

**SITE SENSITIVITY VERIFICATION REPORT ON THE PROPOSED ESTABLISHMENT OF NYALA SOLAR ENERGY FACILITY 3 AND ASSOCIATED INFRASTRUCTURE ON THE REMAINING EXTENT OF THE FARM LEEUWKOPJE NO.415 (390 HA IN EXTENT) SITUATED 1.5 KM NORTH OF NORTHAM, IN THE THABAZIMBI LOCAL MUNICIPALITY, WATERBERG DISTRICT MUNICIPALITY, LIMPOPO PROVINCE**

**Prepared For:**

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## **1. SITE SENSITIVITY SCREENING TOOL: NYALA SITE 2**

This document represents an *onsite assessment of the screening tool* prepared by DFFE reflecting the *Agricultural Theme Sensitivity* (ATS) of the site. The site assessment was undertaken on 23 and 24 November 2022.

### **1.1 Soils Quality**

During a preliminary drive through of the Nyala site 3, a series of ditches and borrow pits made it visibly obvious that these were high quality, deep soils with a high Agricultural Theme Sensitivity

An examination of a representative cross section of 22 soil profiles for Nyala 3 up to a depth of 700mm confirmed that these are Land Capability Class I and Class II (LCCI and LCCII) soils. These are well suited to food production provided that there is sufficient rainwater or irrigation water available

Nyala 3 has a level topography. The quality of both veld and woody vegetation confirmed that these soils have a good yield potential

On a scale of LCCI to LCCVIII these soils are placed at LCC I and LCC II. This is equivalent to an ATS of 12 to 15 on a scale of 1 to 15 i.e. a good soil potential suitable for food crop production

However, soil quality is not the only criterion for crop yield potential at any given site. The other criteria are rainfall and management.

### **1.2 Climate and Rainfall**

This is a summer rainfall area with the incidence of heavy winter frost thus making it a summer production area. A moderate rainfall with a high annual variation coefficient means that the planting of annual arable crops is a risk that should be carefully considered, even if suitable soils are available.

### **1.3 Livestock**

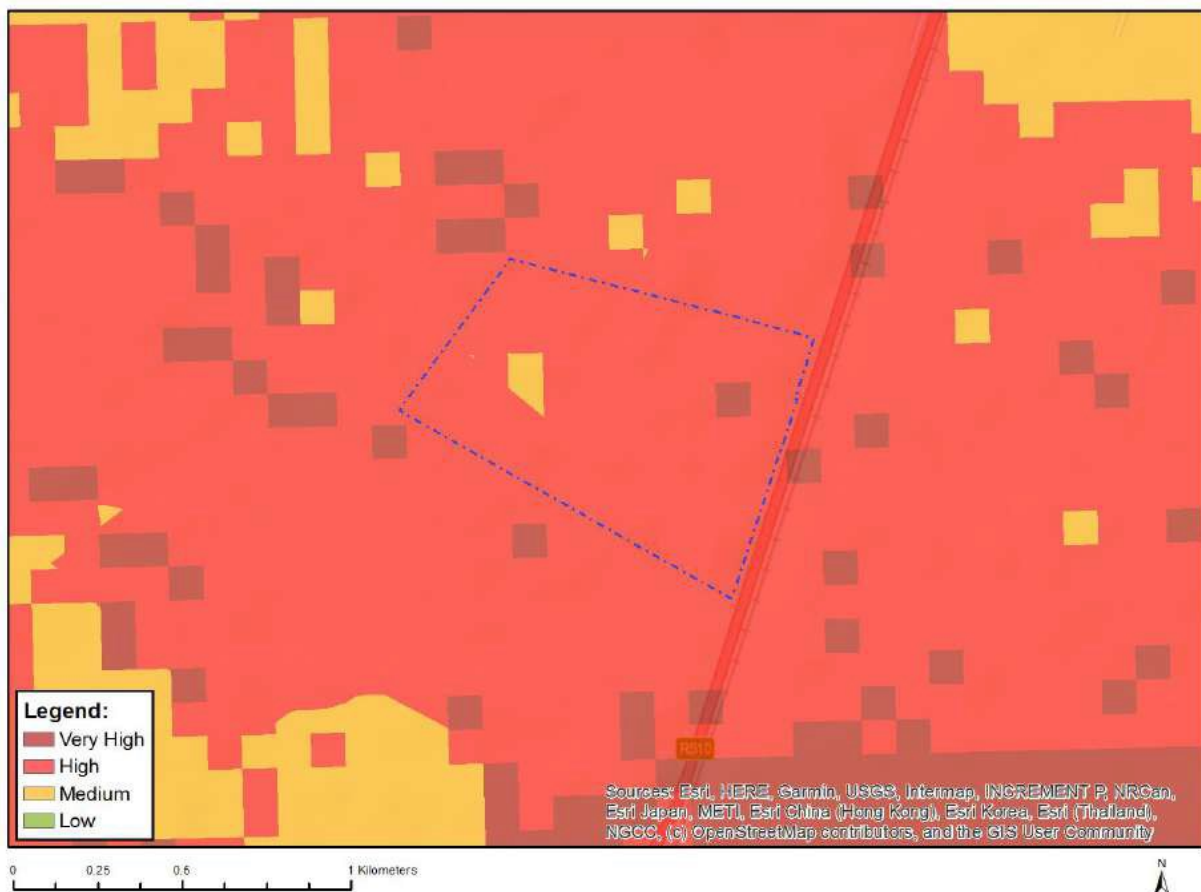
A combination of good soils and annually variable rainfall is sufficient to maintain large livestock in good condition during the summer months, but dairy and breeding herds would require supplementary feeding in the winter months in order to

maintain calving rates and lactation levels. The veld carrying capacity of 5 ha per Large Stock Unit (LSU), is commensurate with soil quality and climate.

#### 1.4 Full Impact Assessment and Recommendations

A Full impact assessment will be a detailed follow up to this document as soon as the ATS has been reviewed by the authorities.

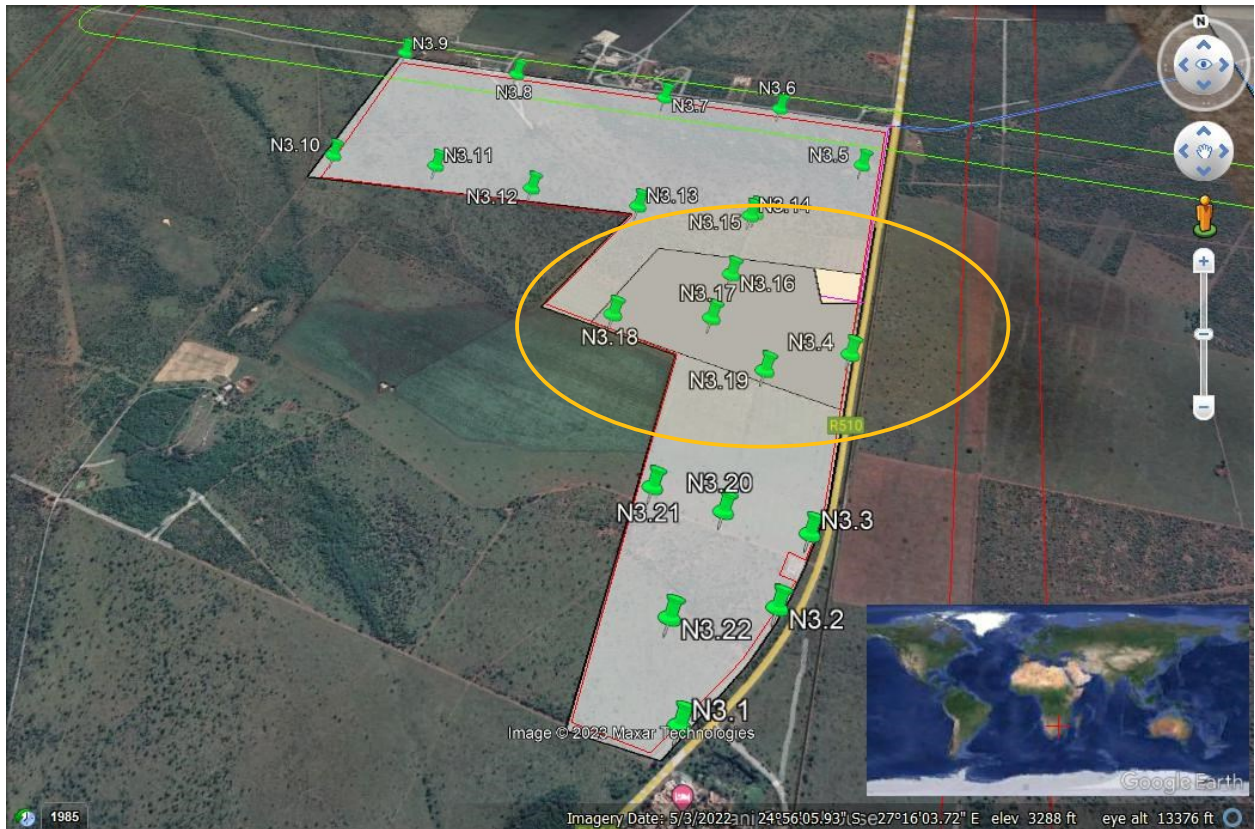
## 2. DFFE AGRICULTURAL THEME SENSITIVITY MAP: NYALA 3



A full Site Assessment confirmed that this is a High Sensitivity Area. This map depicts the Sensitivity levels in the final buildable area

**The outcome of the onsite Nyala 3 Agricultural Potential verification has confirmed that the Nyala site 3 is a High Agricultural Theme Sensitivity Land parcel.**

### 3. NYALA 3: SITE MAP OF LAND CAPABILITY CLASS



The map above is the outcome of an onsite soil and climate potential assessment undertaken by the author hereof. In addition to the soil profiles exposed, observation of soils profiles at the edge of roads, drainage lines etc. confirmed that the actual profiles examined are fully representative of the site

The green placemarks all indicate a high ATS rating of ATS 12 to ATS 13 or ATS 14 to 15

It must be noted that the above map reflects soils only and does not take into account rainfall risk

The map above is the outcome of an on site soil and climate potential assessment undertaken by the author hereof. In addition to the soil profiles exposed, observation of soils profiles at the edge of roads, drainage lines etc. confirmed that the 22 profiles examined are fully representative of the Soil Forms across the entire site.

**4. LAND CAPABILITY CLASSES (LCC) AND AGRICULTURAL THEME SENSITIVITY (ATS): SOIL PROFILES AT THE TARGET SITE: NYALA 3**

Ref	Co-ordinates	Soil Form	Slope %	Clay %	Depth (mm)	Permeability	Wetness	LCC	ATS
<b>N3. 1</b>	24°56'46.1"S 27°16'05.2"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 2</b>	24°56'34.2"S 27°16'17.5"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 3</b>	24°56'25.6"S 27°16'22.82"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 4</b>	24°56'0.2"S 27°16'33.1"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 5</b>	24°55'24.2"S 27°16'42.7"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 6</b>	24°55'10.0"S 27°16'32.0"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 7</b>	24°55'5.9"S 27°16'13.1"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3.8</b>	24°54'57.8"S 27°15'48.2"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 9</b>	24°54'50.6"S 27°15'28.5"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 10</b>	24°55'16.4"S 27°15'18.9"E	Hutton	0	>35	>1000	5	WO	I	14-15
<b>N3. 11</b>	24°55'19.9"S 27°15'35.4"E	Hutton	0	>35	>1000	5	WO	I	14-15

Ref	Co-ordinates	Soil Form	Slope %	Clay %	Depth (mm)	Permeability	Wetness	LCC	ATS
N3.12	24°55'25.9"S 27°15'50.5"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.13	24°55'30.8"S 27°16'06.7"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.14	24°55'33.9"S 27°16'23.5"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.15	24°55'33.5"S 27°16'24.3"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.16	24°55'45.2"S 27°16'19.0"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.17	24°55'52.9"S 27°16'15.2"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.18	24°55'51.4"S 27°16'01.6"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.19	24°56'02.1"S 27°16'21.2"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.20	24°56'22.1"S 27°16'13.0"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.21	24°56'18.3"S 27°16'04.8"E	Hutton	0	>35	>1000	5	WO	I	12-13
N3.22	24°56'34.6"S 27°16'05.3"E	Hutton	0	>35	>1000	5	WO	I	12-13

LCC colour Code	LCC Determination
LCC I	High Agricultural Theme Sensitivity suitable for food crop production provided sufficient rainfall or irrigation water is available

**The Agricultural Theme Sensitivity equivalent to LCC I is an ATS rating of 12 to 15 on a scale of 1 to 15**

## **5. CONCLUSION**

The site sensitivity assessment agrees with the Agricultural Theme Sensitivity map provided by DFFE and a detailed Agricultural impact assessment should be undertaken in the next phase of the project.



## 6. SITE PHOTOGRAPHS

### 6.1 Vegetation



The photographs illustrate the vegetation within the Dwaalboom Thornveld Vegetative Unit of the Central Bushveld Bioregion of the Savannah Biome. Trees are sufficiently far apart to allow for good grass cover and large enough to provide effective shade in hot weather



## 6.2 Hutton Soil Form



As indicated above this photograph was also taken within the same vegetative unit and ecosystem

Hutton Soils are amongst the few that give good to very good yields and yet are easy to manage. When the clay content is greater than 35%, the slope is less than 2% and the soil rooting depth is greater than 1 000 mm, this becomes a Land Capability Class I soil



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

### DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number:	(For official use only)
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

#### PROJECT TITLE

**Nyala 3 Solar Energy Facility**

#### Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.environment.gov.za/documents/forms>.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

#### Departmental Details

##### Postal address:

Department of Environmental Affairs  
Attention: Chief Director: Integrated Environmental Authorisations  
Private Bag X447  
Pretoria  
0001

##### Physical address:

Department of Environmental Affairs  
Attention: Chief Director: Integrated Environmental Authorisations  
Environment House  
473 Steve Biko Road  
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:  
Email: [EIAAdmin@environment.gov.za](mailto:EIAAdmin@environment.gov.za)



## 1. SPECIALIST INFORMATION

Specialist Company Name:	John Phipson		
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	5	Percentage Procurement recognition
Specialist name:	John Phipson		
Specialist Qualifications:	BA UED (UNKZN)		
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E-mail:	<a href="mailto:topcrops@mwweb.co.za">topcrops@mwweb.co.za</a>		

## 2. DECLARATION BY THE SPECIALIST

I, John Phipson 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 48 and is punishable in terms of section 24F of the Act.

Signature of the Specialist

John Phipson

Name of Company:

20 May 2023

Date

### 3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, John Phipson, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

John Phipson

Name of Company

20 May 2023

Date

Signature of the Commissioner of Oaths

Date

2023.05.20

