

# DRAFT BASIC ASSESSMENT REPORT

Proposed Development of a 132 kV Overhead Power Line and Supporting Infrastructure for the Proposed Vhuvhili Solar Photovoltaic Energy Facility, near Secunda in the Mpumalanga Province

## APPENDIX D.8

Defence Site Sensitivity  
Verification

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# Appendix D.8: Defence Site Sensitivity Verification

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## 1. Introduction

This report serves as the Site Sensitivity Verification for Defence for the Basic Assessment (BA) for the proposed development of a 132 kV Overhead Power Line and Associated Electrical Grid Infrastructure (EGI), near Secunda in the Mpumalanga Province. The project is being proposed by Vhuvhili Solar RF (Pty) Ltd to support the proposed Vhuvhili Solar Photovoltaic Energy Facility.

## 2. Need for the Site Sensitivity Verification

On 20 March 2020, in Government Gazette 43110, Government Notice (GN) R320, the then Department of Environment, Forestry and Fisheries (now operating as the Department of Forestry, Fisheries and the Environment (DFFE)) published 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 (Act 107 of 1998, as amended) (NEMA) when applying for an Environmental Authorisation (EA). GN R320 prescribes general requirements for undertaking Site Sensitivity Verification, as well as protocols for assessment and minimum report content requirements of environmental impacts associated with specified environmental themes for activities requiring EA. GN R320 was enforced within 50 days of publication of the notice i.e., on 9 May 2020.

GN R320 specifically includes a protocol that provides the criteria for the specialist assessment and minimum report content requirements for impacts on defence installations for activities requiring EA. This protocol replaces the requirements of Appendix 6 of the 2014 NEMA Environmental Impact Assessment (EIA) Regulations (as amended).

This specific protocol states that proposed developments that occur on sites identified as Very High, High or Medium sensitivity, as depicted on the National Web-Based Environmental Screening Tool (Screening Tool), must include a Defence Compliance Statement. It further states that there are no requirements if the proposed developments occur on sites identified as Low sensitivity on the Screening Tool. However, a Site Sensitivity Verification is required for the Defence Protocol.

Therefore, since the proposed 132 kV overhead power line and associated EGI project requires an EA in terms of the 2014 NEMA EIA Regulations (as amended), and Defence was identified as a relevant theme for on the Screening Tool, as well as a required study, GN R320 must be complied with.

## 3. Methodology

The Site Sensitivity Verification Process and Report has been compiled based on the following methodology:

- Existing spatial databases were used to determine the location of defence installations in relation to the proposed project area, and to identify preliminary areas of concern in terms of impacts to defence installations;
- The proposed project sites and footprints were plotted on the Screening Tool to identify the sensitivity allocated;

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- A site visit was undertaken to confirm the current land use and the environmental sensitivity as it relates to Defence;
- Additional research was undertaken to substantiate the Site Sensitivity Verification process; and
- A Site Sensitivity Verification Report was compiled (i.e., this report).

The information sources listed in Table D.8-1 were used in the Site Sensitivity Verification process.

**Table D.8-1: Information Sources used for the Site Sensitivity Verification process**

Data / Information	Source	Date	Type	Description
National Web-Based Environmental Screening Tool (Screening Tool)	Department of Environment, Forestry and Fisheries (DEFF)	2020	Spatial / Online Assessment	The Screening Tool is a geographically based web-enabled application which allows a proponent intending to submit an Application for EA in terms of the 2014 NEMA EIA Regulations (as amended) to screen the proposed site for any environmental sensitivity <sup>1</sup> .
RSA Airspaces in 3D	Air Traffic and Navigation Services SOC Limited (ATNS)	2020	Google Earth KMZ File	The RSA Airspaces in 3D data KMZ file is an initiative undertaken by the ATNS to illustrate the definitions and complexities of airspace, routes, aerodromes and navigational facilities within South Africa to the public in the interest of safety <sup>2</sup> .
Wind and Solar PV Phase 1 Strategic Environmental Assessment (SEA)	Department of Environmental Affairs (DEA)	2015	Report	SEA commissioned by the DEA [now operating as the DEFF] in 2013 for an assessment of wind and solar PV energy in South Africa, with an aim of identifying eight Renewable Energy Development Zones (REDZs) to focus and incentivize such development (i.e. Phase 1 REDZs SEA: CSIR Report Number: CSIR/CAS/EMS/ER/2015/0001/B).
Wind and Solar PV Phase 2 SEA	DEFF	2019	Report	SEA commissioned by the DEFF in 2016 for an assessment of wind and solar PV energy in South Africa, with an aim of identifying three additional REDZs to focus and incentivize such development (i.e. Phase 2 REDZ SEA. CSIR Report Number: CSIR/SPLA/SECO/ER/2019/0085).

Therefore, the Site Sensitivity Verification was undertaken using desktop analysis, satellite imagery, on-site inspection, and other available and relevant information.

#### 4. Proposed Project Location

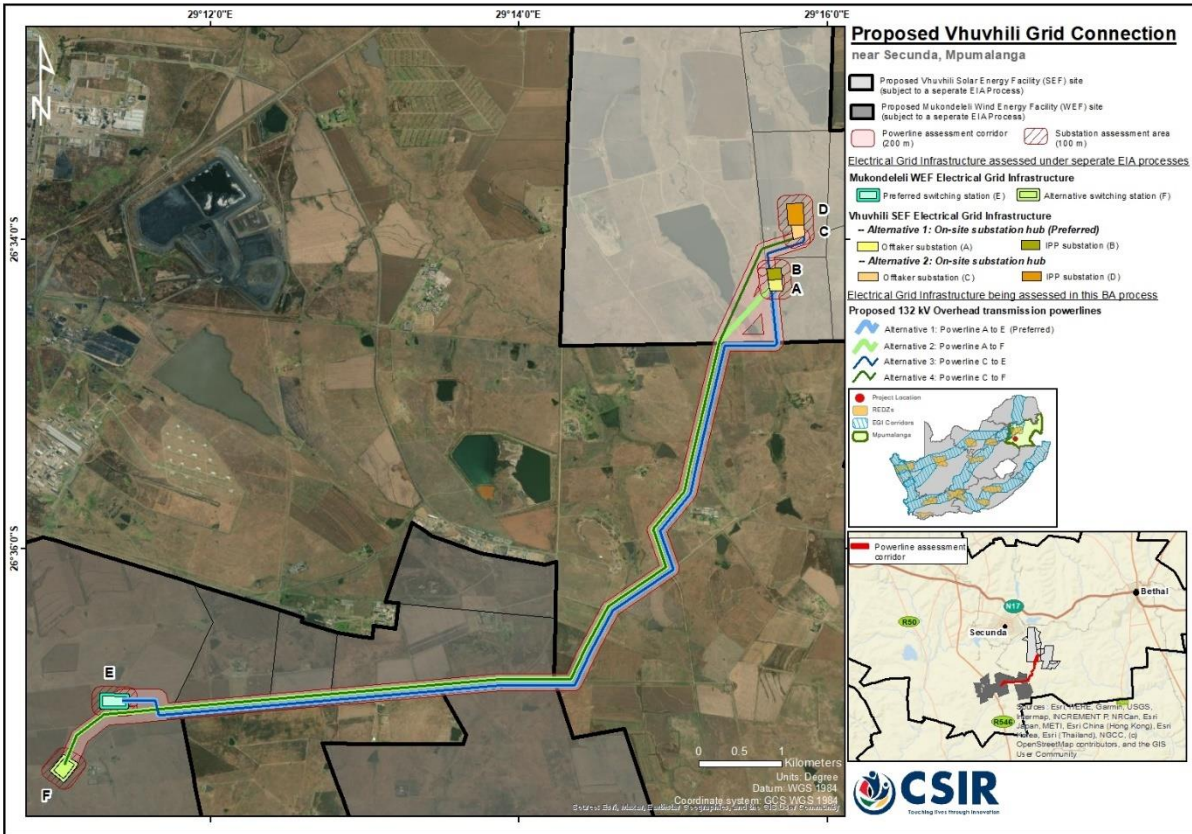
The proposed Vhuvhili EGI **assessment corridor** is located near Secunda, which falls in the Govan Mbeki Local Municipality and the Gert Sibande District Municipality in the Mpumalanga Province (Figure D.8-1).

<sup>1</sup> <https://screening.environment.gov.za/screeningtool/index.html#/pages/welcome>

<sup>2</sup> <https://www.atns.co.za/rsakmz.php>

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**Figure D.8-1: Locality map for the proposed Vhuvhili EGI assessment corridor near Secunda in the Mpumalanga Province.**

**Table D.8-2. Affected farm portions and SG codes associated with the proposed Vhuvhili EGI assessment corridor**

Farm	Portion	SG Code
Grootvlei No.584	RE/584	TOIS00000000058400000
Grootvlei No. 293	20/293	TOIS00000000029300020
Vlakspruit No.292	RE/292	TOIS00000000029200000
Vlakspruit No.292	20/292	TOIS00000000029200020
Vlakspruit No.292	19/292	TOIS00000000029200019
Vlakspruit No.292	14/292	TOIS00000000029200014
Vlakspruit No.292	15/292	TOIS00000000029200015
Vlakspruit No.292	13/292	TOIS00000000029200013
Vlakspruit No.292	3/292	TOIS00000000029200003
Vlakspruit No.292	2/292	TOIS00000000029200002
Vlakspruit No.292	16/292	TOIS00000000029200016
Vlakspruit No.292	18/292	TOIS00000000029200018
Knoppies No.314	RE/314	TOIS00000000031400000
Brandwacht No.316	3/316	TOIS00000000031600003
Bosjesspruit No. 291	3/291	TOIS00000000029100003
Bosjesspruit No. 291	6/291	TOIS00000000029100006

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Bosjesspruit No. 291	13/291	TOIS00000000029100013
Bosjesspruit No. 291	10/291	TOIS00000000029100010
Bosjesspruit No. 291	11/291	TOIS00000000029100011
Tondershoek No. 317	2/317	TOIS00000000031700002
Tondershoek No. 317	12/317	TOIS00000000031700012

The proposed Vhuvhili EGI assessment corridor is not located within any of the Renewable Energy Development Zones (REDZs) gazetted in Government Gazette 41445, GN R114 on 16 February 2018 (Phase 1 REDZ), and Government Gazette 44191, GN R144 on 26 February 2021 (Phase 2 REDZ). The proposed Vhuvhili EGI Corridor is also not located within any of the Strategic Transmission Corridors gazetted in Government Gazette 41445, GN R113 on 16 February 2018; and in Government Gazette 44504, GN R383 on 29 April 2021.

### 5. Details of the Environmental Scientist

GN R320 states that prior to commencing with a specialist assessment, the current use of the land and the potential environmental sensitivity of the site under consideration as identified by the Screening Tool must be confirmed by undertaking a Site Sensitivity Verification.

This Site Sensitivity Verification has been undertaken by Lizande Kellerman. Lizande Kellerman is registered with the South African Council for Natural and Scientific Professions (SACNASP), with Registration Number 400076/10. Inputs to the Site Sensitivity Verification Report were also provided by Dhiveshni Moodley (Cand.Sci.Nat.), Willan Adonis, and Helen Antonopoulos of the CSIR.

### 6. Findings of the Screening Tool

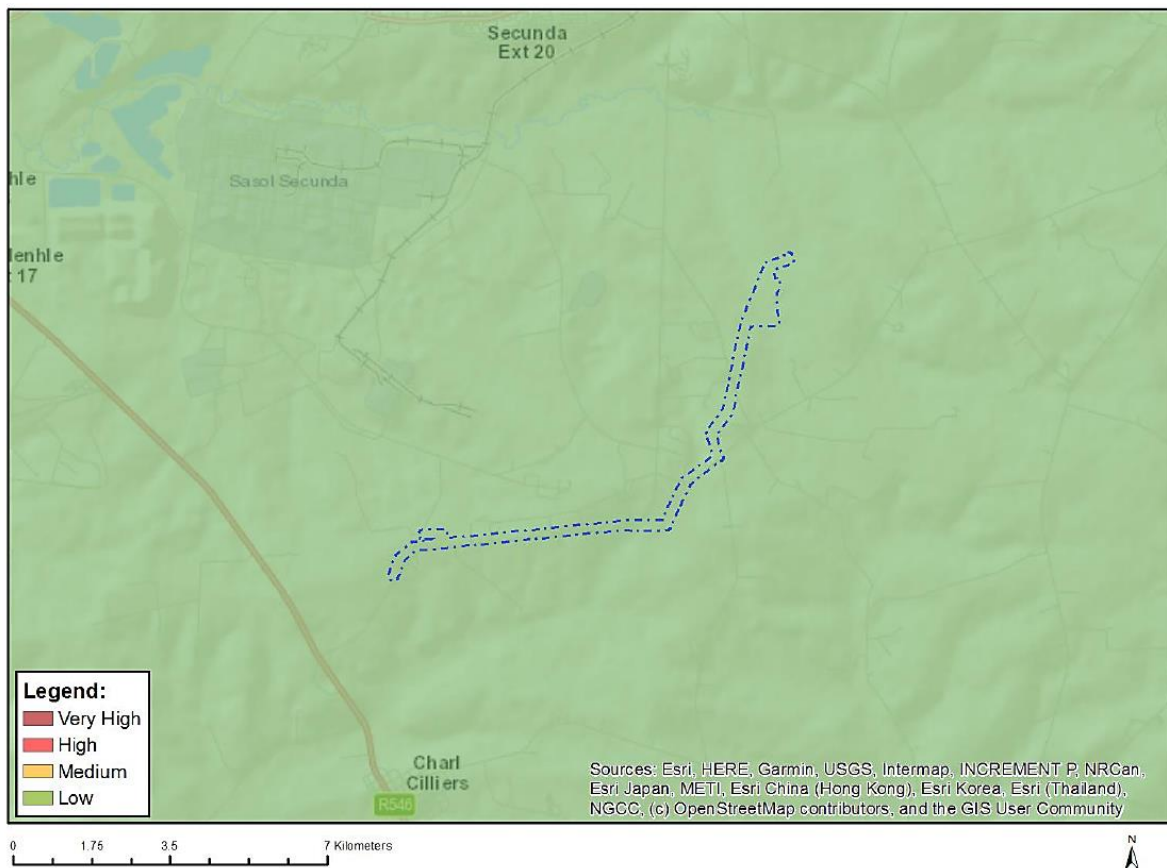
A Screening Tool Report was generated for the proposed project using the following classification: Utilities Infrastructure → Electricity → Distribution and Transmission → Powerline.

The map of Relative Defence Theme sensitivity generated and included in the Screening Tool depicted that the EGI assessment corridor is located in a Low sensitivity area from a defence perspective i.e., there are no major or other types of defence installations or buffers that intersect with the proposed assessment corridor.

In terms of GN R320, this means that no further requirements are applicable i.e., a Compliance Statement is not required, if the site is indeed found to be of Low sensitivity during the site visit.

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**Figure D.8-2: Screening Tool Map showing the Vhuvhili EGI assessment corridor as it relates to Defence Sensitivity (Source: DFFE Screening Tool, 2022).**

### 7. Details of the Site Visit

The details of the site visit are noted below:

<b>Date of Site Visit:</b>	19 October 2022
<b>Specialist Name:</b>	Lizande Kellerman
<b>Professional Registration Number:</b>	SACNASP Reg. Number 400076/10
<b>Specialist Affiliation / Company:</b>	CSIR Environmental Management Services

### 8. Findings

The site visit confirmed that the proposed EGI assessment corridor currently consists of a mixture of natural grassland and disturbed grassland, as well as grazing pastures and crop fields. The proposed Vhuvhili EGI assessment corridor is typified by grassland vegetation characteristic of the Grassland Biome and more specifically of the Mesic Highveld Grassland Bioregion. Refer to Figures D.8-3 and D.8-4 for views of Portion 12 of the Farm Tondershoek No. 317 and the Remainder of Farm Grootvlei No. 584, i.e., two of the affected properties on which the proposed 132 kV powerline is to be developed. **Note that no defence installations were found within the proposed Vhuvhili EGI assessment corridor.**

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**Figure D.8-3: View from the D826 towards Portion 12 of the Farm Tondershoek No. 317 (SE direction) (Photo: W. Adonis)**



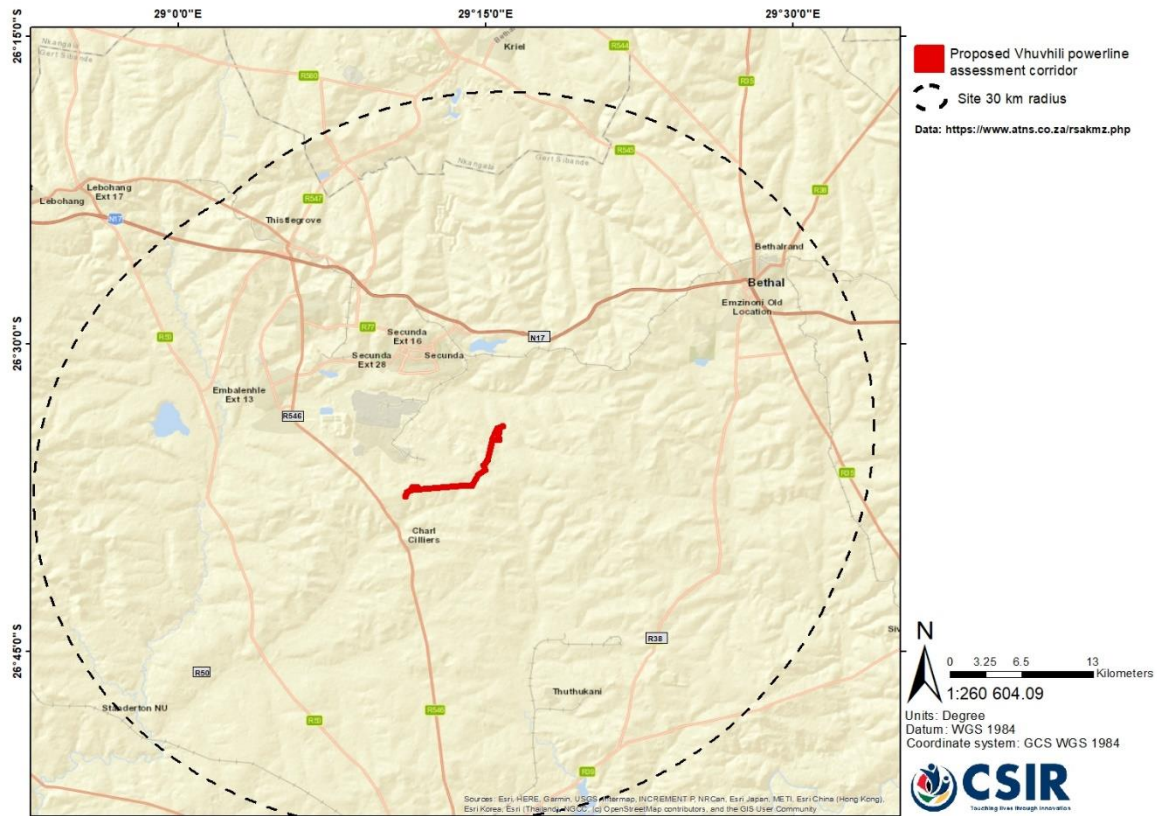
**Figure D.8-4: View towards the Remainder of Farm Grootvlei No. 584 (N direction) (Photo: W. Adonis)**

The Air Traffic and Navigation Services SOC Limited (ATNS) data indicates that the proposed Vhuvhili EGI assessment corridor is located 5 km south-east (at its closest point) of an identified 'restricted airspace' (i.e., FAR63 Secunda) above Sasol in Secunda, which includes features such as the Sasol Synfuels Power Station and Sasol Nitro Explosives. Furthermore, the ATNS data indicates that the proposed EGI assessment corridor is located approximately 28 km south-west (at its closest point) of the Bethal Explosives Factory, which is classified as a 'dangerous airspace' (i.e., FAD84). Although classified as restricted and dangerous airspace, respectively, neither airspace pertains to military or defence installations. Therefore, the proposed EGI assessment corridor will not impact on any military or defence installations.

Figure D.8-5 indicates that no defence features were found within a 30 km radius of the Vhuvhili EGI assessment corridor.

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**Figure D.8-5: Defence Features relative to the proposed Vhuvhili EGI assessment corridor based on the site visit and existing databases.**

### 9. Concluding Statement

The proposed EGI assessment corridor was determined and verified to be of Low sensitivity (as it relates to defence installations). This was determined through a site visit and based on existing databases, and confirms the sensitivity allocated on the Screening Tool. Based on the above, in terms of GN R320, no further requirements are applicable i.e., a Compliance Statement is not required.