

SITE VERIFICATION REPORT

December 2022

THE PROPOSED MAFADI SOLAR POWER
PLANT NEAR LOUIS TRICHARDT, LIMPOPO
PROVINCE



ENVIRONAMICS

ENVIRONAMICS

PROJECT DETAIL

DFFE Reference No's.	:	To be obtained
Project Title	:	The proposed Mafadi Solar Power plant near Louis Trichardt, Limpopo Province
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Client	:	Mafadi Solar Power Plant (RF)(Pty) Ltd
Report Status	:	Site Verification Report
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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. Landscape/Visual Impact Assessment
3. Archaeological and Cultural Heritage Impact Assessment
4. Paleontology Impact Assessment
5. Terrestrial Biodiversity Impact Assessment
6. Aquatic Biodiversity Impact Assessment
7. Civil Aviation Assessment
8. Defense Assessment
9. RFI Assessment
10. Geotechnical Assessment
11. Socio-economic Assessment
12. Plant Species Assessment
13. Animal Species 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.
Landscape / Visual Impact Assessment Sensitivity: Very High	Yes	A Visual Impact Assessment is included in Appendix E3 of the Scoping 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.
Palaeontological Impact Assessment Sensitivity: Medium	Yes	A Palaeontological Impact Assessment is included in Appendix E6 of the Scoping Report, as per the requirements of the National Heritage Resources Act.
Terrestrial Biodiversity Impact Assessment Sensitivity: Very High	Yes	<p>A Terrestrial Biodiversity, Plant and Animal Species Impact Assessment Report is included in Appendix E1 of the Scoping Report.</p> <p>This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.</p>
Aquatic Biodiversity Impact Assessment Sensitivity: Low	Yes	<p>A Wetland/Riparian Impact Assessment Report 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>

<p>Avian Impact Assessment</p> <p>Sensitivity: Very High</p> <p>(not listed as a required specialist study in the DFFE Screening Report but is undertaken due to the very high sensitivity of the site)</p>	Yes	<p>Avifauna Impact Assessment Report is included as Appendix E2 of the Scoping Report.</p> <p>This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.</p>
<p>Civil Aviation Assessment</p> <p>Sensitivity: Low</p>	No	<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>
<p>Defence Theme</p> <p>Sensitivity: Medium</p>	No	<p>The site verification report disputes the medium sensitivity of the Screening Report as the closest military operations are the Makhado Airforce Base located ~25km north west of the affected property.</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, especially considering the distance between the proposed project and the defence facility.</p> <p>The South African Department of Defence and the Makhado Airforce</p>

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		Base has been identified as an I&AP and will be consulted.
RFI Assessment Sensitivity: Low	No	
Geotechnical Assessment Sensitivity: Not indicated	No	<p>The 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>
Plant species Assessment Sensitivity: Low	Yes	<p>Refer to Appendix E1. The Terrestrial Biodiversity, Plant and Animal Species Impact Assessment Report also 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>
Animal Species Assessment Sensitivity: Medium	Yes	<p>Refer to Appendix E1. The Terrestrial Biodiversity, Plant and Animal Species Impact Assessment Report also includes the relevant Animal Species Assessment.</p> <p>This assessment has been undertaken in terms of the Protocols of GNR320 – refer to the content of the report.</p>

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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 Environmental Impact Assessment 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 Mafadi Solar Power Plant 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.

MAP OF RELATIVE CIVIL AVIATION (SOLAR PV) THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	No major or other types of civil aviation aerodromes

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 medium for the proposed project due to the presence of a defence site. Refer to Figure 1.2 below.

MAP OF RELATIVE DEFENCE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

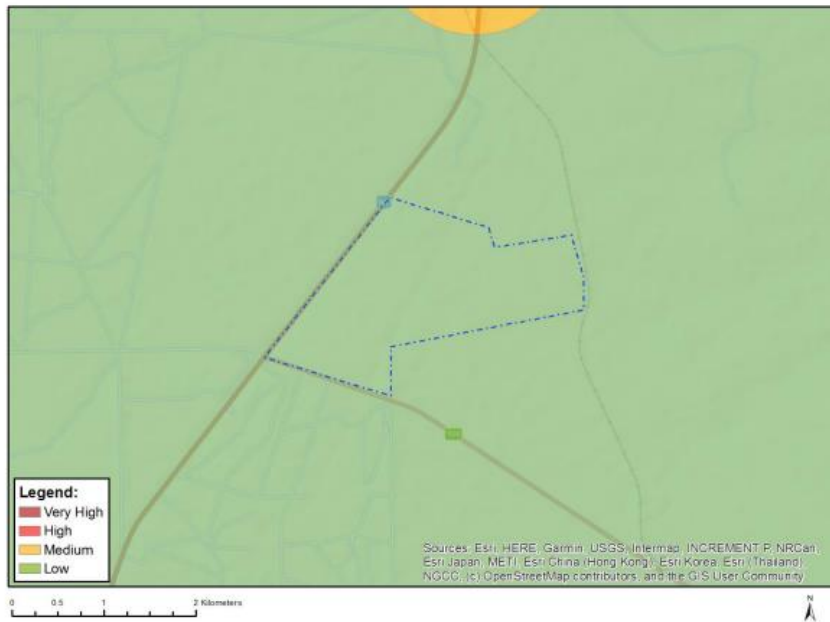
Sensitivity	Feature(s)
Medium	Defence Site

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 low. 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)
Low	Low sensitivity

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, and includes the operation of high voltage Eskom Grid infrastructure, such as power lines. The project is located approximately 30 km southwest of the town of Louis Trichardt.

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 mainly for livestock farming.

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



Figure 1.4: Aerial view of the centre of the site



Figure 1.5: Aerial view of the centre of the site – including existing Eskom grid connection infrastructure



Figure 1.6: Existing farm roads present

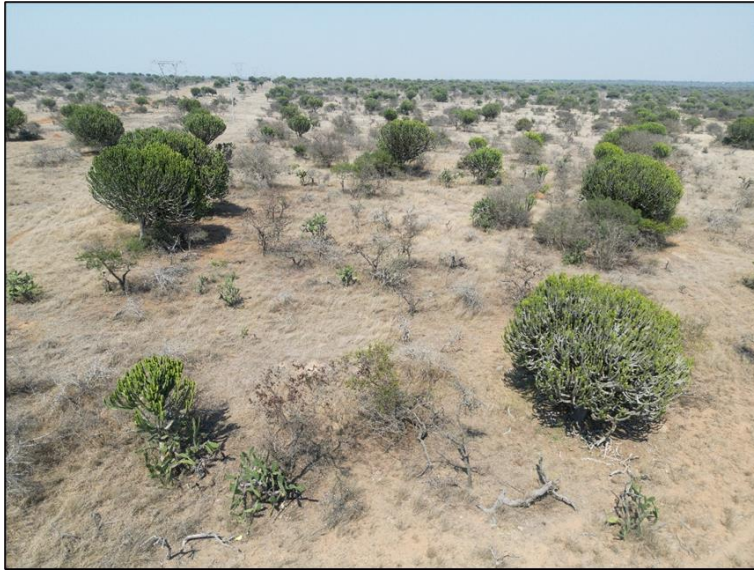


Figure 1.7: General conditions of the site

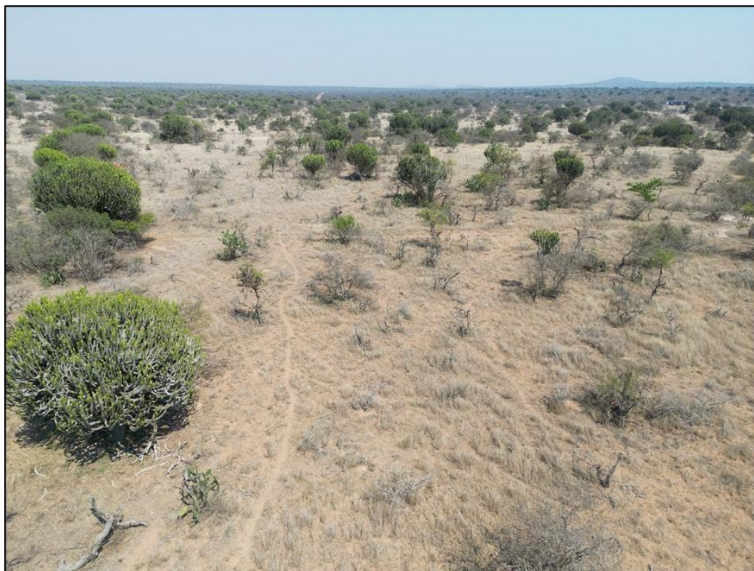


Figure 1.8: General conditions of the site

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
DFFE Screening Report	EAP Feedback	
Low 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.	Low	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. 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.

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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 Mafadi Solar Power Plant.

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
DFFE Screening Report Medium Low potential for negative impacts on the defence installation, and if there are impacts there is a high likelihood of mitigation. Further assessment of the potential impacts may not be required.	EAP Feedback Low	<p>The site verification report disputes the medium sensitivity of the Screening Report as the closest military operations are the Makhado Airforce Base located ~25km northwest of the affected property.</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, especially considering the distance between the proposed project and the defence facility.</p> <p>The South African Department of Defence and the Makhado Airforce Base has been identified as an I&AP and will be consulted.</p>

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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
DFFE Screening Report Low As no specific assessment protocol has been prescribed, the required level of assessment must be based on the findings	EAP Feedback Low	<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</p>

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.		and commenting. No comment has been received from SARAO to date.
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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 low 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 RFI theme is confirmed by the site verification report. However, the Medium sensitivity rating for the Defence Theme is disputed. The is based on the fact that the Makhado Airforce Base located ~22km northwest of the proposed development and is the closest defence installation to the proposed development. Therefore, the project will not have an unacceptable negative impact on any defence infrastructure. The relevant stakeholders will be consulted as part of the Environmental Impact Assessment process to obtain comment on the proposed development.