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SOUTH AFRICA

Prepared for:

Oya Energy (Pty) Ltd

Oya Wind Energy Facility

Bat Pre-construction Walk-through

Bat pre-construction walk-through letter

November 2020

LOOKING DEEP INTO NATURE

EXECUTIVE SUMMARY

Kudusberg Wind Energy Facility was subjected to a 1-year pre-construction bat monitoring campaign in 2015/2016. A subsequent final bat impact assessment report was delivered for consideration in an environmental authorisation process. The project then received environmental authorisation on 25th March 2019 (amended on 4th April 2019 due to a minor naming error), under reference number 14/12/16/3/3/1/1976/AM1. Following this, the Kudusberg Wind Farm is now proposing to submit a Part 2 Amendment Application to split the proposed (authorised) Kudusberg Wind Energy Facility into two smaller parts: Namely, Oya WEF (in the north) and Kudusberg WEF (in the south). For the purpose/scope of this letter, it has been communicated that a final layout for Oya Wind Energy Facility has been designed for implementation. As such, Oya Energy (pty) Ltd (the new holder of the EA after the proposed part 2 Amendment) have contacted Bioinsight (Pty) Ltd. (hereafter referred to as "Bioinsight") to perform a bat walk-though survey of the proposed Oya Wind Energy Facility – to assess the acceptability of the final layout, in terms of any sensitivities observed (past and/or present) for the bat community on site in order to comply with condition 29 of the Kudusberg EA[1].

A site visit was conducted from the 27th to 30th October 2020 to the area, whereby a walk-through survey was completed within/along proposed construction areas. The results of this field survey revealed that all findings in the previous specialist assessment report hold true in present day conditions, and that no new significant potential habitats for bats were identified in the area, and the majority of the site is almost completely dominated by large stretches of homogenous Karoo Scrub vegetation. It is not believed that the final layout being proposed will pose any additional significant threat to bat populations in the area (relative to that which was previously assessed), and no new mitigation measures are considered necessary to be implemented – apart from those already identified in the previous specialist Impact Assessment Report, and mitigated in the EMPr.

[I] Condition 29 of Kudusberg EA [DEFF Ref: 14/12/16/3/3/1/1976/AM1 – Page 15 of EA (page 17 of full document)]: *the final placement of turbines must follow a micro siting procedure involving a walk-through and identification of any sensitive areas by ecological, avifaunal, bat, surface water and heritage specialists.*

SPECIALIST DECLARATION

Professional registration

The Natural Scientific Professions Act of 2003 aims to "Provide for the establishment of the South African Council of Natural Scientific Professions (SACNASP) and for the registration of professional, candidate and certified natural scientists; and to provide for matters connected therewith."

"Only a registered person may practice in a consulting capacity" – Natural Scientific Professions Act of 2003 (20(1)-page 14)

Specialist Investigator:	Miguel Mascarenhas (Pri.Sci.Nat)
Qualification:	MSc on Environmental Impact Assessment – Univ. of Málaga (Spain)
	Postgraduate on Business Management – INDEG Business School (Portugal)
	Postgraduate on Geographic Information Systems – Univ. of Lisboa (Portugal)
	BSc on Applied Biology to Plant Resources – Univ. of Lisboa (Portugal)
Affiliation:	South African Council for Natural Scientific Professions
Registration number:	400168/14
Fields of Expertise:	Ecological Science
Registration:	Professional Member

Declaration of Independence

Bioinsight (Pty) Ltd and the Specialist Investigator declares that:

- We act as independent specialists for this project.
- We consider ourselves bound by the rules and ethics of the South African Council for Natural Scientific Professions.
- We do not have any personal or financial interest in the project except for financial compensation for specialist investigations completed in a professional capacity as specified by the Environmental Impact Assessment Regulations, 2006.
- We will not be affected by the outcome of the environmental process; of which this report forms part of.
- We do not have any influence over the decisions made by the governing authorities.
- We do not object to or endorse the proposed developments, but aim to present facts and our best scientific and professional opinion with regard to the impacts of the development.
- We undertake to disclose to the relevant authorities any information that has or may have the potential to influence its decision or the objectivity of any report, plan, or document required in terms of the Environmental Impact Assessment Regulations, 2006.

- Should we consider ourselves to be in conflict with any of the above declarations, we shall formally submit a Notice of Withdrawal to all relevant parties and formally register as an Interested and Affected Party.

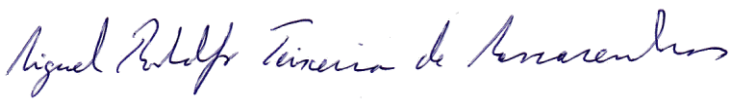
Professional experience

Miguel Mascarenhas has been involved in environmental impact assessment and ecological monitoring for more than 10 years. He has experience with bat interactions with renewable projects, namely energy infrastructure for more than 6 years. During this period, he has been involved in impact assessments and ecological monitoring for over 100 projects, at least 50 of which involved onshore wind energy generation in South Africa. A full Curriculum Vitae can be supplied on request.

Terms and Liabilities

- This report is based on a full pre-construction monitoring year investigation using the available information and data related to the site to be affected.
- The Precautionary Principle has been applied throughout this investigation.
- Additional information may become known or available during a later stage of the process for which no allowance could have been made at the time of this report.
- The Specialist Investigator reserves the right to amend this report, recommendations and conclusions at any stage should additional information become available.
- Information, recommendations and conclusions in this report cannot be applied to any other area without proper investigation.
- This report, in its entirety or any portion thereof, may not be altered in any manner or form or for any purpose without the specific and written consent of the specialist investigator as specified above.
- Acceptance of this report, in any physical or digital form, serves to confirm acknowledgment of these terms and liabilities.

Signed on the 9th of November 2020 by Miguel Rodolfo Teixeira de Mascarenhas in his capacity as specialist investigator.



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1. INTRODUCTION

This letter details the findings of the bat pre-construction walk-through conducted at the proposed Oya Wind Energy Facility (hereafter referred to as Oya WEF), between 27th – 30th October 2020.

The main objective of the pre-construction walk-through was to determine the acceptability of the final proposed project layout, relative to the findings described in (Bioinsight, 2018a), as well as any potential new findings from the walk-through survey conducted. The specific objectives outlined for this pre-construction bat walk-through were:

a) Identify any additional potential areas of concern and/or fatal flaws;

b) Identify any additional sensitive/no-go areas and/or any other special features which need to be avoided;

c) Determine whether the layout for the northern section of the authorised WEF which is being proposed as part of the amendment can be approved by the Department or whether any changes are required to the proposed layout;

d) Compile specialist specific management / monitoring plans for inclusion in the Final EMPr which is to be approved by the DEFF;

e) Provide detailed information to guide the activities associated with the proposed development activities associated within the study area.

In order to achieve the objectives of the pre-construction bat walk-through and micro-siting, a site visit was conducted to assess the acceptability of the final layout against sensitivities defined in the initial bat pre-construction specialist assessment report (Bioinsight, 2018a), as well as any new sensitive features that may be observed in present day conditions. The initial pre-construction bat monitoring programme was based on extensive experience in bat and wind farm monitoring and was designed in order to comply with the key requirements of the available guidelines at the time: "*South African Good Practice Guidelines for Surveying Bats at Wind Energy Facility Developments – Pre-construction*" (Sowler & Stoffberg, 2014).

Oya WEF is being proposed for the installation of wind turbine generators. The project is located approximately 45km southwest of Sutherland in the Northern Cape Province. As demonstrated in Figure 1, The WEF includes the proposed implementation of 20 wind turbines, with associated infrastructures including crane pads, access roads, a construction camp, a wind collector system and various small 4x4 routes. The development is expected to be able to produce up to 86 MW of power.

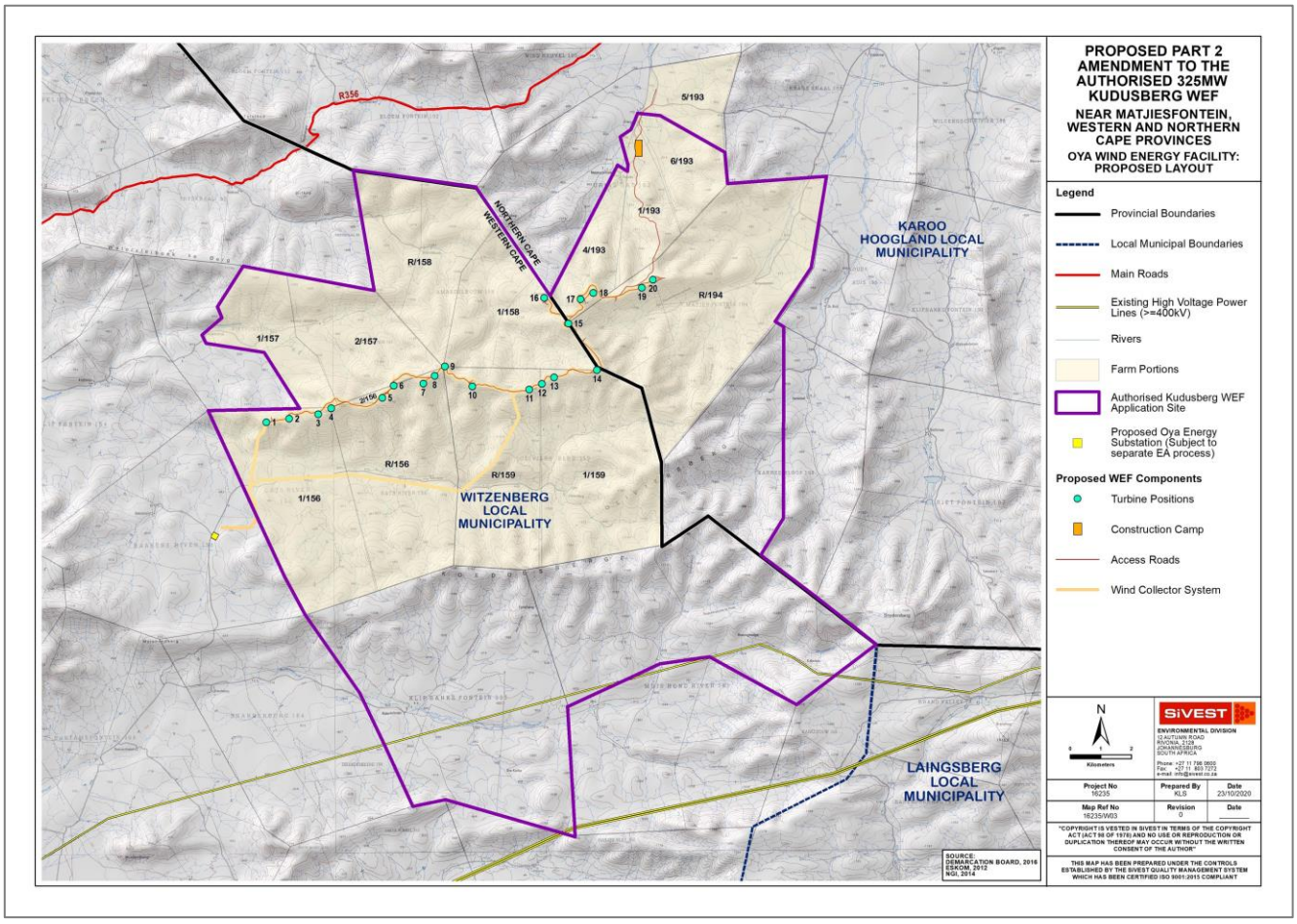

Figure 1 - Location of the proposed Oya Wind Energy Facility (source: Sivest Environmental Division).

2. RESULTS AND DISCUSSION

A walk-through site visit was conducted from 27th – 30th October 2020, by two dedicated field observers with knowledge of the site. This survey was conducted on foot and by making use of a high ground clearance vehicle, wherever possible. Relevant final layout features (Figure 1) were assessed for any concerning overlap with sensitive features, as previously defined in Bioinsight 2018a. The potential for new sensitive features were also searched for along/nearby proposed turbine locations and associated infrastructures.

Our analysis of the general area remains much the same as previously observed during the initial monitoring campaign undertaken as part of the 2018 report. The habitats remain unchanged and the large majority of the proposed site is very homogenous and dominated by vast stretches of Karoo Scrub vegetation. All previously-identified potential bat roosts were visited, with all of them still remaining in tact. The remainder of the area was also scouted for new possible roosting structures, while conducting the walk-through, with results not showing any new signs of roosting potential, besides a small-sized guesthouse building (S 32°53'10.66" ; E 20°15'43.25") – which is in constant use by tourists and is not deemed to hold any important significance for the bat population on site. It is also already located within a Very High (No-go) area. As observed during the initial monitoring campaign, the area is a typical dry and sparsely vegetated Karoo habitat – which does not provide much refuge for bat species, as a whole (Bioinsight, 2018b).

An assessment of the proposed final layout revealed that no new significant sensitive features have been identified, and that the newly proposed layout does not overlap with the previously-identified sensitive features, apart from a few 4x4 tracks and the portions of the overall wind collector system (Figure 2). These infrastructures, however, are not expected to have a significant impact on the bat community due to the fact that the area required for construction only presents a small percentage of the total area available with the same habitat characteristics. The 4x4 tracks tracks in the south of the area (running from west to east) appear to be mostly situated on existing roads, where the area is already impacted. The existence of the wind collector system is noted to cross 500m no-go roosting buffer areas, but it is not considered to be a significant concern at this stage – due to the fact that the system is proposed to run directly along an existing road, where disturbance impacts already exist. Additionally, the installation of such a system is considered to only be a short-term impact and is likely to only last for the duration of the construction phase.

In terms of the change in the turbine heights, it is noted that the newly proposed dimensions are considered to be as follows:

- Lowest blade tip: 17m above ground
- Hub Height: 92m above foundation height above ground
- Highest blade tip: 167m above ground
- Blade length: 75m

Although the height of the lowest blade tip is being proposed to encroach into an area that is lower than previously assessed, it is also worth noting that the overall rotor diameter (i.e. area of influence) is also being reduced by 30m (compared to the maximum area that was previously assessed). Bioinsight originally recommended that the lowest blade tip does not encroach below 40m above ground, wherever possible, but also points out that the new proposed dimensions will not necessarily cause irreplaceable loss to biodiversity. This is particularly relevant given the context of the site and the very low activity levels observed both at ground at rotor heights (Bioinsight, 2018a). Such dimensions are subsequently consdered satisfactory for this particular area / project, as long as all relevant management & mitigation measures, as detailed in the EMPr, are considered – as described in Bioinsight (2018a).

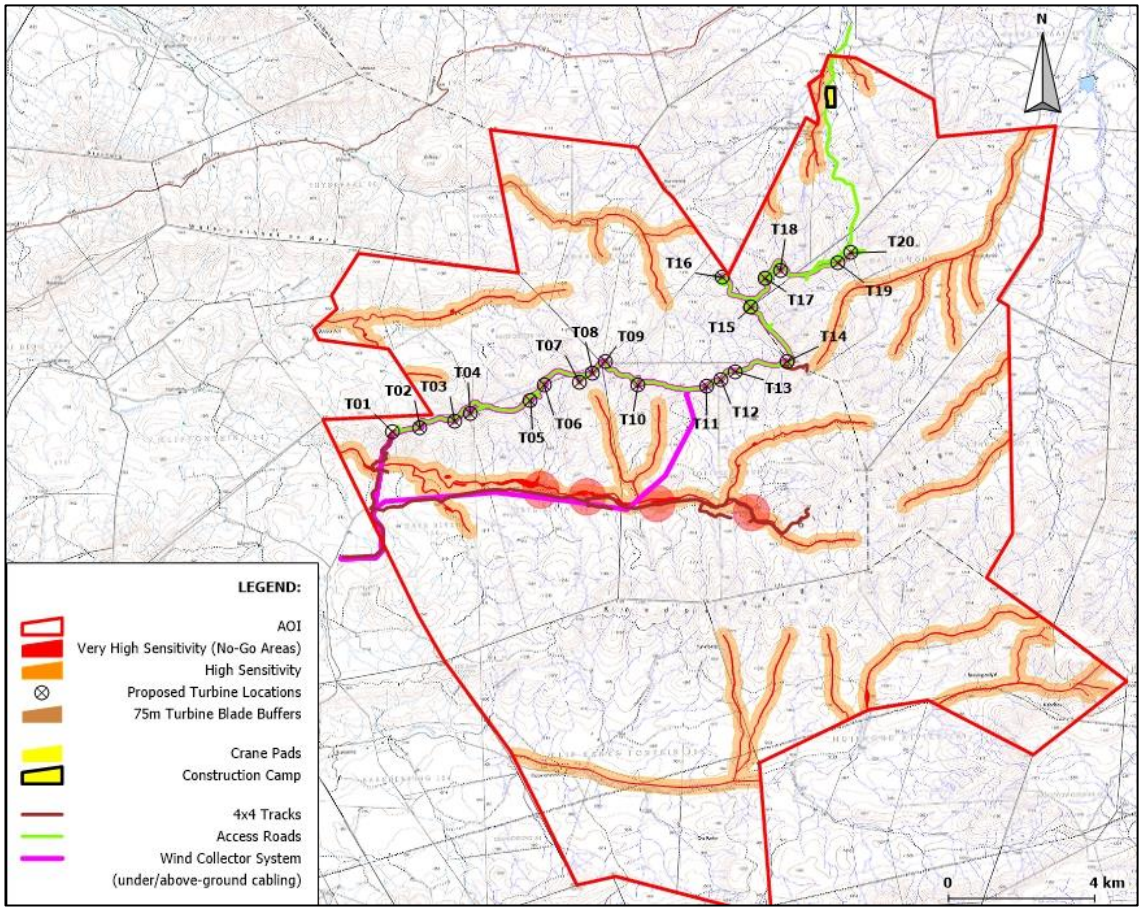

Figure 2 - Bat Sensitivity Map of Final Proposed Layout.

As specified in Bioinsight (2018a), there are no nature conservancy areas, to our present knowledge, within a 30km radius of the proposed development area. The proposed Oya WEF site is located approximately 55km south-east of the Tankwa Karoo National Park (Figure 3). Considering that this area is located at a considerable distance from the proposed WEF area, it is not expected that the species using it will be affected in any way by the implementation of this project.

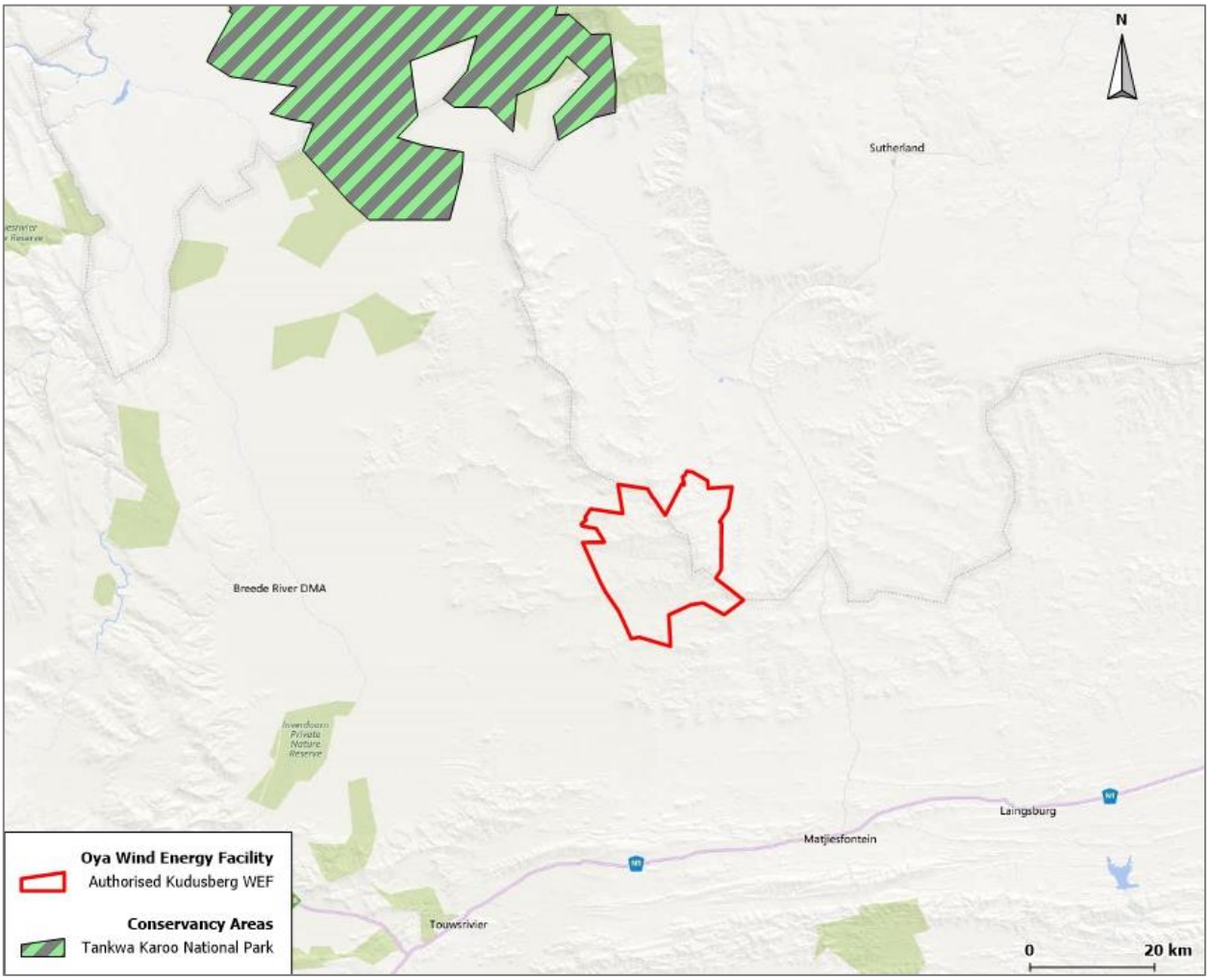

Figure 3 - Location of Oya WEF in relation to the surrounding conservancy areas.

3. CONCLUSION

The pre-construction bat site walk-through at Oya WEF aimed to anaylse the study area and proposed final layout against any old and potentially new sensitivities that may affect the bat community on site. This analysis was required to determine the acceptability of the final layout being proposed.

After careful comparisons between the layout and on-site coniditions observed today, it was determined that no new updates to the initial sensitivity analysis would be required, and that no fatal flaws to the project were identified. All habitats in the area remain the same as before, with the majority of the site being very homogenous and mostly dominated by large stretches of typical Karoo Scrub vegetation. No new significant roosting structures were found, and existing roosts were still intact.

No new significant areas to be avoided were identified, and all previously-identified no-go areas are still applicable under present day conditions. All turbine locations avoid the previously identified no-go areas, and the overlap of certain associated infrastructures are deemed acceptable for the project, given the nature and extent of these activities & features – provided that all previously proposed mitigation/management measures are considered. It is not expected for this project to cause an irreplaceable loss to biodiversity.

As all present day conditions on site have been described as being the same as during the initial monitoring campaign, and as the proposed final layout is deemed acceptable against the pre-defined environmental sensitivities, no new specific management/monitoring plans have been identified to be included in the EMPr going forward, other than those already identified in the initial bat specialist assessment report – which are to be considered.

In light of the above, it is our professional opinion that the proposed final layout for Oya WEF is considered to be acceptable and allowable for implementation, provided that all previously identified management/mitigation measures are considered during all phases of the project. It is therefore considered allowable for the project and final layout to undergo approval for Environmental Authorisation.

4. REFERENCES

Bioinsight. (2018a). Bat Basic Assessment for the Proposed Development of the 325MW Kudusberg Wind Energy Facility and associated infrastructure, between Matjiesfontein and Sutherland in the Western and Northern Cape Provinces: BA Report.

Bioinsight. (2018b). Kudusberg Wind Energy Facility - Bat pre-construction monitoring - Final Report.

Sowler, S., & Stoffberg, S. (2014). South African Good Practice Guidelines for Surveying Bats at Wind Energy Facility Developments - Pre-construction.

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