

THE BASIC ASSESSMENT FOR THE PROPOSED KOMAS WIND ENERGY
FACILITY AND ASSOCIATED INFRASTRUCTURE NEAR KLEINSEE IN THE
NORTHERN CAPE PROVINCE.

APPENDIX C.12

Civil Aviation Site Sensitivity Verification



The Basic Assessment for the proposed Komas Wind Energy Facility and associated infrastructure near Kleinsee in the Northern Cape Province.

Civil Aviation Site Sensitivity Verification

Basic Assessment for the proposed development of the Komas Wind Energy Facility and associated infrastructure near Kleinsee in the Northern Cape Province

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Appendix C.12: Civil Aviation Site Sensitivity Verification

1 INTRODUCTION

This report serves as the Site Sensitivity Verification for Civil Aviation for the Basic Assessment (BA) for the proposed development of the Komass Wind Energy Facility (WEF) and associated infrastructure, near Kleinsee in the Northern Cape. The proposed project is being proposed by Genesis ENERTRAG Komass (PTY) Ltd, and forms part of a cluster of two WEFs, electrical grid infrastructure (EGI) and associated infrastructure. The second WEF, namely the Gromis WEF, as well as the associated EGI components will be assessed in separate BA processes which are currently being undertaken.

2 NEED FOR THE SITE SENSITIVITY VERIFICATION

On 20 March 2020, in Government Gazette 43110, Government Notice (GN) 320, the Department of Environment, Forestry and Fisheries (DEFF) 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 320 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 320 was enforced within 50 days of publication of the notice i.e. on 9 May 2020.

GN 320 specifically includes a protocol that provides the criteria for the specialist assessment and minimum report content requirements for impacts on civil aviation 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 Civil Aviation 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 Civil Aviation Protocol.

Therefore, since the proposed project requires an EA in terms of the NEMA EIA Regulations, 2014, as amended, and Civil Aviation was identified as a relevant theme for the Wind Methodology on the Screening Tool, as well as a required study, GN 320 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 civil aviation installations in relation to the proposed project area, and to identify preliminary areas of concern in terms of impacts to civil aviation installations;
- The proposed project site was plotted on the Screening Tool to identify the sensitivity allocated;
- A site visit was undertaken on 29 September 2020 to confirm the current land use and the environmental sensitivity as it relates to Civil Aviation;
- 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 1 were used in the Site Sensitivity Verification process.

Table 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 ¹ .
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 ² .
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).
Visual Impact Assessment for the proposed projects	SiVEST SA (Pty) Ltd	2020	Report	This Visual Impact Assessment was commissioned for the proposed project.

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

² <https://www.atns.co.za/rsakmz.php>

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

4 PROPOSED PROJECT LOCATION

The proposed project is located entirely within the Springbok Renewable Energy Development Zone (REDZ 8), one of the eight REDZs formally gazetted in South Africa for the purpose of developing solar and wind energy generation facilities (GN 114; 16 February 2018). The proposed Komass WEF project is located on the following farm portions:

- Portion 1 of the Farm Zonnekwa No. 326 (Surveyor General (SG) 21 Digit Code: C05300000000032600001);
- Portion 2 of the Farm Zonnekwa No. 328 (SG 21 Digit Code: C05300000000032800002);
- Portion 3 of the Farm Zonnekwa No. 328 (SG 21 Digit Code: C05300000000032800003);
- Portion 4 of the Farm Zonnekwa No. 328 (SG 21 Digit Code: C05300000000032800004); and
- Portion 4 of the Farm Kap Vley No. 315 (SG 21 Digit Code: C05300000000031500004).

5 DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

GN 320 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. GN 320 further notes that the Site Sensitivity Verification must be undertaken by an Environmental Assessment Practitioner (EAP) or specialist with expertise in radar.

This Site Sensitivity Verification has been undertaken by Minnelise Levendal, an EAP at the CSIR. Minnelise Levendal is registered with the South African Council for Natural and Scientific Professions (SACNASP), with Registration Number 117078 in the field of Environmental Science. Inputs to the Site Sensitivity Verification Report were provided by Abulele Adams and Rohaida Abed of the CSIR. Refer to Appendix A of this verification for the declaration by the EAP.

6 FINDINGS OF THE SCREENING TOOL

A Screening Tool Report was generated for the proposed project using the following classification: Utilities Infrastructure → Electricity → Generation → Renewable → Wind.

The map of relative civil aviation (wind) theme sensitivity generated and included in the Screening Tool depicted that the Komass WEF project area is entirely located in a low sensitivity area from a civil aviation perspective i.e. there are no major or other types of civil aviation aerodromes or buffers that intersect with the project footprint (Figure 1).

In terms of GN 320, 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.

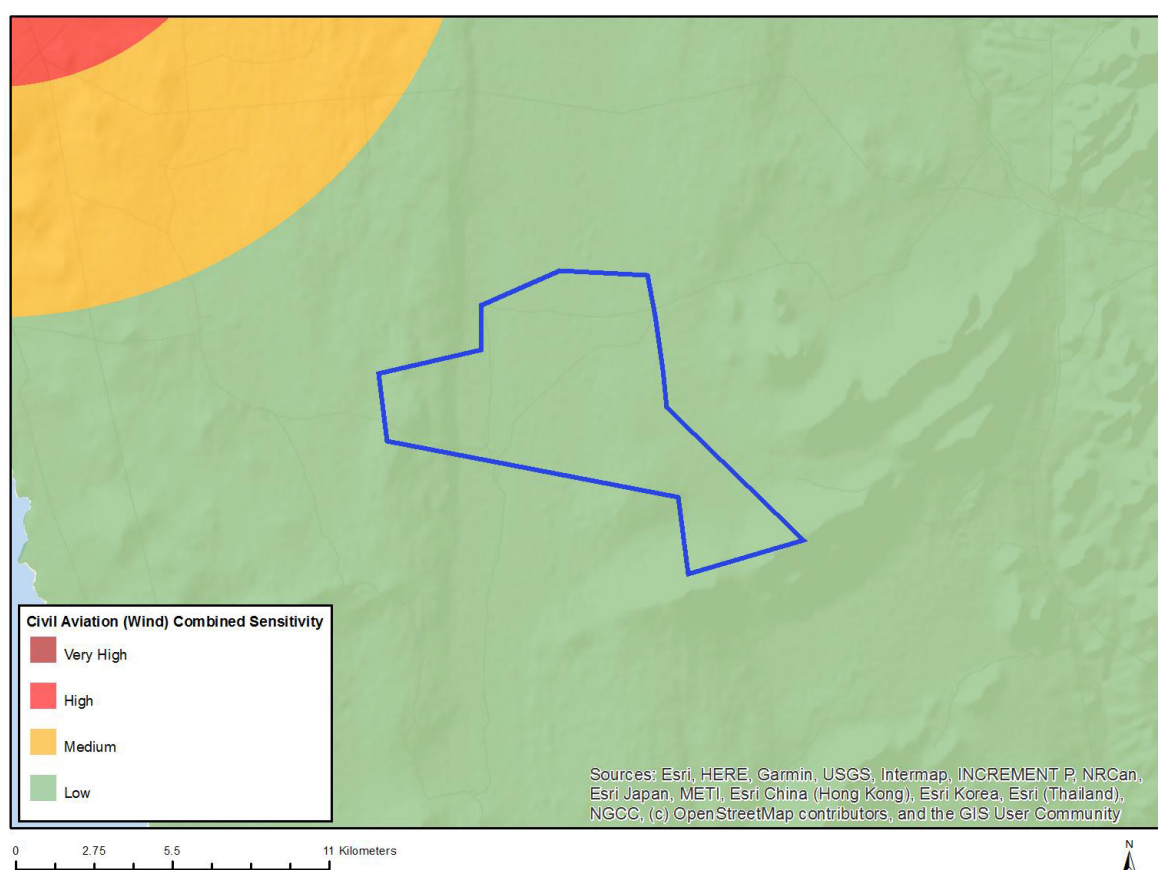


Figure 1: Screening Tool Map showing the Komass WEF Assessed Area in terms of Civil Aviation Sensitivity.

7 DETAILS OF THE SITE VISIT

The details of the site visit are noted below:

Date of Site Visit	29 September 2020
Specialist Name	Minnelise Levendal (EAP)
Professional Registration Number	SACNASP Registration Number 117078
Specialist Affiliation / Company	CSIR

8 FINDINGS

The site visit confirmed that the proposed project site is dominated by natural vegetation and that there are no areas of cultivation present on site. There are a few farmsteads on site. **No civil aviation installations were found within the proposed project assessed area and footprint for the Komass WEF.** According to the Visual Impact Assessment, much of the area is characterised by natural vegetation which is dominated by Karoo and Fynbos shrubland. Refer to Figures 2, 3, 4 and 5 for views of the proposed project site.



Figure 2: View of the central area of the proposed Komas WEF from the east viewed towards the south west



Figure 3: View of the northern area of the proposed Komas WEF from the east viewed towards the south west



Figure 4: View of the northern area of the proposed Komas WEF from the east viewed towards the west



Figure 5: View of the southern area of the proposed Komas WEF from the south viewed towards the north

The ATNS data has confirmed that the Kleinsee Licenced Aerodrome is located about 21 km from the closest point of the WEF, towards the north west. The ATNS data further notes that Area

Navigation Routes intersect with the 30 km radius of the project area, however none intersect with the actual Komas WEF project site. In terms of airspaces, the area overlaps the Johannesburg Area West airspace. The proposed wind turbines will have a maximum hub height of 200 m from the ground and the wind measurement monitoring mast extends approximately 120 m in height from ground level.

The Screening Tool also shows the Kleinsee Aerodrome, with a high sensitivity within 8 km from the aerodrome, and medium sensitivity allocated to the area extending between 8 and 15 km from the aerodrome. These sensitivities do not intersect with the proposed Komas WEF assessed area.

Most of the features noted above are in line with the findings of the Phase 1 and Phase 2 Wind and Solar SEA Reports.

Figure 6 indicates the location of the civil aviation features noted above, which informed this Site Sensitivity Verification.

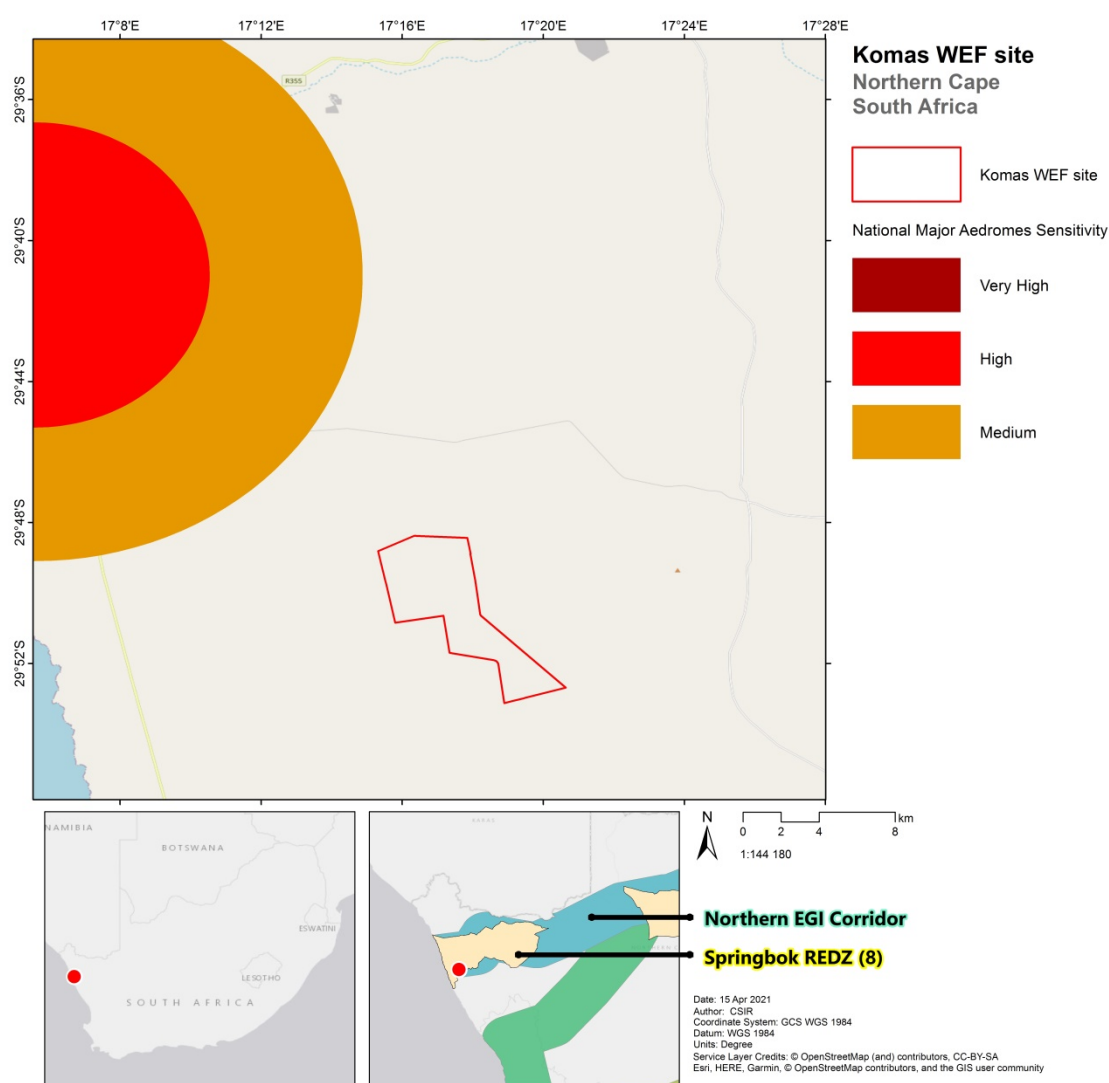


Figure 6: Civil Aviation Features relative to the proposed project site based on the site visit and existing databases.

9 CONCLUDING STATEMENT

The proposed project site was determined and verified to be of low sensitivity (as it relates to civil aviation). 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 320, no further requirements are applicable i.e. a Compliance Statement is not required.

The Phase 1 Wind and Solar SEA notes the following (DEA, 2015³; PART 3, SECTION 7, Page 2):

- *“According to international (ICAO) and local (SA CARs) standards, aviation operations may be conducted at a height of 150 m (500 feet) above ground level, and lower if these can be carried out without being a hazard or nuisance to persons or property on the ground. Any obstacle protruding above this height is thus considered a danger to aviation.*
- *In South Africa all structures higher than 15 metres above ground level must be assessed and registered as potential obstacles to aviation in the Electronic Terrain and Obstacle Database (eTOD). With wind turbines potentially protruding beyond 150 m above ground level, they present a real danger to aviation, especially if sited in close proximity to aerodromes. It is for this reason that the safeguarding of the areas around aerodromes is important and that specific safety requirements (e.g. lighting and markings) are applicable to all wind turbines”.*

However, comment will be sought from the South African Civil Aviation Authority, who will confirm the requirements for the WEF and associated management actions.

³ Department of Environmental Affairs, 2015. Strategic Environmental Assessment for wind and solar photovoltaic energy in South Africa. CSIR Report Number: CSIR/CAS/EMS/ER/2015/0001/B. Stellenbosch.


10 APPENDIX A: EAP DECLARATION

I, **Minnelise Levendal**, declare that –

- I act as the independent environmental assessment practitioner in this site sensitivity verification;
- I have expertise in conducting environmental impact assessments, 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 will perform the work relating to the site sensitivity verification in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I will take into account, to the extent possible, the matters listed in Regulation 13 of the Regulations when preparing the site sensitivity verification and any report relating to the site sensitivity verification;
- 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 site sensitivity verification by the Competent Authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the Competent Authority, unless access to that information is protected by law, in which case it will be indicated that such information exists and will be provided to the Competent Authority;
- I will perform all obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I am aware of what constitutes an offence in terms of Regulation 48 and that a person convicted of an offence in terms of Regulation 48(1) is liable to the penalties as contemplated in Section 49B of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;
- ~~I have a vested interest in the proposed activity proceeding, such vested interest being:~~

Signature of the Environmental Assessment Practitioner	
Name of Company	CSIR
Date	14 December 2020