

# KLIPKRAAL 2 WIND ENERGY FACILITY

## SITE SENSITIVITY VERIFICATION



PRODUCED FOR SIVEST ON BEHALF OF AURA DEVELOPMENT COMPANY (PTY) LTD



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January 2023

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## SHORT CV/SUMMARY OF EXPERTISE – SIMON TODD

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 <p><b>3Foxes Biodiversity Solutions</b> <b>ECOLOGICAL SPECIALIST SERVICES</b> Assessment/Management/Research</p>	<p>Simon Todd Pr.Sci.Nat Director &amp; Principle Scientist C: 082 3326502 Simon.Todd@3foxes.co.za</p> <p>23 De Villiers Road Kommetjie 7975</p>	<p>Ecological Solutions for People &amp; the Environment</p>
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Simon Todd is Director and principal scientist at 3Foxes Biodiversity Solutions and has over 20 years of experience in biodiversity measurement, management and assessment. He has provided specialist ecological input on more than 200 different developments distributed widely across the country, but with a focus on the three Cape provinces. This includes input on the Wind and Solar SEA (REDZ) as well as the Eskom Grid Infrastructure (EGI) SEA and Karoo Shale Gas SEA. He is on the National Vegetation Map Committee as representative of the Nama and Succulent Karoo Biomes. Simon Todd is a recognised ecological expert and is a past chairman and current deputy chair of the Arid-Zone Ecology Forum. He is registered with the South African Council for Natural Scientific Professions (No. 400425/11).

### *Skills & Primary Competencies*

- Research & description of ecological patterns & processes in Nama Karoo, Succulent Karoo, Thicket, Arid Grassland, Fynbos and Savannah Ecosystems.
- Ecological Impacts of land use on biodiversity
- Vegetation surveys & degradation assessment & mapping
- Long-term vegetation monitoring
- Faunal surveys & assessment.
- GIS & remote sensing

### *Tertiary Education:*

- 1992-1994 – BSc (Botany & Zoology), University of Cape Town
- 1995 – BSc Hons, Cum Laude (Zoology) University of Natal
- 1996-1997- MSc, Cum Laude (Conservation Biology) University of Cape Town

### *Employment History*

- 2009 – Present – Sole Proprietor of Simon Todd Consulting, providing specialist ecological services for development and research.
- 2007 Present – Senior Scientist (Associate) – Plant Conservation Unit, Department of Botany, University of Cape Town.
- 2004-2007 – Senior Scientist (Contract) – Plant Conservation Unit, Department of Botany, University of Cape Town

- 2000-2004 – Specialist Scientist (Contract ) - South African National Biodiversity Institute
- 1997 – 1999 – Research Scientist (Contract) – South African National Biodiversity Institute

A selection of recent work is as follows:

### **Strategic Environmental Assessments**

Co-Author. Chapter 7 - Biodiversity & Ecosystems - Shale Gas SEA. CSIR 2016.

Co-Author. Chapter 1 Scenarios and Activities – Shale Gas SEA. CSIR 2016.

Co-Author – Ecological Chapter – Wind and Solar SEA. CSIR 2014.

Co-Author – Ecological Chapter – Eskom Grid Infrastructure SEA. CSIR 2015.

Contributor – Ecological & Conservation components to SKA SEA. CSIR 2017.

### **Recent Specialist Ecological Studies in the Vicinity of the Current Site**

Environmental Impact Assessment for the Proposed Komsberg East and Komsberg West Wind Farms and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment. Arcus Consulting 2014.

Proposed Rietkloof & Brandvallei Wind Farms and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment Report. EOH 2016.

Proposed Gunstfontein Wind Farm and Associated Grid Connection Infrastructure: Fauna & Flora Specialist Impact Assessment Report. Savannah Environmental 2016.

Mainstream South Africa Dwarsrug Wind Energy Facility: Fauna & Flora Specialist Impact Assessment Report. Sivist 2014.


Phezukomoya and San Kraal Wind Energy Facilities and associated grid connection. Fauna and Flora specialist studies. Arcus Consulting 2018.

Kokerboom Wind Energy Facilities (1-4) and associated grid connections. Fauna and Flora specialist studies. Aurecon 2017.

## SPECIALIST DECLARATION

I, ..Simon Todd....., as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I 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;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- 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 have no vested interest in the proposed activity proceeding;
- 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;
- I have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the specialist:  \_\_\_\_\_

Name of Specialist: \_\_\_\_Simon Todd\_\_\_\_\_

Date: \_\_\_\_20 June 2022\_\_\_\_\_

## **1 INTRODUCTION**

Aura Development Company (Pty) Ltd is proposing to develop the Klipkraal 2 Wind Farm on a ca. 7600 ha site situated about 30km southeast of Fraserburg, within the Karoo Hoogland Local Municipality, Namakwa District Municipality, Northern Cape. SIVEST are conducting the required EIA process and 3Foxes Biodiversity Solutions has been appointed by SIVEST, on behalf of Aura Development Company (Pty) Ltd to provide Terrestrial Biodiversity inputs for the proposed Klipkraal 2 Wind Farm as part of the EIA application.

In terms of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations (4 December 2014, Government Notice (GN) R982, R983, R984 and R985, as amended), various aspects of the proposed development may have an impact on the environment and are considered to be listed activities. These activities require authorisation from the National Competent Authority (CA), namely the Department of Forestry, Fisheries and the Environment (DFFE), prior to the commencement thereof. In accordance with GN 320 and GN 1150 (20 March 2020) <sup>1</sup> of the NEMA EIA Regulations of 2014, prior to commencing with a specialist assessment, a site sensitivity verification must be undertaken to confirm the current land use and environmental sensitivity of the proposed project area as identified by the National Web-Based Environmental Screening Tool (Screening Tool). 3Foxes Biodiversity Solutions has been commissioned to verify the sensitivity of the Klipkraal 2 Wind Farm project site under these specialist protocols.

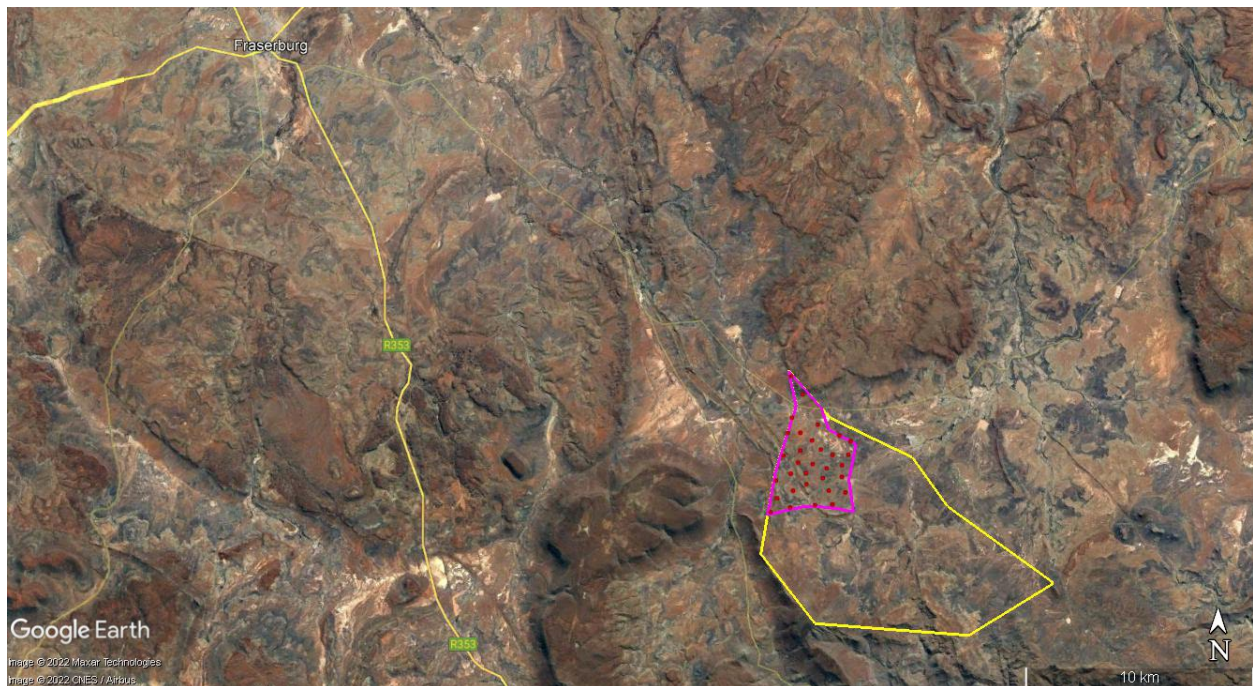
## **2 RELEVANT ASPECTS OF THE DEVELOPMENT**

The Klipkraal 2 Wind Farm is part of the Klipkraal Cluster and is located approximately 30 km southeast of Fraserburg in the Northern Cape. The layout and location of the Klipkraal 2 Wind Farm is illustrated below in Figure 1 and includes 31 potential turbine locations with a maximum output of 240 MW. The estimated total permanent footprint of the Klipkraal 2 Wind Farm is estimated at 120ha.

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<sup>1</sup> GN 320 (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





**Figure 1.** Satellite image showing the location of the proposed Klipkraal 2 Wind Farm, southeast of Fraserburg.

### **3 DFFE SITE VERIFICATION**

Government Notice No. 320, dated 20 March 2020, includes the requirement that an Initial Site Sensitivity Verification Report must be produced for a development footprint. The outcomes of the Site Verification Report determine the level of assessment required for the site. The outputs of the Screening Tool are illustrated and briefly discussed below for each theme as relevant to the current study and related to the results of the field assessment and associated site verification.

### **4 ANIMAL SPECIES THEME**

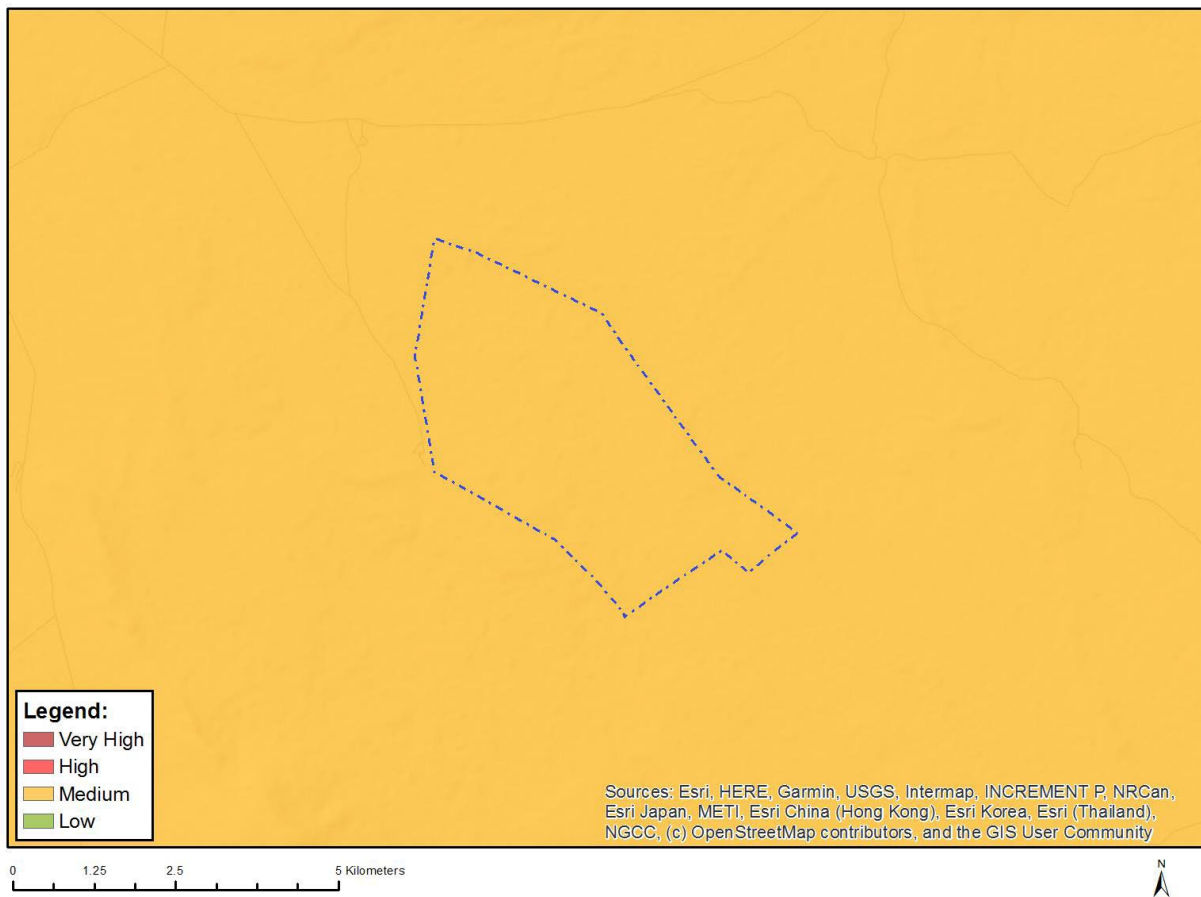
The DFFE Screening Tool identified the entire site as having a medium animal sensitivity theme due to the modelled possible presence of the Riverine Rabbit and the Karoo Dwarf Tortoise. In addition, avifauna are included under the animal theme but would be covered under the avifaunal specialist study. Refer to Table 2 and Figure 2 below for the Animal Theme results.

In terms of the site verification, the presence of the Riverine Rabbit has been confirmed on the Klipkraal 2 site through camera trapping. As a result, the site is considered High sensitivity for this species within the Klipkraal 2 development area. The field verification also confirmed that the site includes suitable habitat for the Karoo Dwarf Tortoise. While no specimens of this species were observed within site despite extensive searching, the presence of historical records from the



area and the presence of suitable habitat are considered sufficient to confirm the likely presence of this species within the site. As such a full assessment for the Karoo Dwarf Tortoise is required.

In terms of fauna of concern that may be present on the site, but which are not listed under the DFFE Screening Tool, several different species are potentially present on the site including Mountain Reedbuck *Redunca fulvorufula* (EN), Black-footed Cat *Felis nigripes* (VU), Grey Rhebok *Pelea capreolus* (NT), and Brown Hyena *Hyaena brunnea* (NT). Extensive camera trapping was conducted across the site and since these none of these species have been detected within the site, it is considered to be low sensitivity for these species.



**Figure 2.** Animal Species Theme Sensitivity Map for the Klipkraal 2 site and surrounds.

**Table 1.** Animal Species Theme Features for the Klipkraal 2 site.

Sensitivity	Feature(s)
Medium	Reptilia - <i>Chersobius boulengeri</i>
Medium	Mammalia - <i>Bunolagus monticularis</i>
Medium	Aves - <i>Neotis ludwigii</i>



**Figure 3.** The rocky hills of the Klipkraal 2 site are considered suitable habitat for the Karoo Dwarf Tortoise.

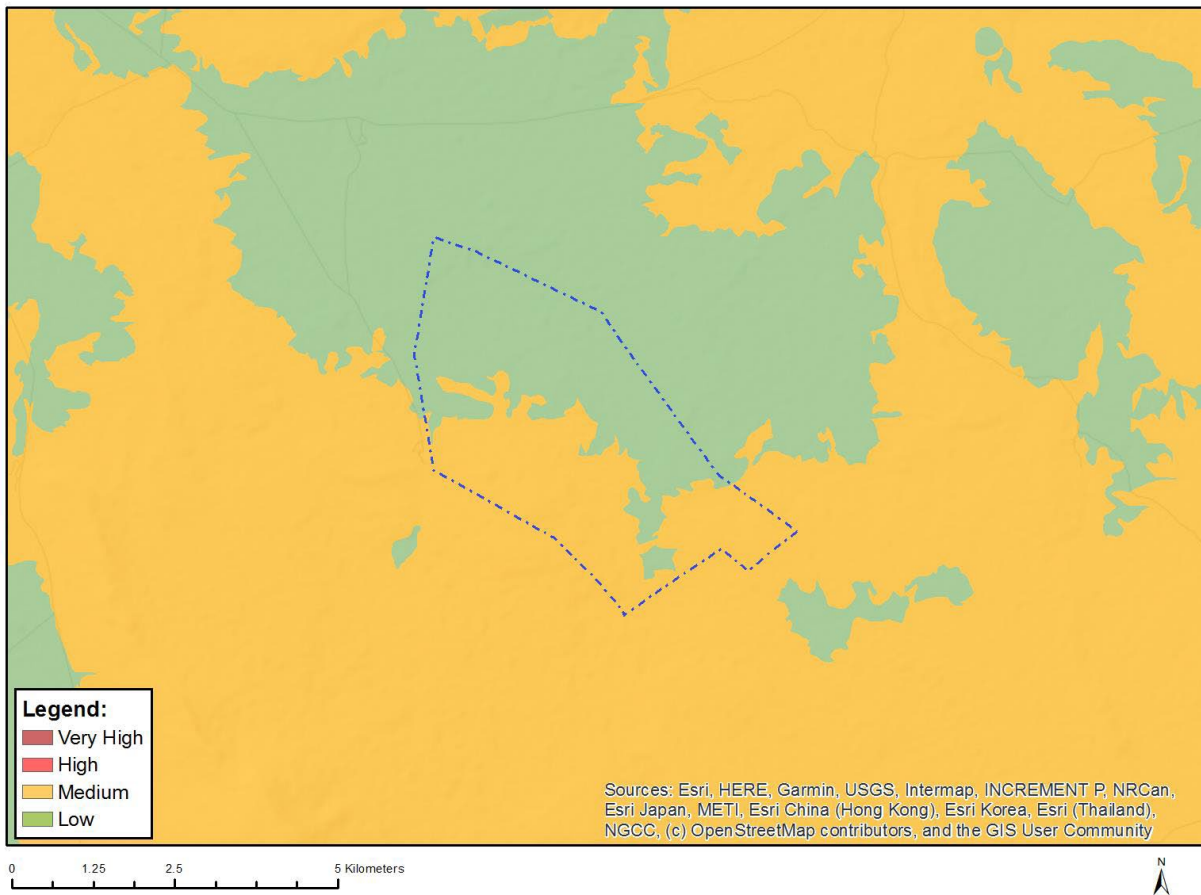


**Figure 4.** The larger drainage lines of the Klipkraal 2 site have riparian floodplain areas with vegetation considered suitable for the Riverine Rabbit, which was confirmed present in these areas through camera trapping.



#### 4.1 PLANT SPECIES THEME SENSITIVITY

The DFFE Screening Tool indicates that there is a single potential plant species of concern known from the Klipkraal 2 study area (Figure 5, Table 2). This species was not observed at the site and it is considered unlikely that this species is present but was not observed. As such, The Klipkraal 2 site is considered to be low sensitivity for the Plant Species Theme.



**Figure 5.** Plant Species Theme Sensitivity Map for the Klipkraal 2 site and surrounds.

**Table 2.** Plant species theme sensitivities for the Klipkraal 2 site.

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 484

**Table 3.** Sensitive Species as listed by the DFFE Screening Tool for the Klipkraal 2 site and the likely presence of these species within the site.

DFFE Site Status	Name	IUCN Status	Possible presence within the Hoogland South Grid Corridor
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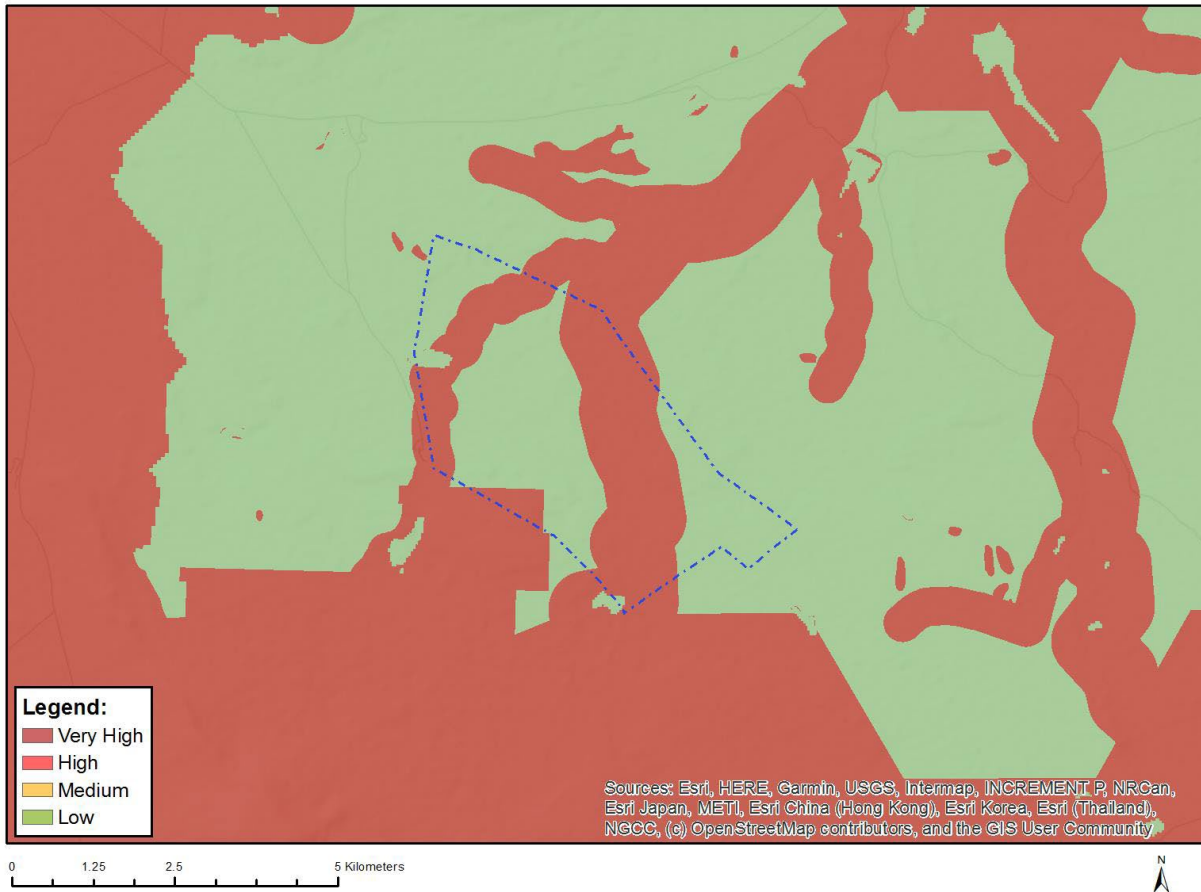
Medium	Sensitive species 484	Rare	This small cryptic succulent occurs from the Roggeveld Escarpment to the Nuweveld Mountains. As this species is localised habitat specialist it is possible that it was overlooked within the site. However, as it was not observed despite searching within suitable habitat, it is assumed absent from the site.
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**Figure 6.** Typical open plains vegetation of the Klipkraal 2 site, corresponding with the Eastern Upper Karoo vegetation type. No species of concern were observed within this habitat type and it is considered low sensitivity.

## **5 TERRESTRIAL BIODIVERSITY THEME SENSITIVITY.**

The overall combined Terrestrial Biodiversity theme indicates that the site consists largely of low sensitivity areas with some areas of Very High sensitivity along the margins of the affected area, associated with areas classified as CBA 2 and ESA (Figure 6 and Table 4). Since these are anthropogenic conservation planning-based features, it is not really possible to verify these features in the field, apart from an assessment of their condition and characteristics. Based on the presence of these features within the site, a full terrestrial biodiversity assessment is required.



**Figure 7.** Terrestrial Biodiversity Theme Sensitivity Map of the Klipkraal 2 site and surrounds.

**Table 4.** Terrestrial Biodiversity Theme Features for the Klipkraal 2 study area.

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	Critical biodiversity area 2
Very High	Ecological support area

## 6 CONCLUSIONS & IMPLICATIONS OF THE SITE VERIFICATION

Based on the results of the site verification for the Klipkraal 2 WEF, the following studies are required in the EIA process for terrestrial ecology:

- Karoo Dwarf Tortoise Species Assessment
- Riverine Rabbit Species Assessment
- Plant Species Compliance Statement
- Terrestrial Biodiversity Assessment