

SITE VERIFICATION REPORT

January 2023

THE PROPOSED LUCKHOFF SOLAR 1
PHOTOVOLTAIC SOLAR ENERGY FACILITY
NEAR LUCKHOFF, FREE STATE PROVINCE



ENVIRONAMICS

PROJECT DETAIL

DFFE Reference No's.	:	To be confirmed
Project Title	:	Proposed Luckhoff Solar 1 Photovoltaic Solar Energy Facility near Luckhoff , Free State Province
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1 INTRODUCTION

This Site Verification Report is compiled in compliance with Government Notice No. 320, dated 20 March 2020, which includes the requirement for an Initial Site Sensitivity Verification Report to be produced for a development footprint. The outcome of the Initial Site Verification must be recorded in the form of a report that-

- a) Confirms or disputes the current use of the land and environmental sensitivity as identified by the national web based environmental screening tool;
- b) Contains a motivation and evidence of either the verified or different use of the land and environmental sensitivity;
- c) Is submitted together with the relevant reports prepared in accordance with the requirements of the Environmental Impact Assessment Regulations.

1.1 Specialist Assessments identified by the Screening Report

The DFFE Screening Tool Report (Appendix B of the Scoping Report) identified the following specialist assessment to be included in the assessment:

1. Agricultural Impact Assessment
2. Animal Species Assessment
3. Aquatic Biodiversity Impact Assessment
4. Archaeological and Cultural Heritage Impact Assessment
5. Avian Impact Assessment
6. Civil Aviation Assessment
7. Defense Assessment
8. Landscape/Visual Impact Assessment
9. Paleontology Impact Assessment
10. Plant Species Assessment
11. RFI Assessment
12. Terrestrial Biodiversity Impact Assessment

The table included below provides an indication of the specialist studies identified by the DFFE Screening Tool Report, as well as an indication of whether the studies were undertaken or not and a motivation or confirmation of the studies being included or not.

Table 1.1: Specialist studies identified by the DFFE Screening tool and specialist studies conducted

Study identified in the DFFE Screening Tool and sensitivity	Study included?	Appendix
Agricultural Impact Assessment Sensitivity: Medium	Yes	An Agricultural Compliance Statement is included in Appendix E4 of the Scoping Report.
Animal Species Assessment Sensitivity: Medium	Yes	Refer to Appendix E1. The Ecological Impact Assessment also includes the relevant Plant Species Assessment. This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.
Aquatic Biodiversity Impact Assessment Sensitivity: Low	Yes	An Aquatic Ecological Impact Assessment is included in Appendix E1. This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.
Archaeological and Cultural Heritage Impact Assessment Sensitivity: Low	Yes	A Heritage Impact Assessment is included in Appendix E5 of the Scoping Report, as per the requirements of the National Heritage Resources Act.
Avian Impact Assessment Sensitivity: Low	Yes	An avifaunal scoping report is included in Appendix E2.
Civil Aviation Assessment Sensitivity: Low	No	The identification of the site as low sensitivity considering civil aviation is agreed to by the EAP. This is based on the current land use of the site being used for agricultural purposes.

		<p>The Civil Aviation Authority has been consulted regarding the development of the project since the commencement of the S&EIR Process. No specific negative impacts or issues have been raised to date by the CAA regarding the project. The project is also not located within an area considered to be of a high sensitivity.</p>
<p>Defence Theme</p> <p>Sensitivity: Low</p>	No	<p>The affected property is confirmed to be used for agricultural purposes and therefore the development will not have any impact on defence installations.</p> <p>The sensitivity for the entire extent of the site is low and therefore no assessment has been included.</p> <p>The South African National Defence Force has been consulted regarding the development of the project since the commencement of the S&EIR Process. No specific negative impacts or issues have been raised to date regarding the project. The project is also not located within an area considered to be of a high sensitivity.</p>
<p>Landscape / Visual Impact Assessment</p> <p>Sensitivity: Very High</p>	Yes	<p>A Visual Impact Assessment is included in Appendix E3 of the Scoping Report.</p>
<p>Palaeontological Impact Assessment</p> <p>Sensitivity: High</p>	Yes	<p>A Palaeontological Impact Assessment is included in Appendix E6 of the Scoping Report, as per the requirements of the National Heritage Resources Act.</p>
<p>Plant species Assessment</p>	Yes	<p>Refer to Appendix E1. The Ecological Impact Assessment also</p>

Sensitivity: Medium		<p>includes the relevant Plant Species Assessment.</p> <p>This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.</p>
RFI Assessment Sensitivity: Medium	No	<p>The RFI theme sensitivity is medium for the entire extent of the project. The South African Radio Astronomy Observatory (SARAO) has been consulted regarding the development of the project since the commencement of the S&EIR Process. No specific negative impacts or issues have been raised to date by the SARAO regarding the project. The project is also not located within an area considered to be of a high sensitivity.</p>
Terrestrial Biodiversity Impact Assessment Sensitivity: Very High	Yes	<p>An Ecological Impact Assessment is included in Appendix E1.</p> <p>This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.</p>
Geotechnical Assessment Sensitivity: Not indicated	No	<p>The detailed Geotechnical Assessment will be conducted before construction begins as part of the micro-siting of the facility layout.</p> <p>The consideration of geotechnical aspects is considered to be of a technical concern rather than an environmental concern.</p>

		A Desktop Geotechnical Assessment is included in Appendix E9.
Socio-Economic Assessment Sensitivity: Not indicated	Yes	A Social Impact Assessment is included in Appendix E7.

1.2 Sensitivities of the studies not conducted

This report has been produced specifically to consider the Civil Aviation, Defence and RFI theme and addresses the content requirements of (a) and (b) above.

The remaining required specialist studies have been undertaken as part of the Scoping and Environmental Impact Reporting (S&EIR) process as listed in the DFFE Screening Tool Report. The only study not considered as relevant is the Geotechnical Assessment which will only be undertaken before construction begins as part of the micro-siting of the facility layout. The consideration of geotechnical aspects is considered to be of a technical concern rather than an environmental concern.

The sensitivities for the Civil Aviation, Defence and RFI themes associated with Luckhoff solar 1 PV facility are as follows:

1.2.1 Civil Aviation Theme

The site sensitivity is classified as low, and no major or other types of civil aviation aerodromes are present. Refer to Figure 1.1.

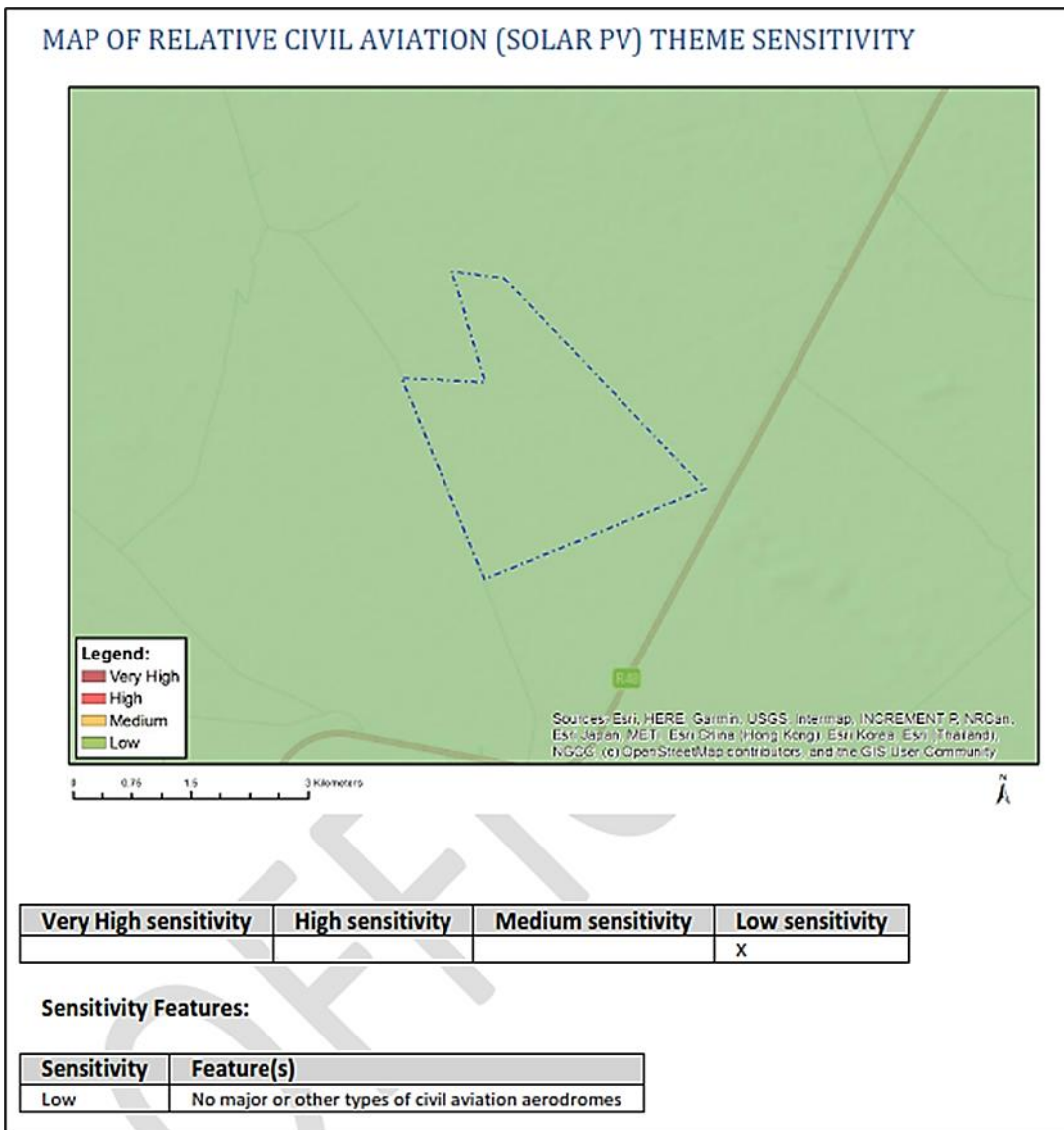


Figure 1.1: Civil aviation sensitivity as indicated by the DFFE Screening Tool Report

1.2.2 Defence theme

The defence theme is considered to be low for the proposed project and the presence of a defence site has not been indicated in close proximity of the site. Refer to Figure 1.2 below.

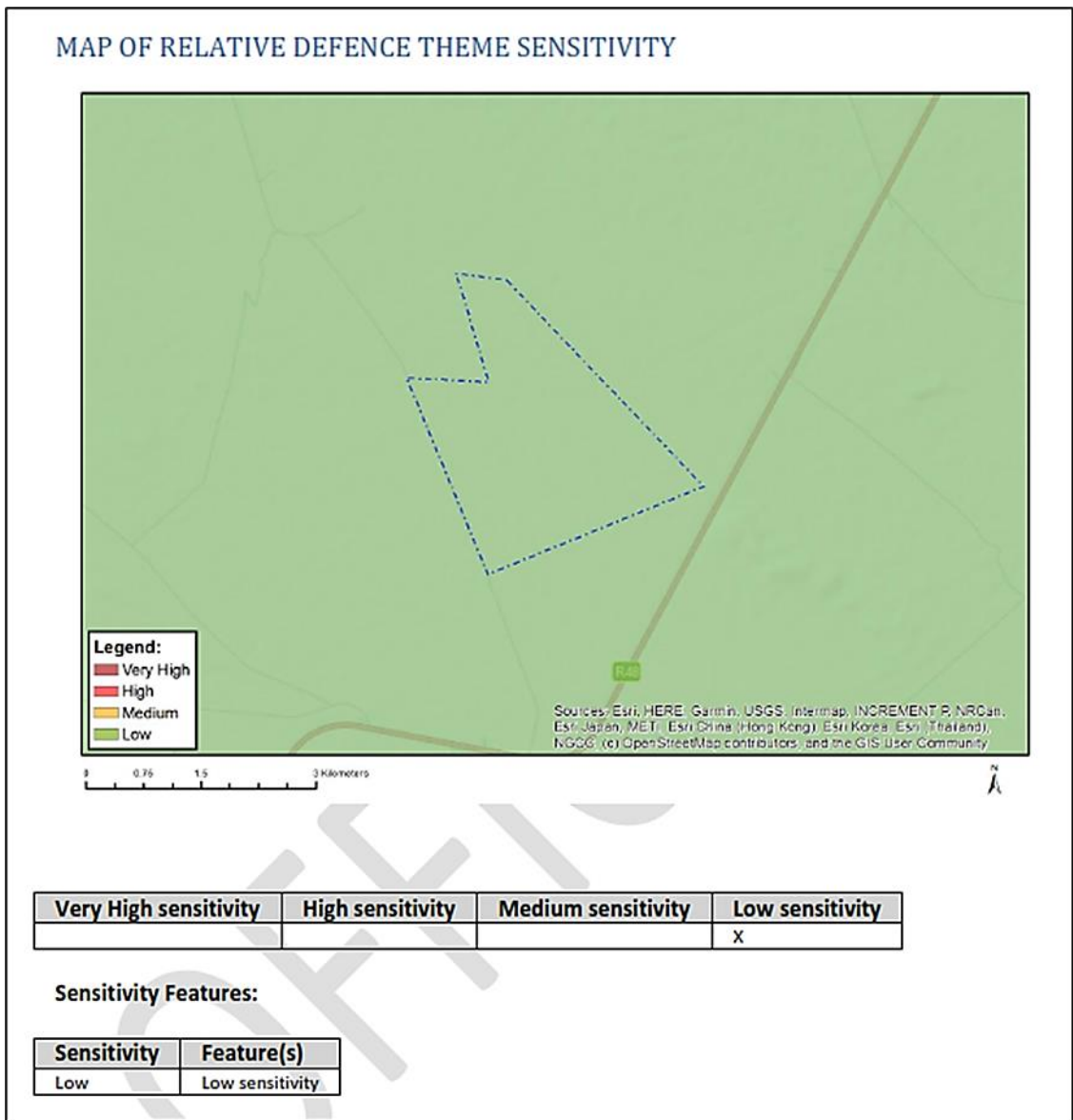
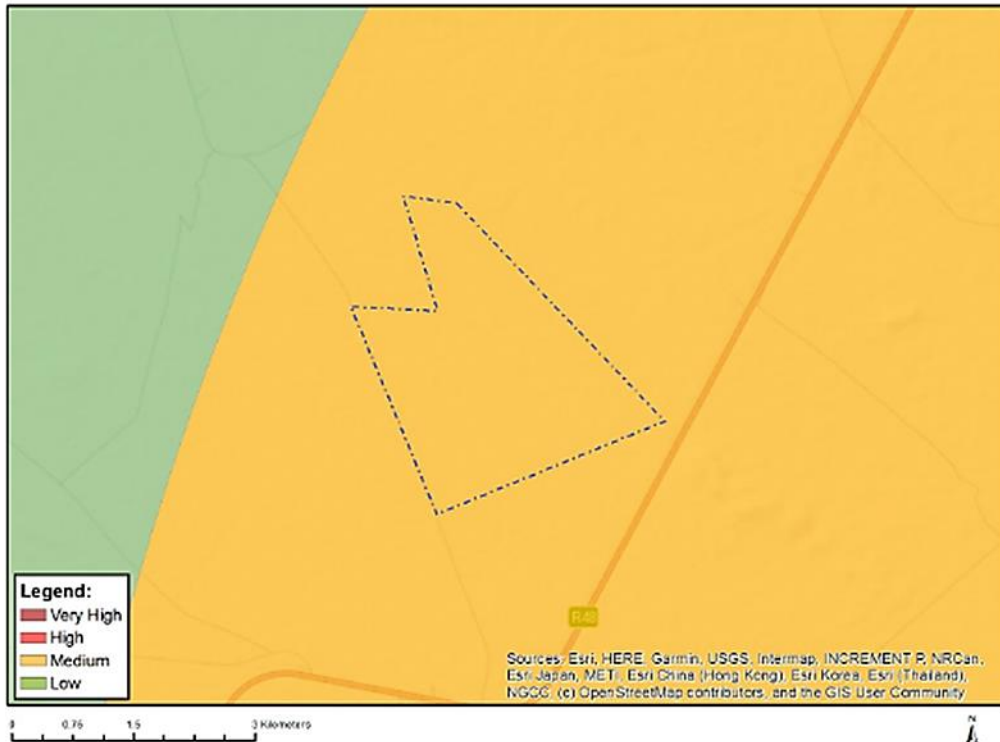


Figure 1.2: Defence theme sensitivity as indicated by the DFFE Screening Tool Report

1.2.3 RFI Theme

The sensitivity of the RFI theme for the project is medium. Refer to Figure 1.3 below.

MAP OF RELATIVE RFI THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Between 14 and 32 km of a SKA receptor

Figure 1.3: RFI theme sensitivity as indicated by the DFFE Screening Tool Report

1.3 Current/ Verified Land Use

The current land use of the properties is mainly used for agricultural purposes, which includes cattle grazing. The town of Luckhoff is located approximately 3km south of the proposed development.

Most of the surrounding area has a low number of farmsteads/buildings that are sparsely populated. The area is located within an agricultural region, and the immediate area is presently used for agricultural purposes.

Refer to Figures 1.4 – 1.8 for photographs of the site under assessment.



Figure 1.4: The site (taken towards the north)



Figure 1.5: The site (taken towards the north east)



Figure 1.6: The site (taken towards the east)



Figure 1.7: The site (taken towards the south)



Figure 1.8: The site (taken towards the west)

2 SITE VERIFICATION

This section will evaluate and verify the sensitivity ratings provided by the DFFE Screening Tool Report and provide feedback from the EAP.

2.1 Civil Aviation Theme

The site sensitivity is classified as low with no civil aviation infrastructure located in proximity to the proposed development that will be affected.

Table 2.1: Verification of DFFE Screening Report Sensitivity Ratings for the Civil Aviation Theme

Identified Sensitivity		Comment
<u>DFFE Screening Report</u>	<u>EAP Feedback</u>	
Low	Low	
<p>As no specific assessment protocol has been prescribed, the required level of assessment must be based on the findings of the Initial Site Sensitivity Verification and must comply with Appendix 6 of the Environmental Impact Assessment Regulations promulgated under sections 24(5) and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (The Act), where a specialist assessment is required.</p>		<p>The identification of the site as low sensitivity considering civil aviation is agreed to by the EAP. This is based on the current land use of the site being used for agricultural purposes.</p> <p>The Civil Aviation Authority (CAA) has been identified as an I&AP, and has received the Draft Scoping report for review and commenting. No comments from the CAA have been received as part of the public participation process.</p>

The proposed development will not have an unacceptable negative impact on civil aviation installations based on the findings of the site visit and the lack of civil aviation infrastructure within the general area.

Based on the above, the EAP agrees with the outcome and results for the Civil Aviation Theme for the Luckhoff solar 1 PV facility.

This assessment is considered sufficient for the civil aviation theme. There is no reason for the development not to proceed based on the results of the assessment and no objections are made.

2.2 Defence Theme

Table 2.2: Verification of DFFE Screening Report Sensitivity Ratings for the Defence Theme

Identified Sensitivity		Comment
<p><u>DFFE Screening Report</u></p> <p>Low</p> <p>As no specific assessment protocol has been prescribed, the required level of assessment must be based on the findings of the Initial Site Sensitivity Verification and must comply with Appendix 6 of the Environmental Impact Assessment Regulations promulgated under sections 24(5) and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (The Act), where a specialist assessment is required.</p>	<p><u>EAP Feedback</u></p> <p>Low</p>	<p>The affected property is confirmed to be used for agricultural purposes and therefore the development will not have any impact on defence installations.</p> <p>The sensitivity for the entire extent of the site is low and therefore no assessment has been included.</p> <p>The South African National Defence Force (SANDF) has been identified as an I&AP, and has received the Draft Scoping report for review and commenting. No comments from the have been received as part of the public participation process.</p>

The proposed development will not have an unacceptable negative impact on defence installations. Considering the site under assessment and the surrounding defence aspects the sensitivity is confirmed as low.

This assessment is considered sufficient for the defence theme. There is no reason for the development not to proceed based on the results of the assessment and no objections are made.

2.3 Radio Frequency Interference (RFI) Theme

Table 2.3: Verification of the DFFE Screening Tool Report Sensitivity Ratings for the Radio Frequency Interference (RFI) Theme

Identified Sensitivity		Comment
<p><u>DFFE Screening Report</u> Medium</p> <p>As no specific assessment protocol has been prescribed, the required level of assessment must be based on the findings of the Initial Site Sensitivity Verification and must comply with Appendix 6 of the Environmental Impact Assessment Regulations promulgated under sections 24(5) and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (The Act), where a specialist assessment is required.</p>	<p><u>EAP Feedback</u> Low</p>	<p>The site verification is inconclusive as no desktop information could be sought, however on-site evidence of the low sensitivity was available identified during the site inspection since no potential RFI could be identified.</p> <p>The South African Radio Astronomy Observatory (SARAO) have been consulted regarding the development of the project and the Scoping Report has been circulated to SARAO for review and commenting. No comment has been received from SARAO to date.</p>

The EAP was not able to verify the findings of the Screening Tool. A desktop based assessment into telecommunications; Radio Astronomy Advantage Areas and Weather Radar installation areas was undertaken, however no information is readily available. The EAP could not confirm if any features are present in proximity to the proposed development.

However, as the theme is of a medium sensitivity, no unacceptable impact is expected to occur. I&APs that may be impacted in this regard will be consulted during the process and all comments will be considered.

3 CONCLUSION

The DFFE Screening Tool Report identified thirteen (13) specialists' studies to be conducted, which includes Agricultural Impact Assessment, Landscape/Visual Impact Assessment, Archaeological and Cultural Heritage Impact Assessment, Palaeontology Impact Assessment, Terrestrial Biodiversity Impact Assessment, Aquatic Biodiversity Impact Assessment, Avian Impact Assessment, Civil Aviation Assessment, RFI Assessment, Geotechnical Assessment, Socio-Economic Impact Assessment, Plant Species Assessment and Animal Species Assessment.

The Low sensitivity ratings for the Civil Aviation and Defence theme is confirmed by the site verification report. However, the Medium sensitivity rating for the RFI Theme is disputed. This is based on the fact that any related features could not be identified by means of a desktop analysis. However, as the theme is of a medium sensitivity, no unacceptable impact is expected to occur. The relevant stakeholders will be consulted as part of the S&EIR process to obtain comment on the proposed development.