individuals walk through a particular site pre-construction to ensure that no individuals are impacted by the development.

### 3.3 Flora Species of Conservation Concern

The Screening Tool indicates that one (1) flora SCC is predicted to occur within the PAOI (Table 3-3). Results from the walkdown suggest that the species does not occur within the PAOI. Further, given the limited size of the developmental footprint, it is unlikely that the project activities will significantly impact the floristic composition present within the PAOI.

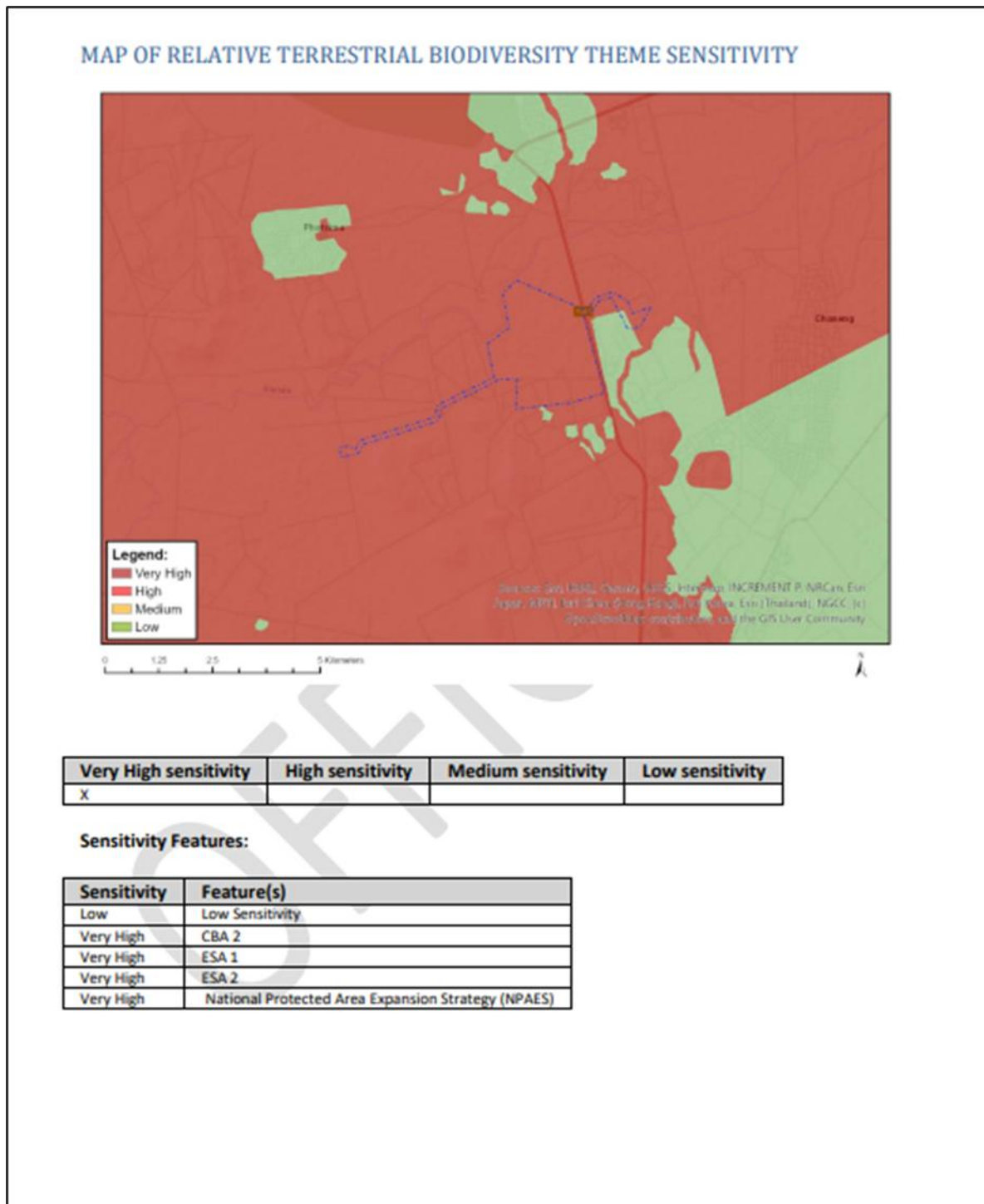
**Table 3-3** *Threatened flora species that are expected to occur within the PAOI. CR = Critically Endangered, and VU = Vulnerable.*

Family	Taxonomic Name	Conservation Status (IUCN)	Screening Tool Sensitivity	Tool	Likelihood Occurrence	of	Reason
Apocynaceae	<i>Cullen holubii</i>	VU	Medium		Low		Despite the presence of suitable habitat (i.e., Zeerust Thornveld) present within the PAOI, no individuals were detected during the field survey and site walkdown. Moreover, the species has only been detected at eight locations; none of which coincide with the locality of the PAOI.

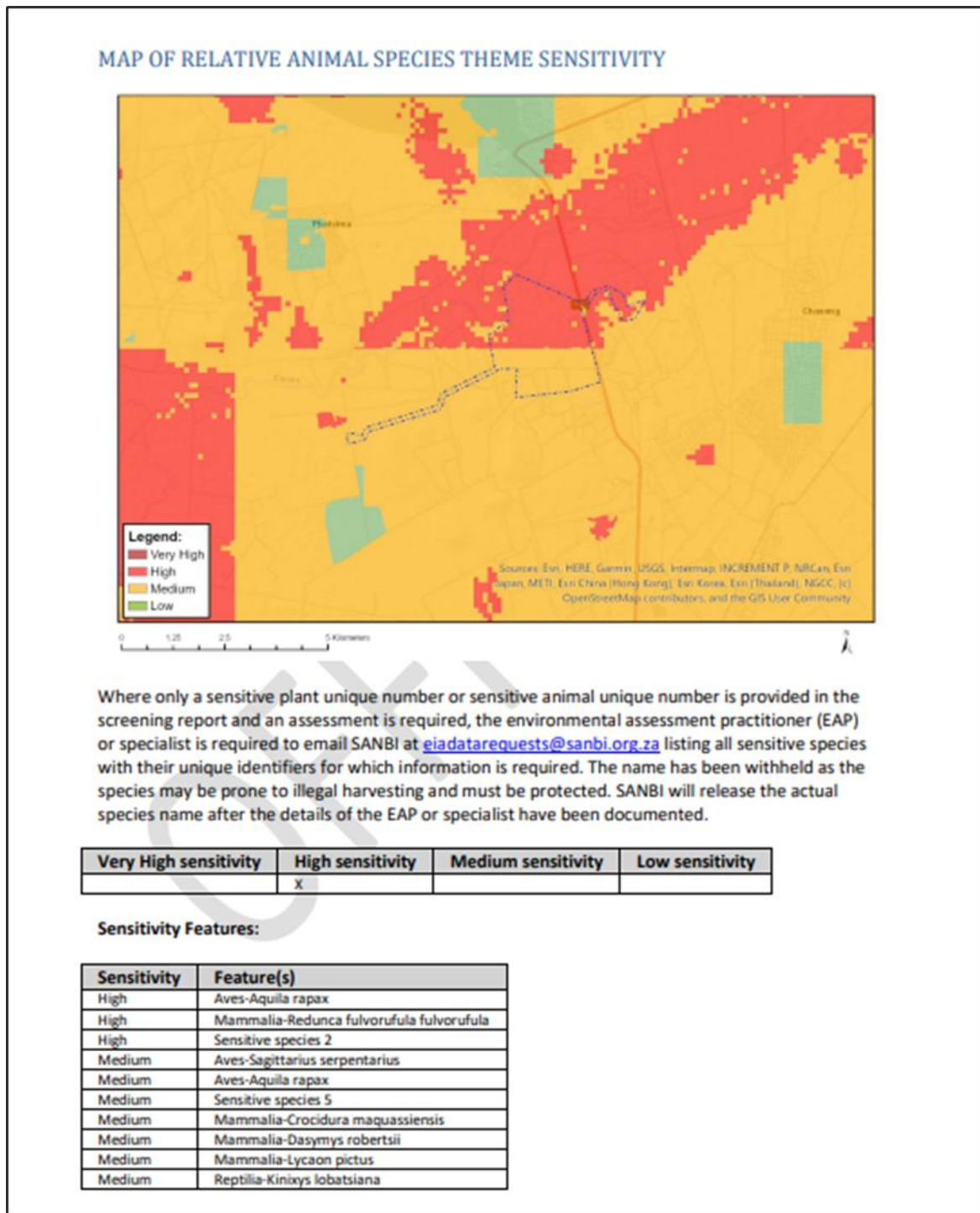
### 3.4 Desktop Ecological Sensitivity

The following is deduced from the National Web-based Environmental Screening Tool Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended):

- Terrestrial Biodiversity Theme sensitivity is 'Very High' as the PAOI overlaps Critical Biodiversity Areas (CBA 2), Ecological Support Areas (ESA 1 & 2), and an NPAs classified Priority Focus Area (Figure 3-1);
- Animal Species Theme sensitivity is 'High' for the PAOI owing to the potential occurrence of three (3) avifauna, four (4) mammalian, and one (1) reptilian SCC. Further, two (2) sensitive SCC are predicted to occur within the PAOI (Figure 3-2); and
- Plant Species Theme sensitivity is 'Medium' with one (1) flora SCC expected to occur within the PAOI (Figure 3-3).

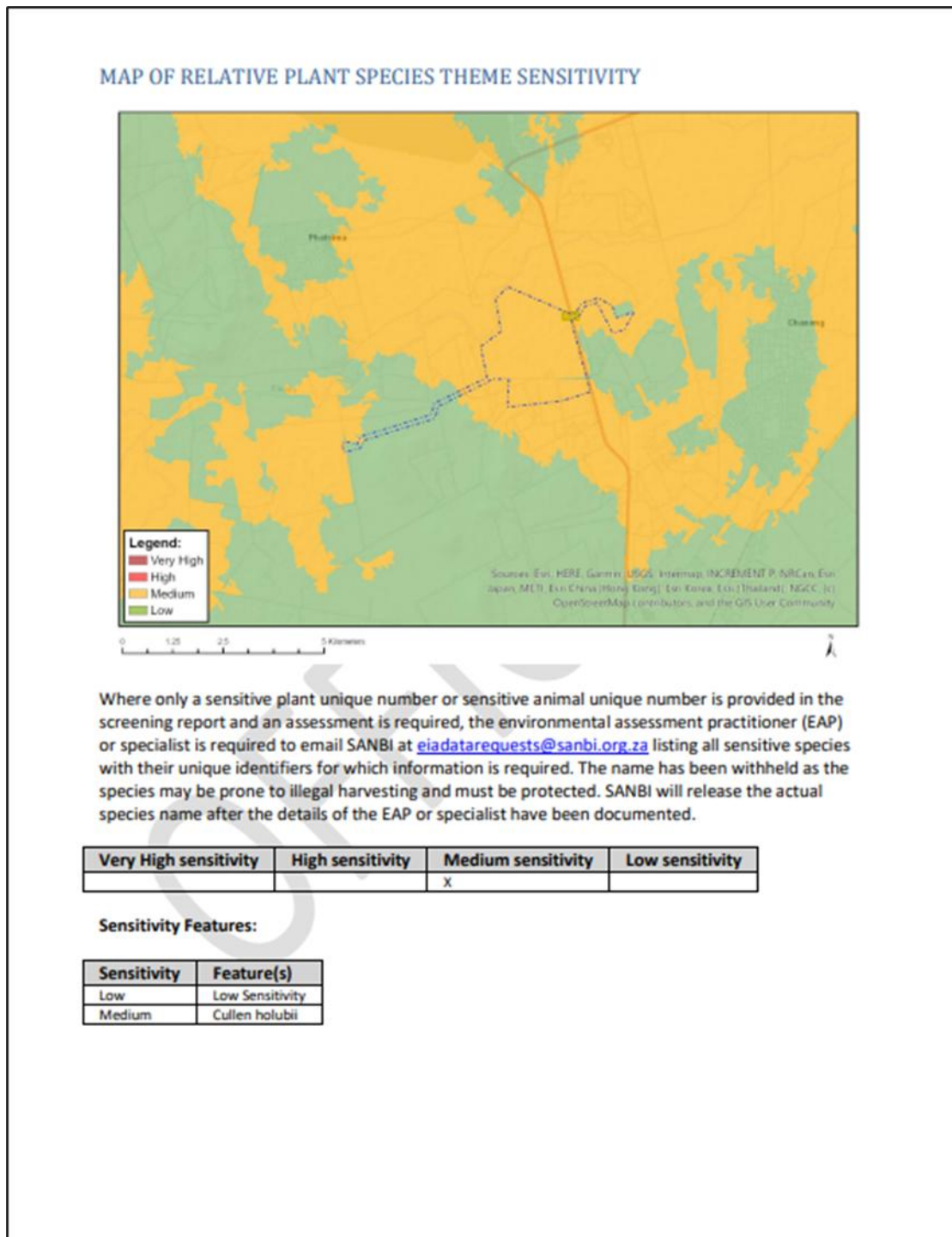


**Figure 3-1** Map depicting the relative terrestrial biodiversity theme sensitivity for the PAOI as generated for by the environmental screening tool.



**Figure 3-2** Map depicting the relative animal theme sensitivity for the PAOI as generated for by the environmental screening tool.





**Figure 3-3** Map depicting the relative plant theme sensitivity for the PAOI as generated for by the environmental screening tool.

### 3.5 Biodiversity Field Survey

A summary of the terrestrial field assessment is provided in Table 3-4. The PAOI was surveyed to establish the overall ecological condition of the vegetation and to determine the likelihood of any flora and fauna SCC occurring within the area. Any potential sensitive habitat features were also assessed.

**Table 3-4 Summary of field survey conducted within the PAOI.**

Habitat	Description	SEI	Photographs
<b>Old Fields</b>	<p>This habitat type is predominantly disturbed having been cleared of almost all indigenous vegetation to allow for the propagation and cultivation of crop, and/or for livestock grazing pastures. Although there are signs of repropagation by pioneer shrubs and grasses, these habitats exist in a constant state of disturbance and will not recover to a more natural state without rehabilitation. No flora and/or fauna were detected, and none are expected to occur within this habitat.</p>	Very Low	 <p>The photographs show two different views of old fields. The left image is a wide shot of a field with tall green grass and some red soil. The right image shows a dirt path through a field with sparse green vegetation and trees in the background. Both photos have a date of 04/02/2025 and GPS coordinates.</p>
<b>Bushveld</b>	<p>This habitat is collectively comprised of Gold Reef Mountain Bushveld and Zeerust Thornveld vegetation types. For brevity, these have been combined and are collectively referred to as bushveld habitat. Deciduous, open to dense short woodland vegetation, dominated by <i>Vachellia/Senegalia</i> species with a woody layer comprising mainly of grass species (including <i>Eragrostis lehmanniana</i>,</p>	Medium	 <p>The photographs show two different views of bushveld. The left image shows a dense thicket of tall grasses and trees. The right image shows a dirt path through a bushveld area with scattered trees and grass. Both photos have a date of 05/02/2025 and GPS coordinates.</p>

Habitat	Description	SEI	Photographs
	<p><i>Panicum maximum</i>, and <i>Aristida congesta</i>), dominates this habitat type. The habitat is largely intact and ecologically functional with the potential to house a high flora and fauna diversity. Further, it is possible that <i>Kinixys lobatsiana</i> has the potential to occur within this habitat. It is, however, important to note that owing to the limited size of the developmental footprint and linear activity proposed, it is unlikely that a significant portion of viable habitat will be lost during the development. Further, it is improbable that any fauna and flora species will be significantly impacted by the proposed development. These findings, however, need to be considered in conjunction with the accompanying avifauna report (TBC, 2025).</p>		
<p><b>Water Resources</b></p>	<p>Water resource habitats, in this instance, refers to an unchanneled valley bottom, and a single drainage line. The sensitivity of these habitats is classified as Medium. Collectively, water resources are ecologically important habitats as they improve water quality, provide habitats for certain fauna species (particularly avifauna and</p>	<p>Medium</p>	 

Onderstepoort Grid Connection Infrastructure

Habitat	Description	SEI	Photographs
	<p>herpetofauna species), and assist in flood attenuation. They are also a vital component of the global water cycle. Given the limited size of the proposed developmental footprint, however, it is unlikely that these habitats will be significantly impacted by the proposed project activities.</p>		

### 3.6 Site Walkdown

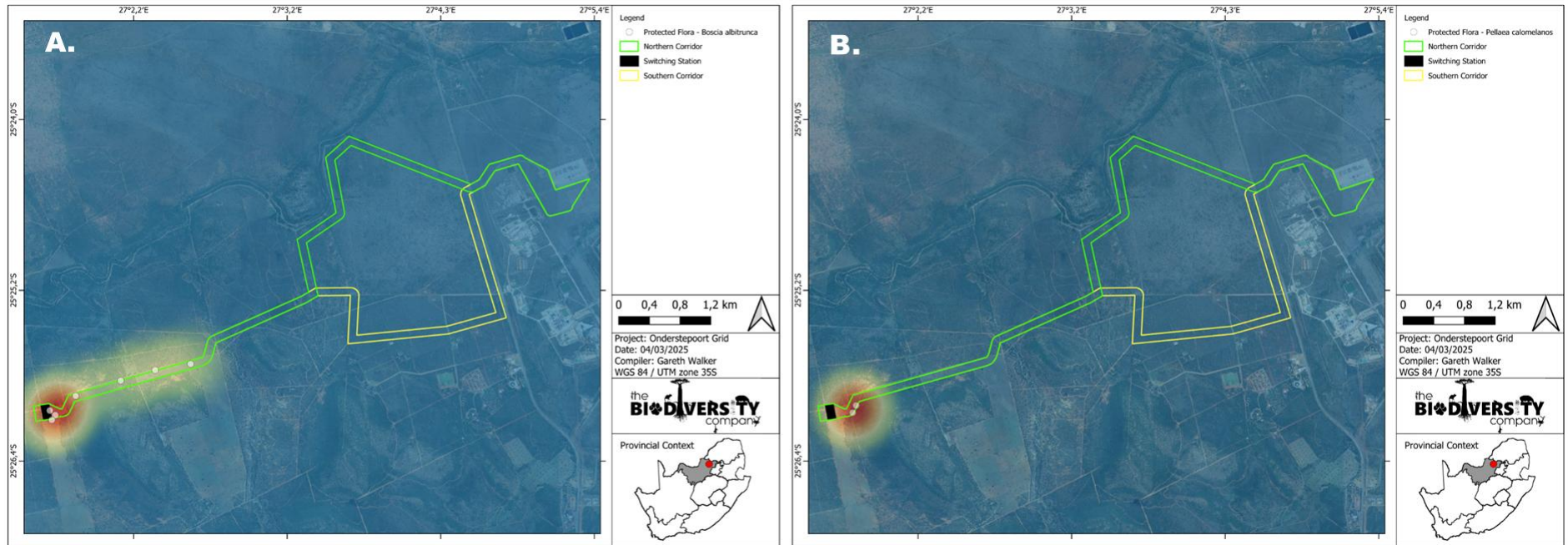
The specialist ecologist traversed both the northern and southern portions of the PAOI searching for ecologically sensitive habitats and any SCCs and/or protected species within the proposed development footprints. It is important to note that the exact locations of the pylons associated with the OHL had not been received prior to the commencement of the field survey and walkdown. Consequently, this may limit the accuracy of the findings set forth in this report. Moreover, large patches of impenetrable bushveld habitat were encountered on site which presented accessibility issues. Together with unknowns associated with the pylon locations, it is possible that inaccessibility to certain areas may have impeded on the specialist ecologist's ability to detect certain SCC and/or protected species. Irrespective, two (2) protected species were detected within the PAOI during the field survey and walkdown (Table 3-5 & Figure 3-4). The locations of each protected species detected during the field survey can be seen in Figure 3-5.

**Table 3-5** *Protected flora recorded during the field survey and site walkdown. LC = Least Concern.*

Family	Taxonomic name	Common name	Red list (SANBI, 2025)	Regional
Brassicaceae	<i>Boscia albitrunca</i>	Shepherd's Tree	LC	Protected
Pteridaceae	<i>Pellaea calomelanos</i>	Hard Fern	LC	Protected



**Figure 3-4** *Photographs illustrating the two protected species detected within the PAOI. A: Pellaea calomelanos; B: Boscia albitrunca.*



**Figure 3-5** Heat maps and specific locations of protected flora species (A) *Boscia albitrunca*, and (B) *Pellaea calomelanos*. Areas depicted in dark red are predicted to house a high density of protected species, with blue illustrating areas of predicted low density.

### 3.6.1 Walkdown Recommendations and Conclusions

Recommendations specific to the ecological functionality for the entire PAOI are provided for in Section 5 of this report. Specific to the findings of the walkdown, however, the following recommendations apply:

- All mitigation measures set forth in this report (and any other documentation developed to obtain Environmental Authorisation) remain applicable for the remainder of the development and must be adhered to;
- Unnecessary clearance of vegetation must be avoided;
- The environmental officer (ECO) is required to be present when construction/clearance commences to advise what protected plant species in the general vicinity will be impacted on, and managed accordingly;
- Permits will need to be obtained for activities involving protected and specially protected species which may result in the need to rescue and translocate, cut/damage, and/or destroy specimens. Please take note that this project will require two types of permits to be obtained one for the protected tree (national) species and one for the protected species (provincially); and
- Given the limitations highlighted earlier (i.e., no specific pylon locations and inaccessibility attributed to impenetrable and dense bushveld vegetation), it is recommended that a follow-up assessment to detect individual protected species be conducted when the specific locations of the pylons are proposed

### 3.7 Site Sensitivity Verification

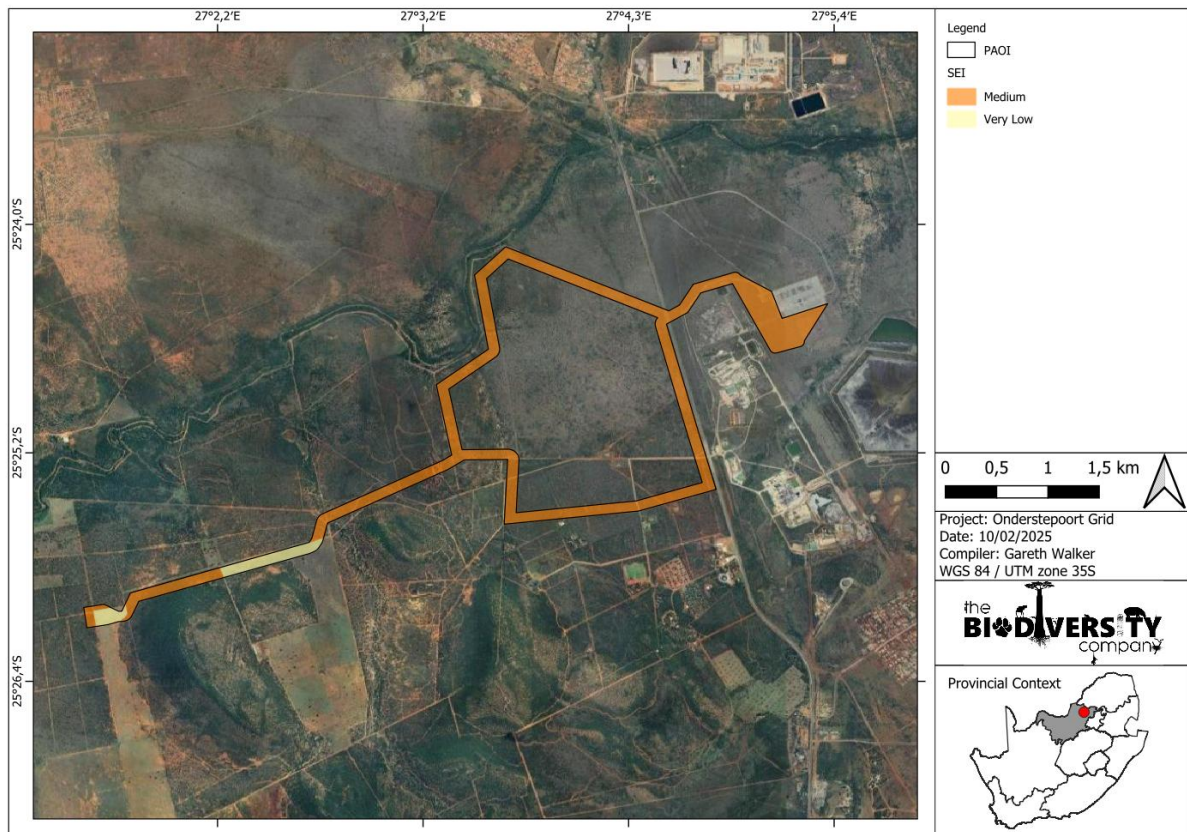
#### 3.7.1 Habitats and Site Ecological Importance (SEI)

Based on the criteria provided in Appendix B of this report, all habitats within the PAOI were assigned a sensitivity category, i.e., a SEI category. Habitats within the PAOI varied in sensitivity from Very Low (i.e., old fields) to Medium (i.e., water resources and bushveld) SEI (Table 3-6 & Figure 3-6). The findings of this assessment therefore contradict the findings set forth by the Screening Tool with regards to the combined Terrestrial Biodiversity Theme Sensitivity.

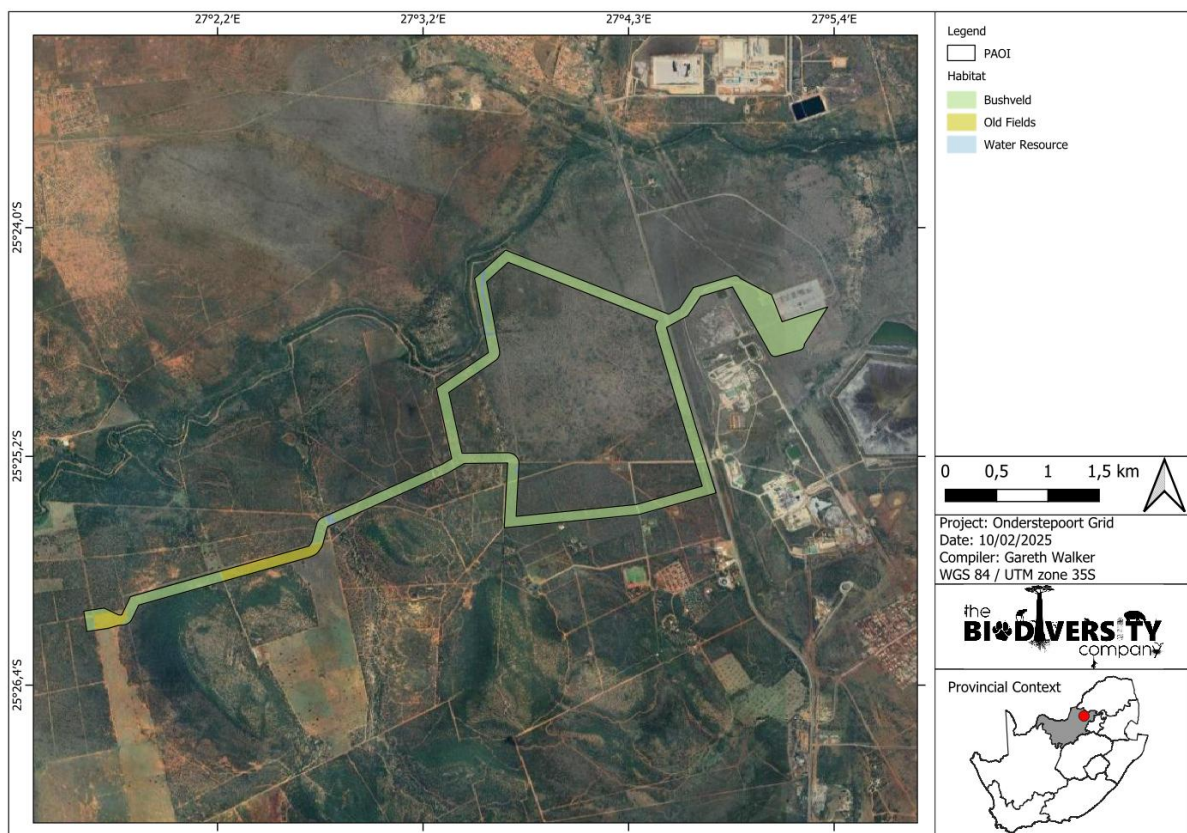
**Table 3-6 Summary of habitat types and associated SEIs delineated within the PAOI.**

Habitat Type	Conservation Importance (CI)	Functional Integrity (FI)	Biodiversity Importance (BI)	Receptor Resilience (RR)	Site Ecological Importance (SEI) Guidelines for interpreting SEI in the context of the proposed development activities
Bushveld	<u>Medium</u> > 50% of receptor contains natural habitat with the potential to support fauna and flora SCC.	<u>Medium</u> Mostly minor current negative ecological impacts with some major impacts and a few signs of minor past disturbance. Moderate rehabilitation potential.	<u>Medium</u>	<u>Medium</u> Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.	<u>Medium</u> Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
Old Fields	<u>Low</u> < 50% of receptor contains natural habitat with limited potential to support SCC.	<u>Low</u> Several minor and major current and historical negative ecological impacts.	<u>Low</u>	<u>High</u> Habitat that can recover relatively quickly (~ 5–10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a high likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a high likelihood of returning to a site once the disturbance or impact has been removed.	<u>Very Low</u> Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.
Water Resources	<u>Medium</u> > 50% of receptor contains natural habitat with the potential to support fauna and flora SCC.	<u>Medium</u> Only narrow corridors of good habitat connectivity with a busy road between intact habitat patches. Mostly minor current negative ecological impacts with some major impacts and a few signs of minor past disturbance. Moderate rehabilitation potential.	<u>Medium</u>	<u>Medium</u> Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.	<u>Medium</u> Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.





**Figure 3-6** Map depicting the Site Ecological Importance (SEI) sensitivity for the PAOI.



**Figure 3-7** Map depicting the habitat types defined within the PAOI.

### 3.7.2 Screening Tool Comparison

The allocated sensitivities for each of the relevant themes are either disputed or validated in Table 3-7 below. A summative explanation for each result is provided as relevant. The specialist-assigned sensitivity ratings are based largely on the SEI process followed in the previous section, and consideration is given to any observed or likely presence of SCC or protected species.

**Table 3-7 Summary of the screening tool vs specialist assigned sensitivities.**

Screening Tool Theme	Screening Tool	Specialist	Habitats	Tool Validated or Disputed by Specialist - Reasoning
Terrestrial Theme	Very High	Very Low	Old Fields	Disputed – These habitats (referring exclusively to the old fields) have been disturbed predominantly by historical agricultural practices (including both crop and livestock farming). Although the ecological functionality and integrity of these habitats has been compromised by anthropogenic disturbance, the presence of indigenous flora species (i.e., pioneer grasses and shrubs) could serve as habitats for indigenous flora species. Moreover, these habitats can serve as dispersion corridors for fauna species. Irrespective, the old field habitats are no longer a viable constituent of CBA 1 and ESA 1 & 2 ecosystems.
		Medium	Water Resources and Bushveld	Disputed – These habitats refer to the bushveld and water resource (i.e., unchanneled valley bottom and drainage line) habitats. Both habitats exhibit high levels of ecological functionality and integrity with the potential to house high levels of fauna and flora diversity. Owing to the limited size of the developmental footprint and the fact that the proposed project involves a linear activity, however, based on the mitigation and remedial measures proposed, the land can be returned to its current state shortly after the project's completion. No flora SCC were detected and none are expected to occur within these habitats. Although no fauna SCC were detected during the field survey, there is a moderate (medium) potential that <i>Kinixys lobatsiana</i> could occur within the PAOI. It is therefore imperative that prior to the commencement of construction, efforts are made to ensure that the species does not occur within the developmental footprint.
Animal Theme	High	Medium		Disputed – Although no fauna SCC were detected during the field survey, there is the potential for <i>Kinixys lobatsiana</i> to occur within the PAOI. Efforts need to be made during pre-construction to ensure that the species does not occur within the PAOI, and if located, actions need to be put in place to ensure the safe and ethical removal of the species from the area. SCC aside, the water resource and bushveld habitats have the potential to house a high fauna diversity. However, owing to limited size of the developmental footprint, fauna species are unlikely to be significantly impacted by the proposed development.
Plant Theme	Medium	Medium		Validated – Although no flora SCC are expected to occur within the PAOI, the

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bushveld and water resource habitats are capable of housing a high flora diversity. This was confirmed during the field survey and site walkdown. As mentioned above, however, owing to the limited size of the developmental footprint, it is unlikely the proposed development will significantly affect the population of any flora species.

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## 4 Impact Management and Mitigation Plan

The aim of the management outcomes is to present mitigation actions in such a way that they can be incorporated into the Environmental Management Programme (EMPr), and possible biodiversity management programme, for the project, which should in turn allow for a more successful implementation and auditing of the mitigations and monitoring guidelines. Table 4-1 presents the recommended mitigation measures and the respective time frames, targets, and performance indicators relative to the terrestrial assessment. This mitigation table must be read in conjunction with the Generic Environmental Management Programme (EMPR) for the development and expansion of substation infrastructure for the transmission and distribution of electricity as per No. 42323 GOVERNMENT GAZETTE, 22 MARCH 2019.

The focus of mitigation measures is to reduce the significance of the likely impacts associated with the development, and thereby:

- Prevent the further loss and fragmentation of indigenous vegetation communities within the ecosystem in and around the PAOI;
- Reduce the negative fragmentation effects of the development and facilitate the safe movement of fauna species;
- Prevent the direct and indirect loss and disturbance of flora and fauna species and communities; and
- Adequately follow the guidelines for interpreting the SEI ratings assigned to the PAOI.

**Table 4-1 Project specific mitigation measures including requirements for timeframes, roles, and responsibilities.**

Management outcome: Vegetation and Habitats				
Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Aspect	Frequency
No construction of pylons may occur in the water resource habitats (i.e., unchanneled valley bottom and drainage line), and OHLs must span these areas without infringing on them. These areas should be declared 'no-go' areas for the life of the operation.	Planning Phase, Pre-Construction	Project Manager, Environmental Officer & Contractor	Water resource habitats	Ongoing
Laydown and construction preparation activities (such as cement mixing, temporary toilets, etc.) must be limited to already modified areas of an overall Low SEI, preferably beyond the boundaries of either the southern or northern corridor and should take up the smallest footprint possible.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
It is recommended that areas to be developed/disturbed be specifically demarcated so that during the construction/activity phase, only the demarcated areas be impacted upon.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
Areas of indigenous vegetation, even secondary/disturbed communities outside of the direct project footprint, should not be fragmented or disturbed further.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
All vehicles and personnel must make use of existing roads and walking paths as far as possible, especially construction/operational vehicles. There is an expansive road network that bisects and occurs around the PAOI. These should be utilised.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
The clearing of vegetation must be minimised where possible. All activities must be restricted to within the authorised areas.	Life of operation	Project manager, Environmental Officer	Areas of indigenous vegetation	Ongoing
Any observed protected plants that were undetected during the field survey must be clearly demarcated prior to the commencement of site clearing. If construction activities are likely to affect any protected plants these individuals must be relocated as part of a plant rescue and protection plan, and a permit must be obtained before doing so. See Site Walkdown section.	Planning Phase	Environmental Officer	Protected plants and SCC	During phase
Materials may not be stored for extended periods of time and must be removed from the PAOI once the construction phase has been concluded. Construction buildings should preferably be prefabricated or constructed of reusable/recyclable materials. No storage of vehicles or equipment is allowed outside of the designated laydown areas.	Construction and Operational Phase	Environmental Officer, Design Engineer, and Contractor	Laydown areas	Ongoing
Areas that are denuded during construction need to be re-vegetated with indigenous vegetation according to a habitat rehabilitation plan, to prevent erosion during flood and wind events and to promote the regeneration of functional habitat. This will also reduce the likelihood of encroachment by alien invasive plant species.	Operational phase	Environmental Officer & Contractor	Assess the state of rehabilitation and encroachment of alien vegetation	Quarterly for up to two years after the closure

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A habitat rehabilitation plan must be implemented, and areas of bare ground must be revegetated with species indigenous to the region.	Life of Operation	Project manager, Environmental Officer	Rehabilitation	Ongoing
A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. <ul style="list-style-type: none"> <li>Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use.</li> <li>No servicing of equipment on site unless necessary.</li> <li>All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers.</li> <li>Appropriately contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them from leaking and entering the environment.</li> <li>Construction activities and vehicles could cause spillages of lubricants, fuels and waste material negatively affecting the functioning of the ecosystem.</li> <li>All vehicles and equipment must be maintained, and all re-fuelling and servicing of equipment is to take place in demarcated areas outside of the PAOI.</li> </ul>	Life of operation	Environmental Officer & Contractor	Spill events, Vehicles dripping.	Ongoing
It must be made an offence for any staff member to remove any indigenous plant species from the PAOI or bring any alien species in. This is to prevent the spread of exotic or alien species or the illegal collection of plants.	Life of operation	Project manager, Environmental Officer	Any instances	Ongoing
A fire management plan needs to be compiled and implemented to restrict the impact fire would have on the surrounding areas (this is important for this site considering that most of the PAOI consists of flammable bushveld habitat).	Life of operation	Environmental Officer & Contractor	Fire Management	During Phase
All construction waste must be removed from site at the closure of the construction phase.	Construction phase	Environmental Officer & Contractor	Construction waste	During Phase

**Management outcome: Fauna**

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Aspect	Frequency
A qualified environmental control officer must be on site when activities begin. A site walk through must be performed by a suitably qualified environmental control officer prior to any activities taking place and any SCC or protected species should be noted (this is particularly important for <i>Kinixys lobatsiana</i> ). In situations where the species are observed and must be removed, the proponent may only do so after the required permission/permits have been obtained in accordance with national and provincial legislation. In the abovementioned situation the development and implementation	Construction Phase	Environmental Officer, Contractor	Presence of any floral or faunal SCC	During phase

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of a search, rescue and recovery program is suggested for the protection of these species. Should animals not move out of the area on their own, relevant specialists must be contacted to advise on how the species can be relocated.				
Clearing and disturbance activities must be conducted in a progressive linear manner, and over several days, to provide an easy escape route for all small mammals and herpetofauna.	Construction Phase	Environmental Officer & Contractor	Progressive land clearing operations and the movement of fauna	Ongoing
The areas to be disturbed must be specifically and responsibly demarcated to prevent the movement of staff or any individual into the surrounding environments, signs must be put up to enforce this.	Construction/Operational Phase	Project manager, Environmental Officer	Infringement into these areas	Ongoing
The duration of the activities should be minimised to as short a term as possible, to reduce the period of disturbance on fauna.	Construction	Project manager, Environmental Officer & Design Engineer	Construction/Closure Phase	Ongoing
Noise must be kept to an absolute minimum during the evenings and at night to minimise all possible disturbances to reptile species and nocturnal mammals.	Construction/Operational Phase	Environmental Officer	Noise levels	Ongoing
No trapping, killing, or poisoning of any wildlife is to be allowed and signs must be put up to enforce this. Monitoring must take place in this regard.	Life of operation	Environmental Officer	Evidence of trapping etc	Ongoing
Outside lighting should be designed and limited to minimise impacts on fauna. Fluorescent and mercury vapor lighting should be avoided, and sodium vapor (green/red) lights should be used wherever possible.	Construction/Operational Phase	Project manager, Environmental Officer & Design Engineer	Light pollution and period of light	Ongoing
All construction and maintenance motor vehicle operators should undergo an environmental induction that includes instruction on the need to comply with speed limits, to respect all forms of wildlife. Speed limits must be enforced to ensure that road killings and erosion is limited.	Life of operation	Health and Safety Officer	Compliance to the training	Ongoing
Schedule activities and operations during least sensitive periods. In this case, activities should take place during the day.	Life of operation	Project manager, Environmental Officer & Design Engineer	Activities should take place during the day	Ongoing
Any holes/deep excavations must be dug in a progressive manner and shouldn't be left open overnight. Should any holes remain open overnight they must be properly covered temporarily to ensure that no small fauna species fall in. Holes must be subsequently inspected for fauna prior to backfilling.	Planning and Construction	Environmental Officer & Contractor, Engineer	Presence of trapped animals and open holes	Ongoing
If fencing is required: wildlife-permeable fencing with holes large enough for mongoose and other smaller mammals should be installed, the holes must not be placed in the fence where it is next to a major road as this will increase road killings in the area.	Planning and construction	Environmental Officer & Contractor, Engineer	Fauna movement corridor	Ongoing
Once the development layout has been confirmed, the open areas must be fenced off appropriately pre-construction to allow animals to move or be moved out of these areas before breaking ground activities occur. Prior to vegetation clearing activities, the area to be cleared should be walked on foot by 1-2	Planning/Construction Phase	Environmental Officer & Design Engineer	Areas not to be developed and construction direction	Ongoing

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individuals to create a disturbance for fauna to move off. This is particularly important for slow moving animals such as *Kinixys lobatsiana*. Sites should be disturbed only prior to the area having to be cleared, not more than 1 day in advance

**Management outcome: Alien Species**

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
An Alien Invasive Plant (AIP) Management Plan must be compiled and implemented. This should regularly be updated to reflect the annual change in AIP composition (those species that are categorised as NEMBA 1b).	Life of operation	Project manager, Environmental Officer & Contractor	Manage and assess presence and encroachment of alien vegetation	Twice a year
The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas. Footprints of the roads must be kept to prescribed widths.	Construction/Operational Phase	Project manager, Environmental Officer & Contractor	Footprint Area	Life of operation

**Management outcome: Dust**

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
Dust-reducing mitigation measures must be put in place and must be strictly adhered to. This includes the wetting of exposed soft soil surfaces. No non-environmentally friendly suppressants may be used as this could result in the pollution of water sources.	Construction phase	Contractor	Dustfall	Dust monitoring program.

**Management outcome: Waste Management**

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
Waste management must be a priority, and all waste must be collected and stored effectively and responsibly according to a site-specific waste management plan. Dangerous waste such as metal wires and glass must only be stored in fully sealed and secure containers, before being moved off site as soon as possible.	Life of operation	Environmental Officer & Contractor	Waste Removal	Weekly
Litter, spills, fuels, chemical and human waste in and around the PAOI must be minimised and controlled according to the waste management plan.	Construction/Closure Phase	Environmental Officer & Health and Safety Officer	Presence of Waste	Daily
Cement mixing may not be performed on the ground. It is recommended that only closed side drum or pan type concrete mixers be utilised. Any spills must be immediately contained and isolated from the natural environment, before being removed from site.	Construction Phase	Environmental Officer & Contractor	Cement mixing and spills	Every occurrence
Toilets at the recommended Health and Safety standards must be provided. These should be emptied regularly and once no longer required, they must be pumped dry to prevent leakage into the surrounding environment and removed from site.	Life of operation	Environmental Officer & Health and Safety Officer	Number of toilets per staff member. Waste levels	Daily
The Contractor should supply sealable and properly marked domestic waste collection bins and all solid waste collected shall be disposed of at a licensed disposal facility within every 10 days at least.	Life of operation	Environmental Officer & Health and Safety Officer	Availability of bins and the collection of the waste	Ongoing



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Where a registered disposal facility is not available close to the PAOI, the Contractor shall provide a method statement with regards to waste management. Under no circumstances may domestic waste be burned on site or buried on open pits.	Life of operation	Environmental Officer, Contractor & Health and Safety Officer	Collection/handling of the waste	Ongoing
Refuse bins will be responsibly emptied and secured. Temporary storage of domestic waste shall be in covered and secured waste skips. Maximum domestic waste storage period will be 10 days.	Life of operation	Environmental Officer, Contractor & Health and Safety Officer	Management of bins and collection of waste	Ongoing, every 10 days

**Management outcome: Environmental Awareness Training**

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
All personnel and contractors are to undergo Environmental Awareness Training. A signed register of attendance must be kept for proof. Discussions are required on sensitive environmental receptors within the PAOI to inform contractors and site staff of the presence of protected species, their identification, conservation status and importance, biology, habitat requirements and management requirements in line with the Environmental Authorisation and within the EMPr. Contractors and employees must all undergo the induction and must be made aware of any sensitive areas to be avoided.	Pre-construction phase	Health and Safety Officer, Environmental Officer	Compliance to the training	Ongoing
Speed limits must be put in place to reduce erosion. Soil surfaces must be wetted as necessary to reduce the dust generated by the project activities. Speed control measures should be put in place to enforce slow speeds.	Life of operation	Project manager, Environmental Officer	Water Runoff from road surfaces	Ongoing
Only existing access routes and walking paths may be made use of. This includes any roads/tracks that will be used for the maintenance of the OHL.	Life of operation	Project manager, Environmental Officer	Routes used within the area	Ongoing
Areas that are denuded during construction and not used during operation need to be re-vegetated with indigenous vegetation to prevent erosion during flood events etc.	Life of operation	Project manager, Environmental Officer	Re-establishment of indigenous vegetation	Progressively
A stormwater management plan must be compiled and implemented if necessary.	Life of operation	Project manager, Environmental Officer	Management plan	Before construction phase: Ongoing

## 5 Conclusion

The findings of this survey are considered in conjunction with the findings by Gerhard Botha (Nkurukuru, 2024). Together with this report, the completion of a comprehensive desktop study, in conjunction with the results from the field survey and site walkdown, suggest there is a medium-high confidence in the information provided. The survey ensured that there was suitable ground-truth coverage of the open-spaces and natural habitats, and ecosystems were assessed to obtain a general species (fauna and flora) overview, and the major current impacts were observed. From our findings, the following habitats and corresponding sensitivities were delineated within the PAOI:

- Bushveld: Medium
- Old Fields: Very Low
- Water Resources: Medium

Bushveld habitats dominated the PAOI in both the southern and northern corridors. These habitats exhibited a high flora and fauna diversity. As extensively highlighted throughout this report, there is a moderate (medium) potential that the VU *Kinixys lobatsiana* may occur in bushveld habitats directly within the developmental footprint in the PAOI. Every effort should be made to ensure that the species does not occur within the PAOI prior to the commencement of construction related activities. Further, no pylons should be placed directly within water resource (i.e., unchanneled valley bottom and drainage line) habitats. Moreover, electrical strands must clear these water resource habitats and should in no way impact on their ecological functionality. The majority of the site is comprised of ecologically functional bushveld habitat that is a viable representation of CBA 2 and ESA 1 & 2 ecosystems, however, the linear activity proposed within the relatively small developmental footprint can likely be returned to its current state through the implementation of viable remedial and mitigation measures within a two-year period post construction.

The completion of this terrestrial biodiversity assessment led to a dispute of the 'Very High' Terrestrial Biodiversity Theme Sensitivity as set out in the National Environmental Screening Tool. Instead, the PAOI is assigned an overall 'Very Low to 'Medium' Terrestrial Theme Sensitivity. The findings set forth in this report, however, should be reviewed in conjunction with the accompanying avifauna report (TBC, 2025).

### 5.1 Impact Statement

The location, state and size of the ecosystem suggests that it is unlikely that any functional habitat will be lost because of the impacts arising from the proposed activities. This statement applies to both alternatives. However, these assumptions pertain exclusively to the terrestrial habitat.

### 5.2 Specialist Opinion

It is the opinion of the specialist stipulated herein that the proposed development is favourable only if all mitigation measures provided in this and other specialist reports are implemented. Specifically, it is vital that every effort be made to ensure that *Kinixys lobatsiana* does not occur within the PAOI at the time of commencing construction. Moreover, given the linear activity proposed within the PAOI, it is likely that the area can be returned to its current state within two years post construction. Lastly, the recommendations stipulated within the Site Walkdown section of this report need to be considered and where necessary, implemented.

## 6 References

Bates, M.F., Branch, W.R., Bauer, A.M., Burger, M., Marais, J., Alexander, G.J & de Villiers, M.S. (Eds). 2014. Atlas and Red List of Reptiles of South Africa, Lesotho and Swaziland. Suricata 1. South African Biodiversity Institute, Pretoria.

Department of Forestry, Fisheries and the Environment (DFFE). 2023. SACAD (South Africa Conservation Areas Database) and SAPAD (South Africa Protected Areas Database). <http://egis.environment.gov.za>.

Department of Forestry, Fisheries and the Environment (DFFE). 2022. National Protected Areas Expansion Strategy <http://egis.environment.gov.za>.

**Du Preez, L.H. & Carruthers, V. 2009.** A Complete Guide to the Frogs of Southern Africa. Struik Nature, Cape Town.

Fish, L., Mashau, A.C., Moeaha, M.J. & Nembudani, M.T. 2015. Identification Guide to Southern African Grasses: An Identification Manual with Keys, Descriptions, and Distributions. SANBI, Pretoria.

Mucina, L. & Rutherford, M.C. (Eds.). 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria, South African.

Mucina, L., Rutherford, M.C. & Powrie, L.W. (Eds.). 2007. Vegetation map of South Africa, Lesotho and Swaziland. 1:1 000 000 scale sheet maps. 2nd ed. South African National Biodiversity Institute, Pretoria.

Mucina, L., Scott-Shaw, CR., Rutherford, MC., Camp., KGT., Matthews, WS., Powrie, LW and Hoare, DB. Indian Ocean Coastal Belt. IN Mucina, L. & Rutherford, M.C. (Eds.). 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria, South African.

National Biodiversity Assessment spatial data. 2018. <http://bgis.sanbi.org/>. Accessed February 2025.

Nel JL, Murray KM, Maherry AM, Petersen CP, Roux DJ, Driver A, Hill L, Van Deventer H, Funke N, Swartz ER, Smith-Adao LB, Mbona N, Downsborough L and Nienaber S. 2011. Technical Report for the National Freshwater Ecosystem Priority Areas project. WRC Report No. K5/1801.

NEMBA. 2014. Government Gazette, Volume 584. No 37320. [www.gpwonline.co.za](http://www.gpwonline.co.za). Accessed February 2025.

Raimondo, D., von Staden, L., Foden, W., Victor, J.E., Helme, N.A., Turner, R.C., Kamundi, D.A. and Manyama, P.A. 2009. Red List of South African Plants. Strelitzia 25. South African National Biodiversity Institute, Pretoria.

SANBI. 2022. Red List of South African Plants version 2020. [redlist.sanbi.org](http://redlist.sanbi.org) (Accessed February 2025)

SANBI-BGIS. 2017. Technical guidelines for CBA Maps: Guidelines for developing a map of Critical Biodiversity Areas & Ecological Support Areas using systematic biodiversity planning.

SAPAD (South Africa Protected Areas Database) and SACAD (South Africa Conservation Areas Database) (2023). <http://egis.environment.gov.za>

Skinner, J.D. & Chimimba, C.T. 2005. The Mammals of the Southern African Sub-region. Cambridge University Press, Cape Town.

Skowno, A.L. & Monyeki, M.S. 2021. South Africa's Red List of Terrestrial Ecosystems (RLEs). Land, 10, 1048, 1-14.

Skowno, A.L., Raimondo, D.C., Poole, C.J., Fizzotti, B. & Slingsby, J.A. (eds.). 2019. South African National Biodiversity Assessment 2018 Technical Report Volume 1: Terrestrial Realm. South African National Biodiversity Institute, Pretoria.

Taylor A, Cowell C, Drouilly M, Schulze E, Avenant N, Birss C, Child MF. 2016. A conservation assessment of *Pelea capreolus*. In Child MF, Roxburgh L, Do Linh San E, Raimondo D, Davies-Mostert HT, editors. The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa.

Van Deventer H, Smith-Adao L, Collins NB, Grenfell M, Grundling A, Grundling P-L, Impson D, Job N, Lötter M, Ollis D, Petersen C, Scherman P, Sieben E, Snaddon K, Tererai F. and Van der Colff D. 2019. *South African National Biodiversity Assessment 2018: Technical Report. Volume 2b: Inland Aquatic (Freshwater) Realm*. CSIR report number CSIR/NRE/ECOS/IR/2019/0004/A. South African National Biodiversity Institute, Pretoria. <http://hdl.handle.net/20.500.12143/6230>.

## 7 Appendix Items

### 7.1 Appendix A: Methods

#### 7.1.1 Desktop Dataset Assessment

##### 7.1.1.1 Ecologically Important Landscape Features

Existing ecologically relevant data layers were incorporated into a GIS to establish how the proposed development might interact with any ecologically important entities. Emphasis was placed around the following spatial datasets:

- National Biodiversity Assessment 2018 (Skowno et al, 2019) - The purpose of the National Biodiversity Assessment (NBA) is to assess the state of South Africa's biodiversity based on best available science, with a view to understanding trends over time and informing policy and decision-making across a range of sectors. The NBA deals with all three components of biodiversity: genes, species and ecosystems; and assesses biodiversity and ecosystems across terrestrial, freshwater, estuarine and marine environments. The two headline indicators assessed in the NBA are:
  - Ecosystem Threat Status – indicator of an ecosystem's wellbeing, based on the level of change in structure, function or composition. Ecosystem types are categorised as Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT) or Least Concern (LC), based on the proportion of the original extent of each ecosystem type that remains in good ecological condition. Red List of Ecosystems (RLE) 2021 – The list was first published in 2011 and has since been substantially revised by authors Dr Andrew Skowno and Mrs Maphale Monyeki (SANBI, 2022). This list is based on assessments that followed the International Union for Conservation of Nature (IUCN) Red List of Ecosystems Framework (version 1.1) and covers all 456 terrestrial ecosystem types described in South Africa by Mucina and Rutherford (2006). A total of 120 of the 456 terrestrial ecosystem types assessed are categorised as threatened and together make up approximately 10% of the remaining natural habitat in the country. Of these 120 ecosystem types, 55 are Critically Endangered (CR), 51 Endangered (EN) and 14 are Vulnerable (VU). The remainder are categorised as Least Concern (LC) (SANBI, 2022; Skowno & Monyeki, 2021).
  - Ecosystem Protection Level – indicator of the extent to which ecosystems are adequately protected or under-protected. Ecosystem types are categorised as Well Protected (WP), Moderately Protected (MP), Poorly Protected (PP), or Not Protected (NP), based on the proportion of the biodiversity target for each ecosystem type that is included within one or more protected areas. Not Protected, Poorly Protected or Moderately Protected ecosystem types are collectively referred to as under-protected ecosystems.
- Protected areas:
  - South Africa Protected Areas Database (SAPAD) and South Africa Conservation Areas Database (SACAD) (DFFE, 2023a) – The South African Protected Areas Database (SAPAD) and South Africa Conservation Areas Database (SACAD) contains spatial data for the conservation of South Africa. It includes spatial and attribute information for both formally protected areas and areas that have less formal protection. The database is updated on a continuous basis and forms the basis for the Register of Protected Areas which is a legislative requirement under the National Environmental Management: Protected Areas Act, Act 57 of 2003.

- National Protected Areas Expansion Strategy (NPAES) (DFFE, 2022b) – The National Protected Area Expansion Strategy (NPAES) provides spatial information on areas that are suitable for terrestrial ecosystem protection. These focus areas are large, intact and unfragmented and are therefore, of high importance for biodiversity, climate resilience and freshwater protection.

- Conservation/Biodiversity Sector Plans:

The North-West Department of Rural, Environment, and Agricultural Development (READ), as custodian of the environment in the North West, is the primary implementing agent of the Biodiversity Sector Plan. The spatial component of the Biodiversity Sector Plan is based on systematic biodiversity planning undertaken by READ. The purpose of a Biodiversity Sector Plan is to inform land use planning, environmental assessments, land and water use authorisations, as well as natural resource management, undertaken by a range of sectors whose policies and decisions impact on biodiversity. This is done by providing a map of biodiversity priority areas, referred to as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), with accompanying land use planning and decision-making guidelines (READ, 2015).

Critical Biodiversity Areas (CBAs) are terrestrial and aquatic areas of the landscape that need to be maintained in a natural or near-natural state to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. Thus, if these areas are not maintained in a natural or near natural state then biodiversity targets cannot be met. Maintaining an area in a natural state can include a variety of biodiversity compatible land uses and resource uses (READ, 2015).

Ecological Support Areas (ESAs) are terrestrial and aquatic areas that are not essential for meeting biodiversity representation targets (thresholds), but which play an important role in supporting the ecological functioning of critical biodiversity areas and/or in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. The degree or extent of restriction on land use and resource use in these areas may be lower than that recommended for CBAs (READ, 2015).

- A new set of Key Biodiversity Areas (KBA) specific to South Africa has been identified using the Global Standard for the Identification of Key Biodiversity Areas version 1.2 (IUCN 2016), applied to South African species and ecosystems. KBAs are critical sites that play a vital role in maintaining global biodiversity by serving as essential habitats for species. The identification of KBAs enables governments and civil society to pinpoint key locations crucial for species and their habitats worldwide. This understanding facilitates collaborative efforts to manage and conserve these areas, thereby safeguarding global biological diversity and supporting international biodiversity objectives; and
- Freshwater Ecology:
  - Strategic Water Source Areas (SWSAs) (Le Maitre et al, 2018) – SWSAs are defined as areas of land that supply a quantity of mean annual surface water runoff in relation to their size and therefore, contribute considerably to the overall water supply of the country. These are key ecological infrastructure assets and the effective protection of surface water SWSAs areas is vital for national security because a lack of water security will compromise national security and human wellbeing.
  - South African Inventory of Inland Aquatic Ecosystems (SAIIAE) (Van Deventer et al, 2018) – A South African Inventory of Inland Aquatic Ecosystems (SAIIAE) was established during the National Biodiversity Assessment of 2018. It is a collection of

data layers that represent the extent of river and inland wetland ecosystem types as well as pressures on these systems.

- National Freshwater Ecosystem Priority Area (NFEPA) (Nel et al., 2011) – The NFEPA database provides strategic spatial priorities for conserving the country's freshwater ecosystems and associated biodiversity as well as supporting sustainable use of water resources.

## 7.2 Appendix B: Terrestrial Site Ecological Importance

The different habitat types within the PAOI were delineated and identified based on observations made during the field survey, and information from available satellite imagery. These habitat types were assigned Ecological Importance (EI) categories based on their ecological integrity, conservation value, the presence of SCC and their ecosystem processes.

Site Ecological Importance (SEI) is a function of the Biodiversity Importance (BI) of the receptor (e.g., SCC, the vegetation/fauna community or habitat type present in the Project Area) and Receptor Resilience (RR) (its resilience to impacts).

BI is a function of Conservation Importance (CI) and the Functional Integrity (FI) of the receptor. The criteria for the CI and FI ratings are provided in Table 7-1 and Table 7-2 respectively.

**Table 7-1 Summary of Conservation Importance (CI) criteria.**

Conservation Importance	Fulfilling Criteria
<b>Very High</b>	Confirmed or highly likely occurrence of Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Extremely Rare or CR species that have a global extent of occurrence (EOO) of < 10 km <sup>2</sup> . Any area of natural habitat of a CR ecosystem type or large area (> 0.1% of the total ecosystem type extent) of natural habitat of an EN ecosystem type. Globally significant populations of congregatory species (> 10% of global population).
<b>High</b>	Confirmed or highly likely occurrence of CR, EN, VU species that have a global EOO of > 10 km <sup>2</sup> . IUCN threatened species (CR, EN, VU) must be listed under any criterion other than A. If listed as threatened only under Criterion A, include if there are less than 10 locations or < 10 000 mature individuals remaining. Small area (> 0.01% but < 0.1% of the total ecosystem type extent) of natural habitat of EN ecosystem type or large area (> 0.1%) of natural habitat of VU ecosystem type. Presence of Rare species. Globally significant populations of congregatory species (> 1% but < 10% of global population).
<b>Medium</b>	Confirmed or highly likely occurrence of populations of Near Threatened (NT) species, threatened species (CR, EN, VU) listed under Criterion A only and which have more than 10 locations or more than 10 000 mature individuals. Any area of natural habitat of threatened ecosystem type with status of VU. Presence of range-restricted species. > 50% of receptor contains natural habitat with potential to support SCC.
<b>Low</b>	No confirmed or highly likely populations of SCC. No confirmed or highly likely populations of range-restricted species. < 50% of receptor contains natural habitat with limited potential to support SCC.
<b>Very Low</b>	No confirmed and highly unlikely populations of SCC. No confirmed and highly unlikely populations of range-restricted species. No natural habitat remaining.

**Table 7-2 Summary of Functional Integrity (FI) criteria.**

Functional Integrity	Fulfilling Criteria
<b>Very High</b>	Very large (> 100 ha) intact area for any conservation status of ecosystem type or > 5 ha for CR ecosystem types. High habitat connectivity serving as functional ecological corridors, limited road network between intact habitat patches. No or minimal current negative ecological impacts, with no signs of major past disturbance.
<b>High</b>	Large (> 20 ha but < 100 ha) intact area for any conservation status of ecosystem type or > 10 ha for EN ecosystem types. Good habitat connectivity, with potentially functional ecological corridors and a regularly used road network between intact habitat patches. Only minor current negative ecological impacts, with no signs of major past disturbance and good rehabilitation potential.
<b>Medium</b>	Medium (> 5 ha but < 20 ha) semi-intact area for any conservation status of ecosystem type or > 20 ha for VU ecosystem types. Only narrow corridors of good habitat connectivity or larger areas of poor habitat connectivity and a busy used road network between intact habitat patches. Mostly minor current negative ecological impacts, with some major impacts and a few signs of minor past disturbance. Moderate rehabilitation potential.
<b>Low</b>	Small (> 1 ha but < 5 ha) area. Almost no habitat connectivity but migrations still possible across some modified or degraded natural habitat and a very busy used road network surrounds the area. Low rehabilitation potential. Several minor and major current negative ecological impacts.
<b>Very Low</b>	Very small (< 1 ha) area. No habitat connectivity except for flying species or flora with wind-dispersed seeds. Several major current negative ecological impacts.

BI can be derived from a simple matrix of CI and FI as provided in Table 7-3.

**Table 7-3 Matrix used to derive Biodiversity Importance (BI) from Functional Integrity (FI) and Conservation Importance (CI).**

Biodiversity Importance		Conservation Importance				
		Very High	High	Medium	Low	Very Low
Functional Integrity	Very High	Very High	Very High	High	Medium	Low
	High	Very High	High	Medium	Medium	Low
	Medium	High	Medium	Medium	Low	Very Low
	Low	Medium	Medium	Low	Low	Very Low
	Very Low	Medium	Low	Very Low	Very Low	Very Low

The fulfilling criteria to evaluate RR are based on the estimated recovery time required to restore an appreciable portion of functionality to the receptor, as summarised in Table 7-4.

**Table 7-4 Summary of Receptor Resilience (RR) criteria.**

Resilience	Fulfilling Criteria
<b>Very High</b>	Habitat that can recover rapidly (~ less than 5 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a very high likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
<b>High</b>	Habitat that can recover relatively quickly (~ 5–10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a high likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
<b>Medium</b>	Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
<b>Low</b>	Habitat that is unlikely to be able to recover fully after a relatively long period: > 15 years required to restore ~ less than 50% of the original species composition and functionality of the receptor functionality, or species that have a low likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
<b>Very Low</b>	Habitat that is unable to recover from major impacts, or species that are unlikely to: (i) remain at a site even when a disturbance or impact is occurring, or (ii) return to a site once the disturbance or impact has been removed.

After the determination of BI and RR, the SEI can be ascertained using the matrix as provided in Table 7-5.

**Table 7-5 Matrix used to derive Site Ecological Importance from Receptor Resilience (RR) and Biodiversity Importance (BI).**

Site Ecological Importance		Biodiversity Importance				
		Very High	High	Medium	Low	Very Low
Receptor Resilience	Very Low	Very High	Very High	High	Medium	Low
	Low	Very High	Very High	High	Medium	Very Low
	Medium	Very High	High	Medium	Low	Very Low
	High	High	Medium	Low	Very Low	Very Low
	Very High	Medium	Low	Very Low	Very Low	Very Low



Interpretation of the SEI in the context of the proposed project is provided in Table 7-6.

**Table 7-6** *Guideline for interpreting Site Ecological Importance in the context of proposed activities.*

Site Ecological Importance	Interpretation in relation to proposed development activities
<b>Very High</b>	Avoidance mitigation – no destructive development activities should be considered. Offset mitigation not acceptable/not possible (i.e., last remaining populations of species, last remaining good condition patches of ecosystems/unique species assemblages). Destructive impacts for species/ecosystems where persistence target remains.
<b>High</b>	Avoidance mitigation wherever possible. Minimisation mitigation – changes to project infrastructure design to limit the amount of habitat impacted, limited development activities of low impact acceptable. Offset mitigation may be required for high impact activities.
<b>Medium</b>	Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
<b>Low</b>	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities.
<b>Very Low</b>	Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.

The SEI evaluated for each taxon can be combined into a single multi-taxon evaluation of SEI for the assessment area. Either a combination of the maximum SEI for each receptor should be applied, or the SEI may be evaluated only once per receptor but for all necessary taxa simultaneously. For the latter, justification of the SEI for each receptor is based on the criteria that conforms to the highest CI and FI, and the lowest RR across all taxa.

### 7.3 Appendix C: Specialist Declaration of Independence

I, Dr Gareth Walker, declare that:

I act as the independent specialist in this application;

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;

I will comply with the Act, regulations and all other applicable legislation;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

All the particulars furnished by me in this form are true and correct; and

I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Dr Gareth Walker

Biodiversity Specialist

The Biodiversity Company

February 2025

I, Sarah Newman, declare that:

I act as the independent specialist in this application;

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;

I will comply with the Act, regulations and all other applicable legislation;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

All the particulars furnished by me in this form are true and correct; and

I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Sarah Newman

Ecologist

The Biodiversity Company

February 2025

I, Carami Burger, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.

*C Burger*

Carami Burger

Ecologist

The Biodiversity Company

February 2025

**7.4 Appendix D: Specialist CVs**

# Gareth Walker

BSC, MSc, PhD

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Identity Number: 9111095050080

Date of birth: 09 November 1991



## Profile Summary

Work experience throughout South Africa and Angola.

Extensive experience working in Limpopo and Mpumalanga assessing the various ecological drivers of terrestrial ungulates.

Experience with wildlife management and ecological monitoring in the Kruger National Park and surrounding private reserves.

## Areas of Interest

Zoology, Ecology, Biodiversity, Conservation and Invasion Ecology.

## Key Experience

- Terrestrial Ecological Assessments
- Monitoring programmes
- Field work and research
- Species distribution modelling

## Country Experience

South Africa, Angola

## Nationality

South African

## Languages

English – Proficient

Afrikaans – Conversational

Zulu – Basic

## Qualifications

- PhD Zoology, Rhodes University
- MSc Botany Invasion Ecology, Stellenbosch University
- BSc (Hons) Conservation Ecology, Stellenbosch University
- SANASP (Cert. Nat. Sci. 163013)

# Sarah Newman

M.Sc. Entomology

Cell: +27 73 391 6933

Email: sarah@thebiodiversitycompany.com

Identity Number: 9312170034086

Date of birth: 17 December 1993



## Profile Summary

Work experience throughout South Africa, as well as Lesotho, Angola, Mauritius and Costa Rica.

Extensive experience working in the Sani Pass region of southern Africa investigating the patterns and drivers of ant diversity across an elevation gradient.

Experience with sea turtle monitoring and conservation in Costa Rica.

Experience conducting terrestrial biodiversity specialist assessments throughout South Africa.

## Areas of Interest

Entomology, Zoology, Biodiversity, Conservation and Community Ecology.

## Key Experience

- Terrestrial Ecological Assessments
- Rehabilitation plans and monitoring
- Field work and research
- Taxonomic classification of insects

## Country Experience

South Africa  
Lesotho  
Angola  
Mauritius  
Costa Rica

## Nationality

South African

## Languages

English – Proficient  
Afrikaans – Conversational  
Spanish – Conversational

## Qualifications

- MSc Entomology (*Distinction*), University of Pretoria
- BSc (Hons) Zoology, University of Pretoria
- BSc Zoology, University of Pretoria
- Cand Nat Sci (158474)

Signed:

Sarah Newman

# Carami Burger

**B.Sc. Honours – Ecological Interactions and Ecosystem Resilience (Cum Laude)**

*(Pr Sci Nat)*

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Identity Number: 9606250185084

Date of birth: 25 June 1996



## Profile Summary

Working experience in South Africa and Mozambique.

Specialist experience with infrastructure development, road development, renewable energy, mining and prospecting.

Specialist expertise include terrestrial ecology, wetland resources, rehabilitation and management plans, environmental compliance and monitoring.

## Areas of Interest

Renewable Energy & Bulk Services Infrastructure Development, Mining, Farming, Sustainability and Conservation.

## Key Experience

- Environmental Impact Assessments (EIA)
- Basic Assessments
- Terrestrial Ecological Assessments
- Wetland Delineation and Ecological Assessments
- Environmental Management Programmes (EMPr)
- Rehabilitation Plans
- Invasive Species Plans
- Search and Rescue Plans
- Environmental Compliance Audits
- Water Use License Applications
- Dust Fallout Monitoring
- Water Quality Monitoring

## Countries worked in

South Africa  
Mozambique  
Zambia  
Angola  
Sierra Leone

## Nationality

South African

## Languages

English – Proficient  
Afrikaans – Proficient

## Qualifications

- BSc Hons Ecological Interactions and Ecosystem Resilience.
- BSc Botany and Zoology.
- Pr Sci Nat (121757)