

# KOTULO TSATSI ENERGY PV3 SITE SENSITIVITY VERIFICATION



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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: \_\_\_\_25 March 2023\_\_\_\_\_

## **1 INTRODUCTION**

The Applicant, Kotulo Tsatsi Energy (Pty) Ltd, is proposing the construction of a photovoltaic (PV) solar energy facility (known as the Kotulo Tsatsi Energy PV3 Solar Facility located on a site located approximately 70km south-west of the town of Kenhardt and 60km north east of Brandvlei in the Northern Cape Province. The solar energy facility will comprise arrays of PV panels and associated infrastructure and will have a contracted capacity of up to 480MW. The facility will be located within the farm Portion 3 of Farm Styngs Vley 280. Savannah Environmental are conducting the required EIA process and 3Foxes Biodiversity Solutions has been appointed to provide Terrestrial Biodiversity inputs for the proposed Kotulo Tsatsi Energy PV3 Solar Facility 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 Kotulo Tsatsi Energy PV3 Solar Facility project site under these specialist protocols.

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

Kotulo Tsatsi Energy PV3 Solar Facility is part of the Kotulo Tsatsi PV Cluster and is located approximately 70km south-west of the town of Kenhardt and 60km north east of Brandvlei in the Northern Cape Province. The layout and location of the Facility is illustrated below in Figure 1. The output of the facility would be up to 480MW and the infrastructure associated with the PV development includes the following:

- Solar PV array footprint comprising of:
  - PV modules and mounting structures
  - Inverters and transformers
  - Integrated Energy Storage System (IESS)

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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

- Cabling between the project components
- On-site facility substation to facilitate the connection between the solar PV facility and the Eskom electricity grid
- Battery Energy Storage System (BESS)
- Internal access roads
- Access roads, internal distribution roads and fencing around the development footprint area.
- Admin block comprising of:
  - Site offices and maintenance buildings, including workshop areas for maintenance and storage.
  - Assembly plant
  - Laydown areas and temporary man camp area
- Access roads, internal distribution roads and fencing around the development area.



**Figure 1.** Satellite image showing the location of the proposed Kotulo Tstatsi PV 3 development, west of the R27, located between Kenhardt and Brandvlei.

### 3 SITE VISIT

An initial site visit took place on the 14<sup>th</sup> of August 2016 when the proposed development was still a CSP plant, and the follow-up field assessment to verify and sample the current footprint took place on the 12<sup>th</sup> of December 2021. During the site visits, the different biodiversity features, habitat, and landscape units present at the site were identified and mapped in the field. Specific features visible on the satellite imagery of the site were also marked for field inspection and were verified and assessed during the site visit. Walk-through-surveys were conducted within

representative areas across the different habitat units identified and all plant and animal species observed were recorded. Active searches for reptiles and amphibians were also conducted within habitats likely to harbour or be important for such. The presence of sensitive habitats such as stands of large trees, pans or rocky outcrops were noted in the field where present and recorded on a GPS. The site is homogenous and open, with the result that any features present are easily observable and it is highly unlikely that there are any species of significance or sensitive features present that were not observed during the site visits.

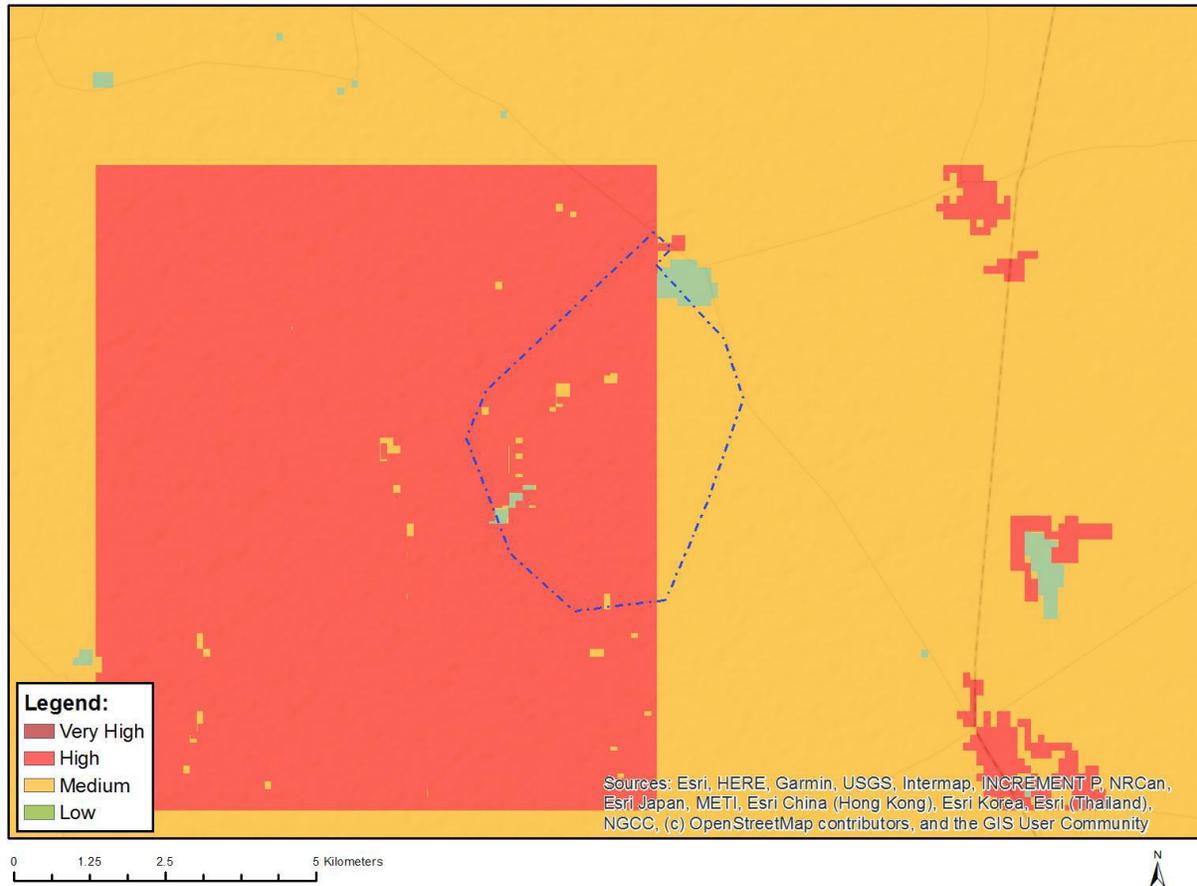
#### **4 DFFE SITE VERIFICATION**

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.

#### **5 ANIMAL SPECIES THEME**

The DFFE Screening Tool identified the entire site as having a medium and high animal sensitivity theme due to the presence of several bird species of concern and medium sensitivity due to the possible presence of several bird species. Refer to Table 1 and Figure 2 below for the Animal Theme results. There are no terrestrial faunal species indicated for the site by the screening tool.

In terms of fauna of concern that may be present on the site, but which are not listed under the DFFE Screening Tool, the only species potentially occurring in the area is likely to be *Parotomys littledalei*, Littledale's Whistling Rat, which is listed as Near Threatened. The habitat of this species is typically associated with riverine habitat, particularly with *Lycium* bushes or *Psilocaulon absimile* plants, where there is some perennially green vegetation. However, suitable habitat for this species was not observed within the site and it is considered highly unlikely that this species is present on-site. As such, the site is considered low sensitivity for terrestrial fauna.



**Figure 2.** Animal Species Theme Sensitivity Map for the Kotulo Tsatsi PV 3 Facility site and surrounds.

**Table 1.** Animal Species Theme Features for the Kotulo Tsatsi PV 3 Facility site.

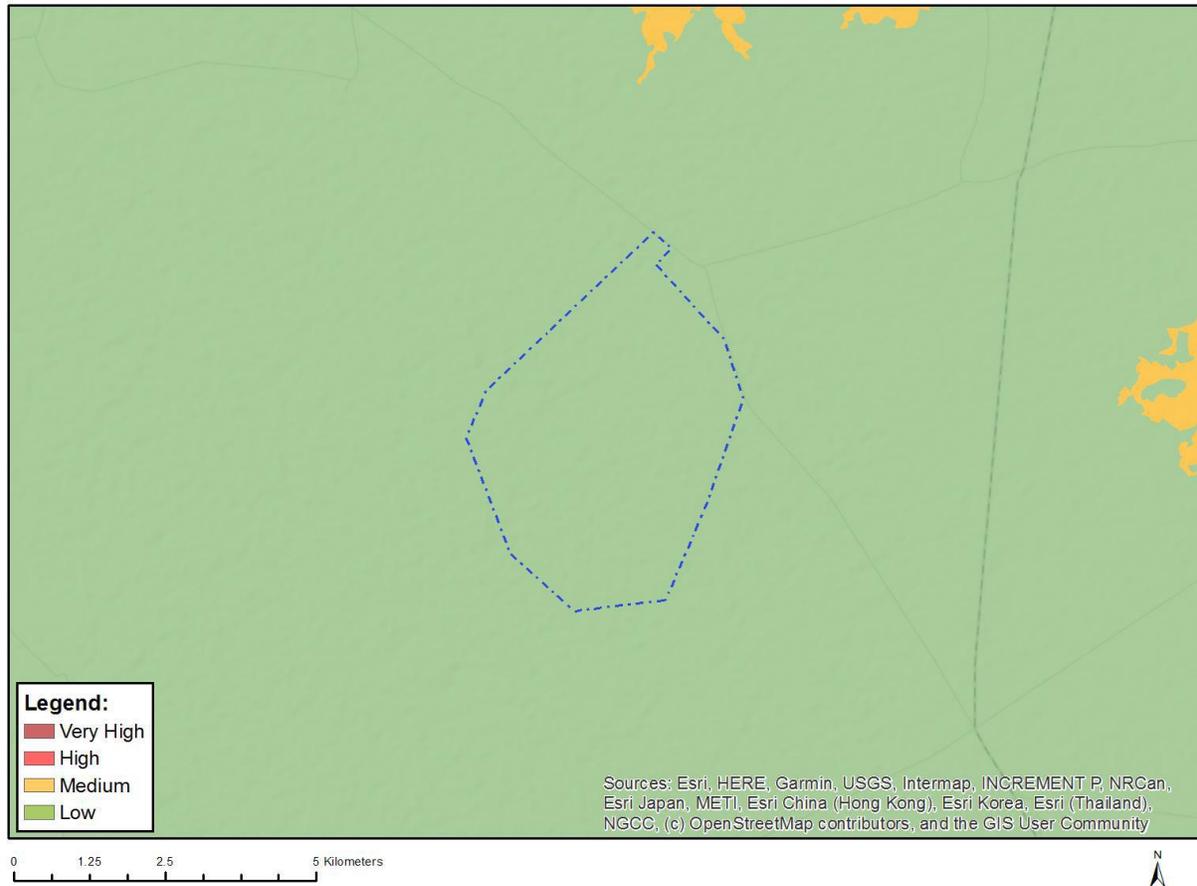
Sensitivity	Feature(s)
High	<i>Aves-Cursorius rufus</i>
High	<i>Aves-Falco biarmicus</i>
High	<i>Aves-Polemaetus bellicosus</i>
Low	Subject to confirmation
Medium	<i>Aves-Neotis ludwigii</i>



**Figure 3.** The typical open plains which occupy the majority of the Kotulo Tsatsi PV 3 Facility site and which are considered low sensitivity for terrestrial fauna.

### ***5.1 PLANT SPECIES THEME SENSITIVITY***

The DFFE Screening Tool indicates that there are no potential botanical sensitivities known from the Kotulo Tsatsi PV 3 Facility study area (Figure 4, Table 2), with the result that the site is mapped as Low Sensitivity for the Plant Species Theme. The site has been sampled several times and no species of concern have been observed within the site or in the immediate area more generally. As such, the low sensitivity of the site according to the DFFE Screening Tool is confirmed.



**Figure 4.** Plant Species Theme Sensitivity Map for the Kotulo Tsatsi PV 3 Facility site and surrounds.

**Table 2.** Plant species theme sensitivities for the Kotulo Tsatsi PV 3 Facility site.

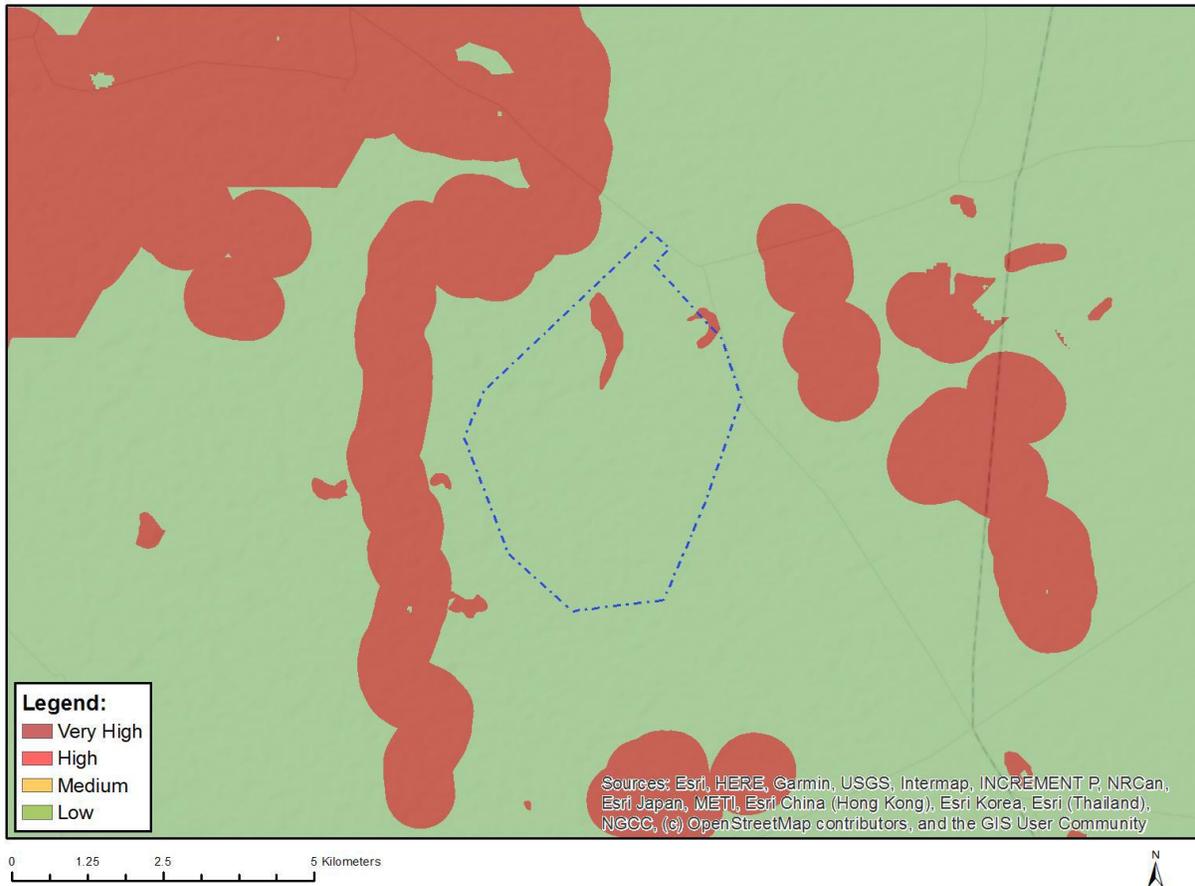
Sensitivity	Feature(s)
Low	Low Sensitivity



**Figure 5.** Typical open plains vegetation of the Kotulo Tsatsi PV 3 Facility site, corresponding with the Bushmanland Basin Shrubland vegetation type. No species of concern were observed within this habitat type and it is considered low sensitivity.

## **6 TERRESTRIAL BIODIVERSITY THEME SENSITIVITY.**

The overall combined Terrestrial Biodiversity theme indicates that the site consists largely of Low sensitivity areas with two areas of CBA 1 within the overall site boundary (Figure 6 and Table 3). However, under the draft layout, the PV footprint would avoid these areas. As such, the development would be restricted to low sensitivity areas under the Terrestrial Biodiversity theme.



**Figure 6.** Terrestrial Biodiversity Theme Sensitivity Map of the Kotulo Tsatsi PV 3 Facility site and surrounds.

**Table 3.** Terrestrial Biodiversity Theme Features for the Kotulo Tsatsi PV 3 Facility study area.

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	Critical Biodiversity Area 1

## 7 CONCLUSIONS & IMPLICATIONS OF THE SITE VERIFICATION

Based on the results of the site verification for the Kotulo Tsatsi PV 3 Facility, the following studies are required in the EIA process for terrestrial ecology:

- Faunal Compliance Statement
- Flora Compliance Statement
- Terrestrial Biodiversity Compliance Statement

