
GAROB WIND ENERGY FACILITY ON A SITE NEAR COPPERTON, NORTHERN CAPE PROVINCE

DEA ref: 14/12/16/3/3/2/279

MOTIVATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORISATION

Prepared for:

Garob Wind Farm (Pty) Ltd

Private Bag X5061

Stellenbosch

7599

Prepared by:

Savannah Environmental Pty Ltd

FIRST FLOOR, BLOCK 2
5 WOODLANDS OFFICE PARK
CNR. WOODLANDS DRIVE AND
WESTERN SERVICES ROAD, WOODMEAD
P.O. BOX 148, SUNNINGHILL, 2157
TEL: +27 (0)11 656 3237
FAX: +27 (0)86 684 0547
E-MAIL: INFO@SAVANNAHSA.COM
WWW.SAVANNAHSA.COM



TABLE OF CONTENTS

	PAGE
1. INTRODUCTION	1
2. MOTIVATION FOR AMENDMENT	3
3. CONCLUSION AND RECOMMENDATION	4
4. LIST OF APPENDICES.....	5

**GAROB WIND ENERGY FACILITY ON A SITE NEAR COPPERTON, NORTHERN
CAPE PROVINCE**

DEA ref: 14/12/16/3/3/2/279

MOTIVATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORISATION

1. INTRODUCTION

Garob Wind Farm (Pty) Ltd received an environmental authorisation for the construction of the Garob Wind Energy Facility on a site near Copperton, Northern Cape Province (DEA ref: 14/12/16/3/3/2/279) in June 2013.

In terms of the environmental authorisation, the project description referred to wind turbines with a hub height of up to 100m and a rotor diameter of up to 120m. Following recent developments in technology and availability of turbine options for the project, Garob Wind Farm (Pty) Ltd would like to request an amendment to the already received Environmental Authorisation so as to increase the allowable rotor diameter from the authorised 120 meters to 125 meters. This will enable the developer to install a technology on the site which is best suited to the conditions on the site (and will increase the efficiency of the facility). This amendment will not result in a change in extent of the facility footprint (see Figure 1).

The activity as described in the authorisation is hereby requested to be amended as follows:

- » Wind turbines with a hub height of up to 100m and a rotor diameter of up to **125m**.

In terms of Condition 5 of the Environmental Authorisation, it is possible for an applicant to apply, in writing, to the competent authority for a change or deviation from the project description to be approved. In this regard, Garob Wind Farm (Pty) Ltd wishes to request DEA's approval to amend the project description as above. Savannah Environmental has prepared this motivation for public review and comment. This memorandum provides detail pertaining to the significance and impacts of the proposed amendment to the project description. Following the public review period, this motivation, together with all comments received regarding the amendment application, will be submitted to DEA in support of this request/application on behalf of Garob Wind Farm (Pty) Ltd, in order for the competent authority to be able to reach a decision.

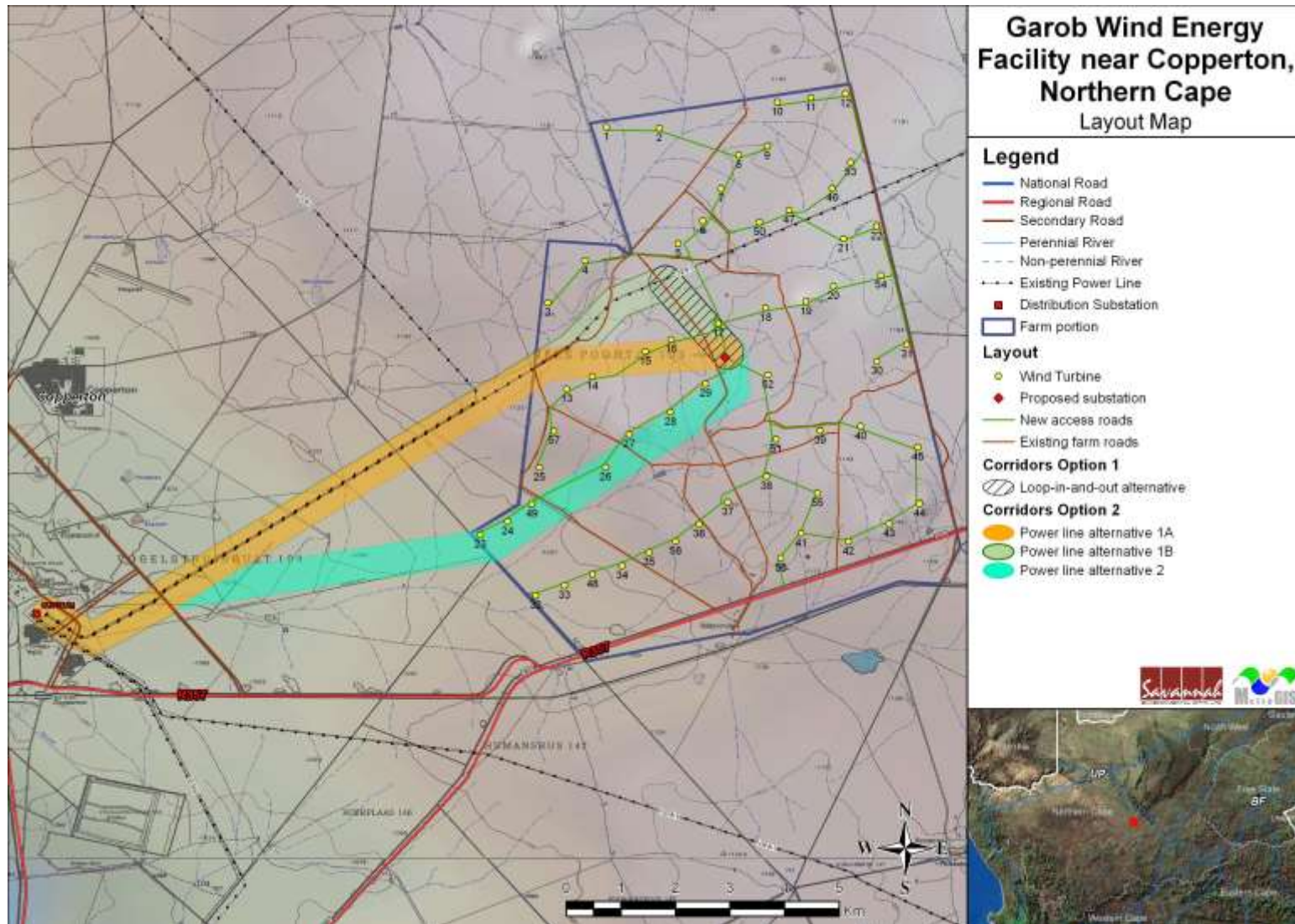


Figure 1: Locality map showing the layout for the Garob Wind Farm Facility

In order to verify the potential for a change in the impacts on visual exposure, avifauna, bats and noise, the amendment has been presented to the relevant specialists who were engaged as part of the EIA. The specialists involved were given the opportunity to consider the amendment and have provided comments accordingly. In all instances the amendment would have little to no effect on any of the impacts evaluated. The comments and statements from the specialist consultants are attached within Appendix A to D.

2. MOTIVATION FOR AMENDMENT

Amendment request: The project description as described in the authorisation is requested to be amended to **“Wind turbines with a hub height of up to 100m and a rotor diameter of up to 125m”**. This amendment relates solely to an increase in rotor diameter. The potential impacts associated with the increase in turbine dimensions is discussed below, and compared to the extent of each impact as identified through the Environmental Impact Assessment.

Location: The site is located on the Portion 5 of the farm Nelspoortje 103 located near Copperton within the Siyathemba Local Municipality (within the Pixley ka Seme District Municipality), approximately 10 km east of the town of Copperton and 35km south west of the town of Prieska in the Northern Cape Province.

Environmental sensitivity: The following environmental sensitivities and potential impacts were identified:

- » Areas of ecological sensitivity
- » Areas of heritage sensitivity
- » Areas of avifauna sensitivity
- » Areas of visual impact
- » Areas sensitive to noise

Understanding the nature and extent of the proposed amendment to the rotor diameter, the potential for the change in the significance of the impact as assessed in the EIA for the following is required to be evaluated:

- » Impacts to avifauna
- » Impacts to bats
- » Visual impacts
- » Impacts to noise receptors

The potential for change in the significance of impacts is discussed in detail below.

- » **Impacts to avifauna:** The 12 months preconstruction bird monitoring at the Garob Wind Energy Facility has been completed. Findings of the avifauna specialist indicate that from the data collected and the understanding acquired from the avifaunal community on site from the pre-construction monitoring, the proposed amendment in rotor diameter to 125m would make no difference to the impacts on avifauna. The effects of the increased rotor diameter will be monitored during operational monitoring, similarly as to how the effects would have been monitored with the original rotor diameter (refer to a letter of motivation drafted by the specialist, included in Appendix A).
- » **Impacts to bats:** The 12 months preconstruction bat monitoring at the Garob Wind Energy Facility has been completed. From the results gathered, understanding, and insight gained on site, the increased rotor diameter will not result in a significant change to the proposed mitigation measures and outcomes of the preconstruction monitoring. The effects of the increased rotor diameter will be monitored during operational monitoring, similar to the monitoring of the original rotor diameter (refer to a letter of motivation drafted by the specialist, included in Appendix B).
- » **Visual Impacts associated with the Wind Energy Facility:** The proposed increase in the rotor diameter dimensions is expected to have a negligible influence on the potential visual exposure of the wind turbine infrastructure as calculated during the Visual Impact Assessment (VIA). It is therefore not expected to significantly alter the influence of the wind energy facility on areas of higher viewer incidence (i.e. observers travelling along national, arterial/main or secondary roads within the region) or potential sensitive visual receptors (i.e. residents of homesteads in close proximity to the wind energy facility) as identified through the EIA studies (refer to a letter of motivation drafted by the specialist, included in Appendix C).
- » **Impacts to noise receptors:** The findings from the specialist indicate that the increase in rotor diameter will not alter the findings of the Environmental Noise Impact Report that was conducted during the EIA phase. The Environmental Noise Impact Report compiled as part of the EIA indicated that the potential noise impact would be low during construction and operational phases (Refer to a letter of motivation drafted by the specialist, included in Appendix D).

3. CONCLUSION

It is concluded from the inputs of the specialists that an increase in the rotor diameter of the turbines for the Garob Wind Energy Facility will not alter the impact significance ratings for impacts as assessed in the EIA or the recommendations in terms of mitigation required for these potential impacts. In

addition, there are no new impacts identified as a result of the proposed amendment. Garob Wind Energy Facility (Pty) Ltd therefore requests that the wording within the authorisation in terms of the project description be amended to accommodate this change in turbine specification. This request is made in terms of Condition 5 of the Environmental Authorisation.

4. LIST OF APPENDICES

The following Appendices are attached in support of the motivation for amendment:

Appendix A: Avifauna – statement from WildSkies Ecological Services (Pty) Ltd

Appendix B: Bats - statement from Animalia

Appendix C: Visual - statement from MetroGIS

Appendix D: Noise – assessment from M2 Environmental Connections

Appendix A
Avifauna - statement from
WildSkies Ecological Services
(Pty) Ltd



17 February 2014

RE: Amendment of turbine size at Garob Wind Energy Facility – effect on avifauna

To whom it may concern,

This letter serves to confirm that WildSkies Ecological Services (Pty) Ltd has completed a full 12 month (four seasons) of pre-construction bird monitoring at the proposed Garob Wind Energy Facility site, in addition to the scoping and EIA Phase reporting.

The EIA assessed the impacts of a turbine rotor diameter of up to 120m and a turbine hub height of up to 100m. The proponent would now like to amend the Environmental Authorisation for a slightly larger rotor diameter, up to 125m.

Based on the findings of this work, the data collected and the understanding acquired of the avifaunal community on site, this amendment in turbine size would make no material difference to the impacts on avifauna.

As already recommended, the facility's effects on avifauna will be monitored once operational, and the same will apply to the new turbine size. There is no additional or different mitigation required due to the change in turbine size.

Kind regards,

A handwritten signature in black ink, appearing to read 'Jon Smallie', is enclosed in a light grey rectangular box.

Jon Smallie



Appendix B: Bats - statement from Animalia

ANIMALIA

zoological & ecological consultation

CK 2009/057469/23

P.O. Box 6892

Weltevredenpark

Gauteng

1715

+27 78 190 3316

werner@animalia-consult.co.za

www.animalia-consult.co.za

17 February 2014

RE: Amendment of turbine size at Garob Wind Energy Facility – effect on bats

To whom it may concern,

This letter confirms that Animalia has completed the full 12 months preconstruction bat monitoring at the proposed Garob Wind Energy Facility site. This monitoring study has incorporated the EIA phase impact assessment effectively.

The proponent is requesting an amendment to the Environmental Authorisation for changing the assessed rotor diameter from 120m to 125m with the hub height remaining at 100m.

From the results gathered and understanding and insight gained on the site, it is not believed that the increased rotor diameter will result in a significant change to the proposed mitigation measures and outcomes of the preconstruction monitoring. The effects of the increased diameter will be monitored during operational monitoring, similarly as to how the effects would have been monitored with the original rotor diameter.

Yours sincerely



Werner Marais

Owner and senior consultant at
Animalia Zoological & Ecological Consultation CC

Appendix C: Visual - statement from MetroGIS



www.metrogis.co.za

+27 12 349 2884/5
+27 12 349 2880
mgis@metrogis.co.za

PO Box 384
La Montagne
0184
South Africa

CSIR, Room 224, Building 8
Meiring Naudé Rd
Brummeria, Pretoria

Lat: -25.747601° Lon: 28.275650° (CSIR Visitors' Reception)

24 February 2014

JUWI WIND ENERGIES (PTY) LIMITED
PROPOSED GAROB WIND ENERGY FACILITY: NORTHERN CAPE PROVINCE
AMENDMENT

Dear Sir/Madam

Juwi Wind Energies (Pty) Limited wishes to amend the dimensions of their wind turbine generators (WTG) for the Proposed Garob Wind Energy Facility (WEF), located near Copperton in the Northern Cape Province.

The intended amendment includes:

- The increase of the maximum turbine rotor diameter from 120m (as assessed in the EIA) to a maximum of 125m diameter (an increase of approximately 2.5m per blade).

The proposed increase in the dimensions is expected to have a negligible influence on the potential visual exposure of the wind turbine infrastructure as calculated during the Visual Impact Assessment (VIA). This is due to the already elevated dimensions of the original wind turbine structures in relation to the receiving environment.

It is therefore **not expected to significantly alter** the influence of the WEF on *areas of higher viewer incidence* (observers traveling along national, arterial/main or major secondary roads within the region) or *potential sensitive visual receptors* (residents of homesteads in close proximity to the WEF).

The proposed increase in dimensions is consequently not expected to significantly influence the anticipated visual impact, as stated in the original VIA report.

Kind regards.

LM du Plessis (PrGISc)

Director: MetroGIS (Pty) Ltd.

**Appendix D: Noise - assessment
from M2 Environmental
Connections**



EAR
Enviro Acoustic Research

Name: Morné de Jager
Cell: 082 565 4059
E-mail: morne@eares.co.za
Date: 25 February 2014
Ref: Garob WEF - Change

Savannah Environmental (Pty) Ltd
PO Box 148
SUNNINGHILL
2157

Attention: Ms. Umeshree Naicker

Dear Madam

SPECIALIST STUDY: NOISE IMPACT ASSESSMENT: PROPOSED WIND ENERGY FACILITY NEAR COPPERTON: CHANGE OF SPECIFICATIONS – ROTOR DIAMETER

The above-mentioned issue and report JRE-GWEF/ENIA/201211-Rev 1 is of relevance.

M2 Environmental Connections was commissioned to undertake a specialist study to determine the potential noise impact on the surrounding sound environment due to the establishment of the Garob Wind Energy Facility east of the town of Copperton, Northern Cape Province. The facility is to be developed by Juwi Renewable Energies (Pty) Ltd. The facility is proposed to accommodate 58 appropriately spaced 2.4 MW wind turbines. Hub height could be up to 100 meters with blade diameter up to 120 meters.

With the input data as used, this assessment indicated that the potential noise impact would be *low* during both the construction and operational phases.

The developer would like to change the specification of the wind turbine, making use of a rotor with a larger diameter than previously specified.

Considering the noise levels projected, as well as how a larger diameter may impact on the noise emission levels, it is my opinion that the change will not alter the findings of the Environmental Noise Impact Report. The results, findings, recommendations and conclusions would remain the same. The significance of the noise impact would remain low and it will not be necessary to review the report, findings, recommendations and conclusions.

Should you require any further details, or have any additional questions, please do not hesitate to call me on the above numbers.

Yours Faithfully,

Morné de Jager
Enviro-Acoustic Research cc