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CIVIL AVIATION COMPLIANCE STATEMENT

FOR THE

PROPOSED PV SOLAR PLANT AND BATTERY ENERGY STORAGE SYSTEM (BESS) ON REMAINDER OF ERF 2018, RIVERSDALE, WESTERN CAPE.

In terms of the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Civil Aviation Installations (Government Notice No. 320, Government Gazette 43110, 20 March 2020)

PREPARED FOR: Hessequa Municipality
PO Box 29
Riversdale
6670

DATE: 23 February 2024

SES REF: PV/HM/CACS/02/24

-
- Environmental Impact Assessments • Basic Assessments • Environmental Management Planning
 - Environmental Control & Monitoring • Water Use License Applications • Aquatic Assessments



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SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS OF IMPACTS ON CIVIL AVIATION INSTALLATIONS

Table 1: protocol for the specialist assessment and minimum report content requirements for environmental impacts on civil aviation installations

<p>1. General Information</p> <p>1.1. An applicant intending to undertake an activity identified in the scope of this protocol for which a specialist assessment has been identified on the screening tool:</p> <p>1.1.1. on a site identified as being of:</p> <p>1.1.1.1. "very high", "high" or "medium" sensitivity for civil aviation, must submit a Civil Aviation Compliance Statement; or</p> <p>1.1.1.2. "low" sensitivity, no further assessment requirements are identified.</p> <p>1.1.2. on a site where the information gathered from the site sensitivity verification differs from the designation of "very high", "high" or "medium" sensitivity on the screening tool and it is found to be of a "low" sensitivity, no further assessment requirements are identified;</p> <p>1.1.3. similarly, on a site where the information gathered from the initial site sensitivity verification differs from the designation of "low" sensitivity on the screening tool and it is found to be of a "very high", "high" or "medium" sensitivity, a Civil Aviation Compliance Statement must be submitted; and</p> <p>1.1.4. If any part of the proposed development footprint falls within an area of "very high", "high" or "medium" sensitivity, the assessment and reporting requirements prescribed for the "very high", "high" and "medium" sensitivity apply to the entire footprint. In the context of this protocol, development footprint means the area on which the proposed development will take place and includes any area that will be disturbed.</p>	Section 2
<p>2. Civil Aviation Compliance Statement</p> <p>2.1. The compliance statement must be prepared by an environmental assessment practitioner or a specialist with expertise in radar.</p>	Document details
<p>2.2. The compliance statement must:</p> <p>2.2.1. be applicable to the preferred site and the proposed development footprint;</p>	Section 2
<p>2.2.2. confirm the sensitivity rating for the site; and</p>	Section 5
<p>2.2.3. indicate whether or not the proposed development will have an unacceptable impact on civil aviation installations.</p>	Section 4
<p>2.3. The compliance statement must contain, as a minimum, the following information:</p>	Document details and Appendix B
<p>2.3.1. contact details of the environmental assessment practitioner or the specialist, their relevant qualifications and expertise in preparing the statement, and a curriculum vitae;</p>	
<p>2.3.2. a signed statement of independence by the environmental assessment practitioner or specialist;</p>	Section 7
<p>2.3.3. a map showing the proposed development footprint (including supporting infrastructure) overlaid on the civil aviation sensitivity map generated by the screening tool;</p>	Section 3
<p>2.3.4. a comment, in writing, from the South African Civil Aviation Authority (SACAA), which may include inputs from the Obstacle Evaluation Committee (OEC), if appropriate, confirming no unacceptable impact on civil aviation installations; and</p>	To be incorporated
<p>2.3.5. should the comment from the SACAA indicate the need for further assessment, a copy of the assessment report and mitigation measures is to be attached to the compliance statement and incorporated into the Basic Assessment Report or Environmental Impact Assessment Report with mitigation and monitoring measures identified included in the EMPr. The assessment must be in accordance with the requirements stipulated by the SACAA.</p>	Not applicable
<p>2.4. A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.</p>	

DOCUMENT DETAILS

Project No:	Ref.	PV/HM/CACS/02/24
Conditions of Use:	<p>This report is the property of the sponsor, <i>Sharples Environmental Services cc (SES)</i>, who may make allowance to publish it, in whole provided that:</p> <ol style="list-style-type: none"> Approval for copy is obtained from <i>SES</i>. <i>SES</i> is acknowledged in the publication. <i>SES</i> is indemnified against and claim for damages that may result from publication of specifications, recommendations or statements that is not administered or controlled by <i>SES</i>. That approval is obtained from <i>SES</i> if this report is to be used for the purposes of sale, publicity or advertisement. <p><i>SES</i> accepts no responsibility for failure to follow the recommended program.</p>	

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Sharples Environmental Services cc (SES) has been actively engaged since 1998 in the fields of environmental planning, assessment and management. Clients include private, corporate and public enterprises on a variety of differing land use applications ranging from large-scale residential estates and resorts to golf courses, municipal service infrastructure installations and the planning of major arterials. The consultants have over 40+ years of combined experience and operate in the Southern, Eastern and Western Cape regions.

MICHAEL BENNETT (Environmental Assessment Practitioner, Report Writer):

Michael studied at the University of Cape Town completing a Bachelor of Science degree majoring in Environmental and Geographic Science and Ocean and Atmospheric Science. Michael joined SES in 2014 and has extensive experience in assessments and monitoring and has worked on a variety of technical projects. See Appendix B for his curriculum vitae. Michael is registered with EAPASA as a certified Environmental Practitioner (EAPASA # 2021/3163).

1. Introduction

Sharples Environmental Services cc (SES) has been appointed the Hessequa Municipality, to complete the Civil Aviation Compliance Statement as part of the Basic Assessment Process for the proposed PV Solar Plant and Battery Energy Storage System (BESS) on Remainder of Erf 2018, Riversdale, Western Cape.

This Compliance Statement has been Compiled in accordance with protocol for the specialist assessment and minimum report content requirements for environmental impacts on civil aviation installations (GN No. 320, GG 43110, 20 March 2020), Table 1 shows where the requirements are met within this document.

2. Screening Tool Report: Theme Civil Aviation

The Screening Tool Report (dated 23 January 2024) indicates that the proposed site has a Medium Sensitivity as the proposed site is located Within 8 km of an other civil aviation aerodrome.

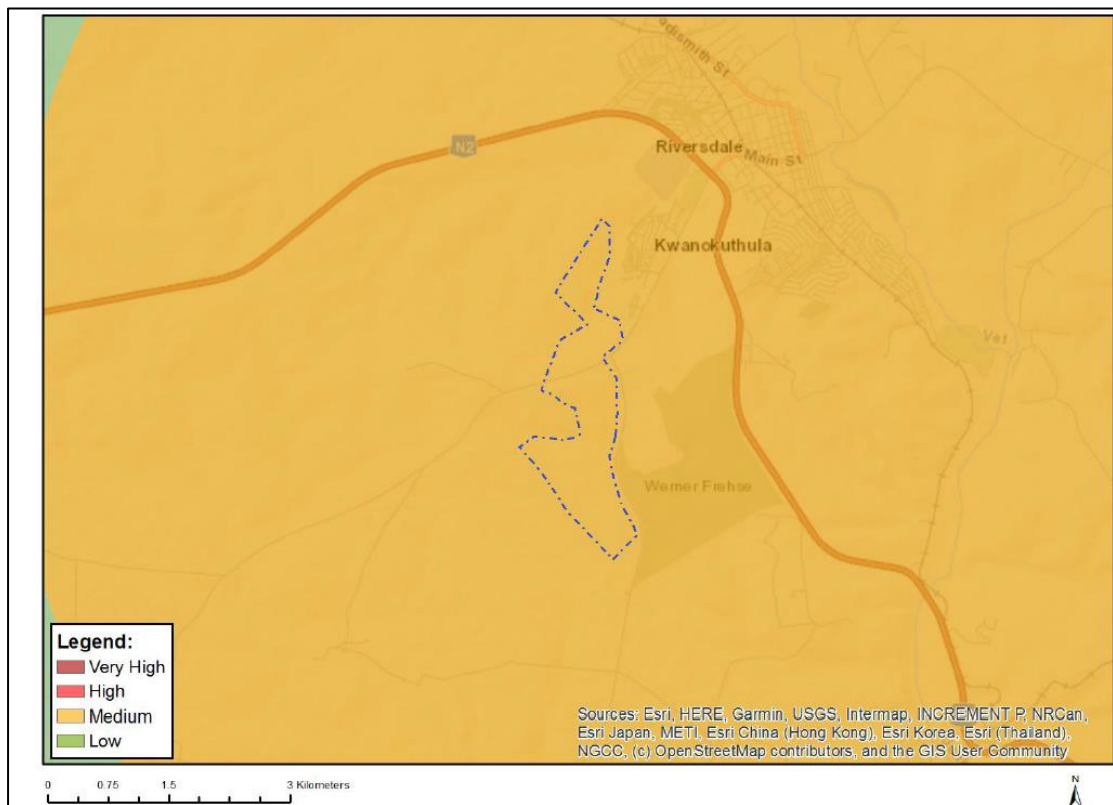


Figure 1: Map of relative civil aviation (solar PV) theme sensitivity

3. Proposed Layout of the Proposed PV Solar Plant

The following layout has been developed for the preferred alternative. The alternative explored in the Basic Assessment Report are all located within the Medium Sensitivity mapped by the screening tool report as such the ground truthed sensitivity ratings will be the same for each alternative and only the preferred alternative will be referenced in this document.



Figure 2: Proposed layout of the preferred alternative

3. Aeronautical Information Management

The RSA DATA KMZ file is an initiative undertaken by ATNS (Air Traffic and Navigation Services) to illustrate the definitions and complexities of airspace, routes, aerodromes and navigational facilities within South Africa to the public in the interest of safety. It allows the user to visualise airspaces in 3D. The RSA DATA KMZ, dated 22 February 2024, was utilized to generate Figure 3. As seen from Figure 3, the proposed site is shown by the white polygon and the red circle a 8km radius around the site. As confirmed by the map, no radared aerodrome is in fact located within the 8km radius of the site.

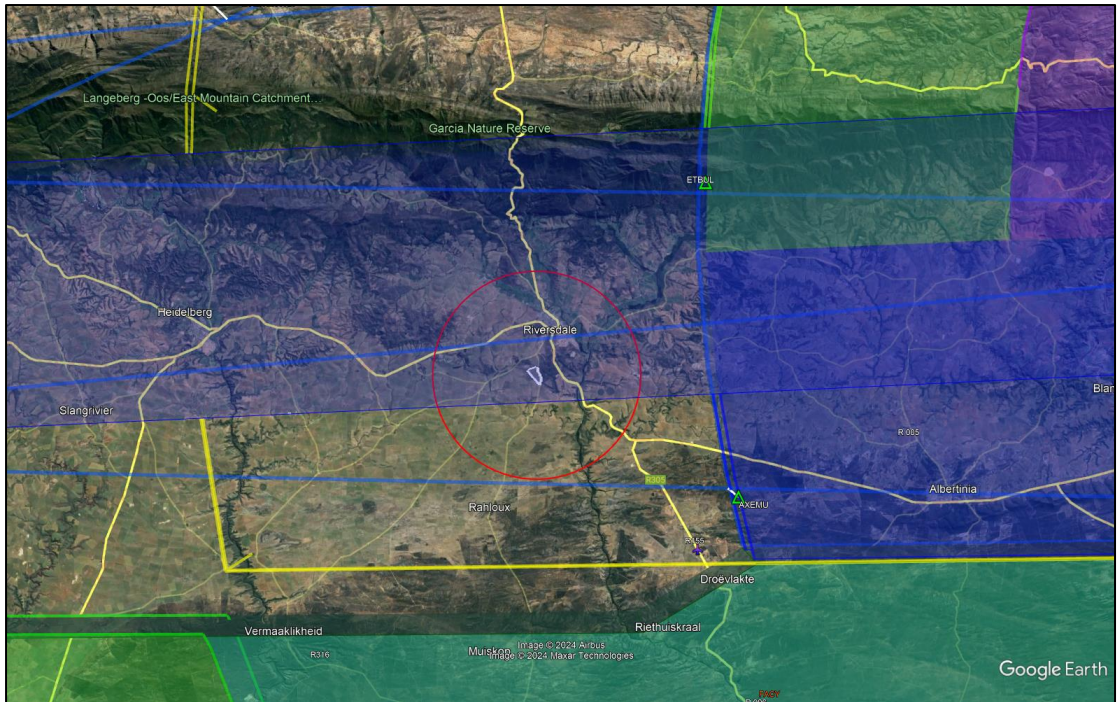


Figure 3: RSA DATA KMZ, dated 22 February 2024

As seen from Figure 4, a small runway is located approximately 2.2km northeast of the proposed site. This is not a commercial runway with radar installations.



Figure 4: Runway proximity to the proposed site

4. Current use of the runway

It was telephonically confirmed by the fliers Club (remote model aircraft) that the runway is unused and unsuitable for aircraft as the landing stripped has been closed. It was also indicated that the white crosses at each side of the landing strip confirms this. Further investigations confirmed this as shown in Figures 5 to 7.

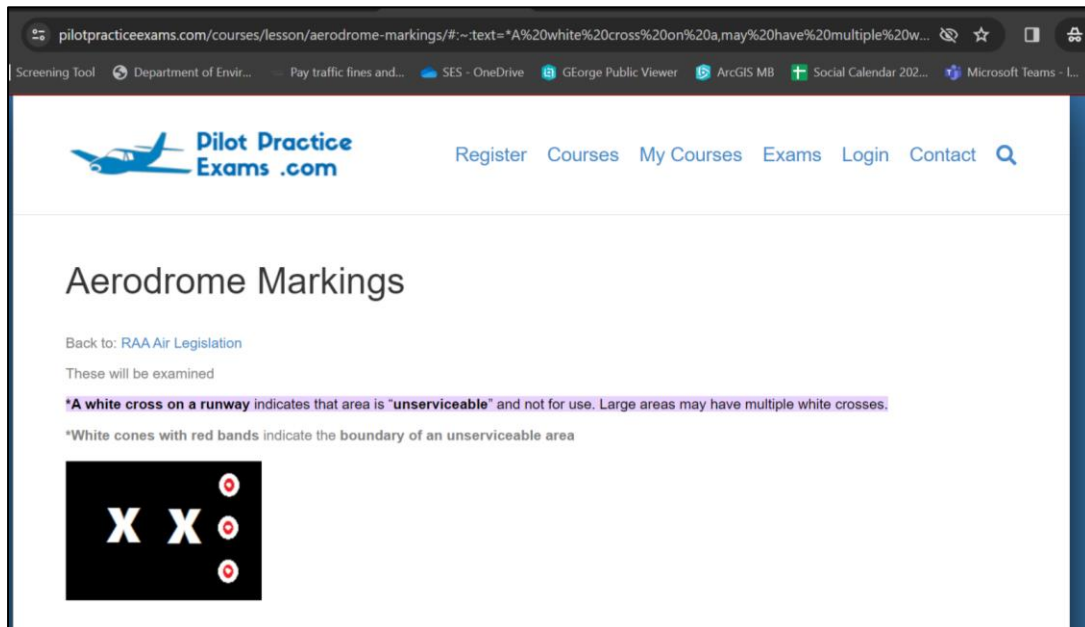


Figure 5: Aerodrome Markings



Figure 6: White cross marking on the western end of the landing strip



Figure 7: White cross marking on the eastern end of the landing strip

5. Impact on Civil Aviation

According to the “*Electro-Magnetic Interference from Solar Photovoltaic Arrays*” article (attached as Appendix A) compiled by the *National Renewable Energy Laboratory (NREL)*, a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, PV arrays have low profiles (i.e. height) relative to most built structures that may be found on or around airfields and in general airport radar systems (e.g., airport surveillance radar) are installed on elevated platforms or towers. The FAA has published a number of case studies that indicate that a setback of 250' to 500' (62 to 152 meters) between the leading edges of a PV array and existing radar equipment is sufficient to prevent blocking and/ or signal reflection issues.

Taking the above into account as well as the white crosses at each end of the runway which indicates that the runway is not in use. No impacts are expected to Civil Aviation for the proposal.

6. Site sensitivity

Taking into consideration that the proposed site is located way beyond the 152 meters recommended by the NREL, the site is located approximately 2.2km from the runway and that there are no visible signs of radar installations at the runway, the sensitivity rating of medium generated by the Screening Tool report is refuted and the sensitivity of the proposed site, for the proposed activity in terms of potential Civil Aviation Impacts should in fact be Low and no further Civil Aviation Impacts need to be investigated.

7. Conclusion

The Proposed PV Solar Plant and Battery Energy Storage System on Remainder of Erf 2018, Riversdale, is not expected to have any impacts on Civil Aviation and therefore no further Civil Aviation Impact Assessments are recommended. Additionally, in the NOI for the EIA process it was indicated that a Glint and Glare Study would be undertaken for the proposal however due to the fact that the landing strip is closed

and not used for Civil Aviation the Glint and Glare Study will no longer be undertaken as there will be no planes using the landing strip and as such the study would be fruitless.

8. References

National Renewable Energy Laboratory (April 2017), Electro-Magnetic Interference from Solar Photovoltaic Arrays.

9. Declaration of independence

- I consider myself bound to the rules and ethics of the Environmental Assessment Practitioners Association of South Africa (EAPASA);
- At the time of conducting the study and compiling this report I did not have any interest, hidden or otherwise, in the proposed development that this study has reference to, except for financial compensation for work done in a professional capacity;
- Work performed for this study was done in an objective manner. Even if this study results in views and findings that are not favourable to the client/applicant, I will not be affected in any manner by the outcome of any environmental process of which this report may form a part, other than being members of the general public;
- I declare that there are no circumstances that may compromise my objectivity in performing this specialist investigation. I do not necessarily object to or endorse any proposed developments, but aim to present facts, findings and recommendations based on relevant professional experience and scientific data;
- I do not have any influence over decisions made by the governing authorities;
- I undertake to disclose 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 a competent authority to such a relevant authority and the applicant;
- I have limited knowledge on the subject theme and have used information from the internet to compile this document;
- This document and all information contained herein is and will remain the intellectual property of Sharples Environmental Services cc. This document, in its entirety or any portion thereof, may not be altered in any manner or form, for any purpose without the specific and written consent of the EAP.
- All the particulars furnished by me in this document are true and correct.

EAP: Michael Jon Bennett (EAPASA reg. No: 2021/3163

Date: February 2024