AMENDMENT TO THE AVIFAUNAL IMPACT ASSESSMENT CONDUCTED FOR THE PROPOSED PAULPUTS NORTH WIND ENERGY FACILITY NEAR POFADDER, NORTHERN CAPE PROVINCE

On behalf of

PAULPUTS NORTH WIND ENERGY FACILITY (RF) (PTY) LTD

February 2021

Prepared By:

Arcus Consultancy Services South Africa (Pty) Limited

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1 INTRODUCTION

1.1 Background

Paulputs Wind Farm Project Proprietary Limited appointed Arcus Consulting Services South Africa (Pty) Ltd ('Arcus') to provide avifaunal specialist input for site changes to the proposed Paulputs Wind Energy Facility (WEF), approximately 50 km east of Pofadder in the Northern Cape Province. Environmental Authorisation (EA) (Reference No 14/12/16/3/3/2/1160) was received on 11 December 2019 by WKN-WindCurrent ('WKN') under the SPV Paulputs WEF (RF) (Pty) Ltd for a maximum of 75 wind turbines with a total generation capacity of 300 MW, each with a maximum hub height of 140 m (maximum blade tip height 230 m), one on-site substation and OHPL Option C was also approved for the Paulputs WEF.

The applicant is now proposing to amend and split the authorised Paulputs WEF and associated infrastructure ('Paulputs WEF'). This includes the splitting of the WEF into Paulputs North WEF and associated infrastructure ('Paulputs North WEF') and the Paulputs South WEF and associated infrastructure ('Paulputs South WEF'). The associated infrastructure for each WEF will include a Battery Energy Storage Facility (BESS). The Proposed Paulputs Grid Connection and Electrical Infrastructure associated with the authorised Paulputs WEF will be split from the current authorisation for ease of transfer of ownership to Eskom Holdings SOC Ltd ('Eskom'). In addition, a separate environmental authorisation application is being be undertaken in respect of grid connection infrastructure to serve the proposed Paulputs South WEF.

The split of the authorised Paulputs WEF into Paulputs North WEF and Paulputs South WEF would result in each WEF containing 40 and 35 turbines respectively. The amendment includes the utilisation of improved turbine technology (increased hub height, rotor diameter and rated power of the turbines).

The aim of this report is to assess the impact of these proposed changes on avifauna for the proposed Paulputs North WEF. The following proposed amendments are relevant to this report:

- Increased hub height: from 140m to 180m;
- Increased rotor diameter: from 180m to 220m; and
- A Battery Energy Storage Facility (BESS).

1.2 Purpose and Aims

The purpose of this report is to assess whether the conclusions and recommendations of the original Avifaunal Impact Assessment Report compiled for the Paulputs WEF in June 2019 will be affected by the proposed changes.

1.3 Terms of Reference

The Terms of Reference for this assessment are as follows:

- Review original reports and data;
- Review any updated data on the baseline avifaunal community (where available);
- Review existing literature relevant to the effects of turbine dimensions on the risks to avifauna;
- Update the avifaunal sensitivity map(s) where relevant to the proposed changes;
- Assess the impacts related to the proposed changes from the authorised specifications (if any);
- Assess advantages or disadvantages of the proposed change in turbine specifications

- Identify additional changes to the mitigation measures required to avoid, manage or mitigate the impacts associated with the proposed changes (if any).

1.4 Assumptions and Limitations

Based on the turbine dimensions proposed at the time of the original avifaunal surveys flight activity was recorded through five height bands. The proposed turbine specification changes no longer correspond to the height bands that were used to determine flight sensitivity. However as the four seasons of monitoring recorded such a low number of flights this is not considered to be a significant limitation to providing accurate impact assessments of the proposed amendment, especially when taking into consideration the margin of error that exists when determining flight heights of birds in the field. The rotor swept area and turbine layout associated with the proposed amendment were the factors considered to be more appropriate to assess any changes to the potential impacts on avifauna in this instance.

2 METHODOLOGY

In carrying out this assessment, Arcus conducted a literature review on avifauna and wind energy impacts with a focus on the relationship between turbine size and fatality. In addition Arcus carried out the pre-construction avifaunal monitoring and are therefore familiar with the project and its associated impacts.

2.1 Document Review

To assess how the proposed changes may compare to the existing authorisation the following documents and/or data were reviewed:

- Arcus, 2019. Final Pre-construction Monitoring Report and Avifaunal Specialist Report for Paulputs Wind Energy Facility, Northern Cape Province, June 2019;
- Various research publications (citations provided in the text).

3 FINDINGS OF THE ORIGINAL IMPACT ASSESSMENT

Activity and abundance of priority species and red data species were found to be very low to low. The diversity of these species recorded was also low. Abundances and diversity of small passerines was found to be low as well. Verreaux's Eagle were confirmed breeding 1.8 km outside of the WEF site boundary, however the species was not recorded flying on site. The WEF site does not contain any important Verreaux's Eagle habitat, even though they may traverse the site or forage there occasionally. Overall the four seasons of monitoring recorded a very low number of flights and as a result the entire site was assigned a score of Low Flight Sensitivity. The original impact assessment identified aquatic features as being high avifaunal sensitivity features and a 200 m buffer was applied. Three types of raptor nests were identified and buffered according to the sensitivity of the species to collisions and standard best practise:

- Verreaux's Eagle (3 km);
- Pale Chanting Goshawk (500 m); and
- Greater Kestrel Nest (500 m).

Compared to other WEF sites flight activity of priority species was the lowest recorded on any WEF that the specialists have worked on or are aware of. The original assessment concluded that the WEF site itself appears to be well suited for wind energy development from an avifaunal perspective.

4 AVIFAUNAL SPECIALIST COMMENT ON THE PROPOSED AMENDMENT

4.1 Proposed Split of the Authorised WEF

As there are no changes in the turbine layout, or the positioning of the other authorised elements of the WEF, the proposed split of the authorised Paulputs WEF into the Paulputs North WEF does not require any further assessment.

4.2 Proposed Amendments to Turbine Specifications

4.2.1 Literature Review

Collision of birds with turbines is the largest potential impact on avifauna associated with wind energy facilities. Therefore, the main factors of the proposed amendment that could influence the potential risks to avifauna are the turbine dimensions and layout.

Conflicting results on the effect that turbine specifications have on avifaunal fatalities exist in the published literature. Howell *et al.* (1997)[1] concluded that the evidence from the Altamont Pass in California (United States of America) did not support the hypothesis that the larger rotor swept area (RSA) of turbines contributes proportionally to avian mortality, i.e. that larger RSA resulted in more mortalities. Barclay *et al.* (2007)[2] compiled wind turbine and fatality data from 33 sites in North America to test the hypothesis that wind turbine size and height influenced fatality rates of birds. They concluded that while it may be expected that as rotor-swept area increased, more animals would be killed per turbine their analyses indicated that this was not the case and rotor-swept area was not a significant factor. In addition they found no evidence that taller turbine towers are associated with increased bird fatalities and that the per-turbine fatality rate for birds was constant with tower height. Krijgsveld *et al.* (2009)[3] conducted a study in the Netherlands which "*indicated that collision risk of birds with larger multi-MW wind turbines is similar to that with smaller earlier-generation turbines, and much lower than expected based on the large rotor surface and high altitude-range of modern turbines*". Smallwood (2013)[4] estimated fatalities at wind energy facilities across North America to "*test whether the trend toward installing larger wind turbines might reduce fatality rates, or whether variation in fatality rates could be explained by other methodological, environmental, or turbine design factors*" and concluded that "*adjusted fatality rates correlated inversely with wind-turbine size for all raptors as a group*", i.e. lower fatality rates were estimated at wind energy facilities with larger turbines. Everaert (2014)[5] studied the impact of bird collisions at eight land-based wind energy facilities in Belgium (with a total of 66 wind turbines) and concluded that "*no significant relationship could be found between the number of collision fatalities and the rotor swept area of the turbines*".

De Lucas *et al.* (2008)[6] showed a correlation between hub height and mortality for Griffon Vulture, indicating that differential impacts and risks may be experienced depending on the flight characteristics of the species present in the area.

[1] Howell, J.A. 1997. Avian Mortality at rotor swept area equivalents Altamont Pass and Montezuma Hills, California. Report for Kenetech Wind Power.

[2] Barclay R.M.R, Baerwald E.F and Gruver J.C. 2007. Variation in bat and bird fatalities at wind energy facilities: assessing the effects of rotor size and tower height. Canadian Journal of Zoology. 85: 381 – 387.

[3] Krijgsveld, K.L., Akershoek, K., Schenk, F., Dijk, F. and Dirksen, S. 2009. Collision risk of birds with modern large wind turbines. Ardea 97(3): 357–366.

[4] Smallwood, K.S. 2013. Comparing bird and bat fatality rate estimates among North American Wind-Energy projects. Wildlife Society Bulletin 37(1):19–33.

[5] Everaert, J. 2014. Collision risk and micro-avoidance rates of birds with wind turbines in Flanders, Bird Study, 61:2, 220-230

[6] De Lucas, M., Janss, G.F.E., Whitfield, D.P., Ferrer, M., 2008. Collision fatality of raptors in wind farms does not depend on raptor abundance. J. Appl. Ecol. 45, 1695–1703.

It must be noted that even though older studies may refer to 'modern turbines' the technology has advanced at such a rapid pace that even turbines considered to be at the larger end of the scale in these studies are significantly smaller than those that are currently available on the market. Similarly, Loss *et al.* (2014)[7] argued that Smallwood (2013) failed to distinguish between lattice and monopole turbines, stating that as monopole turbines comprise the vast majority of all wind turbines installed in North America, it is important to separately estimate mortality and assess correlates of mortality for this turbine type. Loss *et al.* (2014) sought to provide the first mortality estimates specific to monopole turbines and included data from 68 studies, their findings supported a positive relationship between bird collision mortality and turbine hub height. Part of their explanation for why their studied showed different results was the fact that lattice turbines were excluded from their analysis. Lattice turbines are relatively small and have relatively high per-turbine mortality rates as the lattice structure may attract perching birds and raptors which may skew the results and conclusions of previous studies. Loss *et al.* (2014) conclude that "*the projected trend for a continued increase in turbine size coupled with our finding of greater bird collision mortality at taller turbines suggests that precaution must be taken to reduce adverse impacts to wildlife populations when making decisions about the type of wind turbines to install*".

A more recent study by Thaxter *et al.* (2017)[8] conducted meta-analyses that included 88 bird studies containing information from 93 onshore wind energy facilities and related collision rate to species-level traits and turbine characteristics to quantify the potential vulnerability of 9 538 bird species globally. They found a strong positive relationship between wind turbine capacity and collision rate per turbine. The strength of this relationship, however, was insufficient to offset the reduced number of larger turbines required per unit energy generation. They concluded that to minimize bird collisions, wind farm electricity generation capacity should be met through deploying fewer, large turbines, rather than many smaller ones.

4.2.2 Impact Assessment

The proposed amendment to the turbines at the WEF would result in a greater per turbine rotor swept area (RSA) and therefore a potentially greater likelihood that birds would collide with turbine blades. The maximum RSA per turbine in the original authorisation is 25 449 m^2 but based on the amendment being applied for, this would increase to up to 38 014 m^2. This translates into an increase in RSA of approximately 49 % associated with the proposed amendment. The initial four seasons of monitoring conducted for the original impact assessment recorded a very low number of flights, therefore the likelihood that an increase in RSA would have a significantly higher negative impact on avifauna than the original authorisation is considered to be **low**.

The main mitigation measure to protect avifauna is to adhere to the sensitivity map in the final EIA report which contained buffers of several important features such as aquatic features and nests. These buffer distances are dependent on size of the turbine being used. To account for this, a 110 m buffer (the maximum blade length being considered) was added to all buffers to ensure that the blades do not sweep into any buffers.

4.3 Proposed BESS

It is understood that the battery technology being considered for the BESS would be Solid-State, Lithium Ion (Li-Ion) batteries and that the battery modules will be housed in

[7] Loss S.R., Will, T., Marra, P.P. 2013. Estimates of bird collision mortality at wind facilities in the contiguous United States. Biological Conservation 168 201–209.

[8] Thaxter, C.B., Buchanan, G.M., Carr, J., Butchart, S.H.M., Newbold, T., Green, R.E., Tobias, J. A., Foden, W. B., O'Brien, S. and Pearce-Higgins, J.W. 2017. Bird and bat species' global vulnerability to collision mortality at wind farms revealed through a trait-based assessment. Proc. R. Soc. B.28420170829.

containers (similar to shipping containers). These containers will be between 2 m to 5 m high, 1.5 m to 3 m wide and 7 m to 20 m long and may be stacked vertically to a maximum height of 10 m. The containers will be housed within the authorised substation compound site (Option A) and in close proximity to other elements of the WEF on-site infrastructure.

4.3.1 Impact Assessment

As the BESS will be within the substation site that was assessed in the original assessment no additional assessment is deemed necessary. The BESS itself is unlikely to pose additional significant impacts on avifauna in terms of collisions, electrocution or habitat destruction beyond those assessed for the substation and same mitigation measures that apply to the substation should be applicable to the BESS. Birds must be dissuaded from nesting within the facility through the use of bird spikes or other suitable deterrents on a case-by-case basis as it is impossible to predict where such nests may be constructed.

4.4 Removal of the Paulputs WEF Grid Connection and Electrical Infrastructure from the Current Authorisation

As this is largely an administrative exercise to ease the transfer of ownership to Eskom it has no significance from an avifaunal perspective and will not result in any changes to the impacts assessed for the original authorisation.

5 ADVANTAGES AND DISADVANTAGES OF THE PROPOSED AMENDMENT

The advantages of the proposed amendment relate to the increase in the individual generating capacity of the turbines allowing for a potential reduction in the total number of turbines required to achieve the maximum generation capacity of the facility. The disadvantages of the proposed amendment relate to the increase in the RSA should the maximum number of turbines be constructed. The recommendations of Thaxter *et al.* (2017) should be followed in that the maximum generation capacity should be met through the deployment of fewer, larger turbines where possible to minimize bird collisions.

6 CONCLUSION

It is unlikely that the proposed amendments to the Paulputs WEF considered above would result in a change in impacts as assessed for the original authorisation – including cumulative impacts. The key initial mitigation measure that should be implemented at the Paulputs North WEF would be adherence to the revised buffer distances in this report. This has already been adhered to (Figure 1).

The use of larger WTGs with increased generation capacity considered for the amendment could possibly allow for the maximum generation capacity of the facility to be achieved from the deployment of fewer, larger WTGs than the maximum number of WTGs proposed, resulting in a reduction of the potential impacts of the facility on avifauna through a reduced number of obstacles on the landscape. The maximum number of WTGs proposed is acceptable from an avifaunal perspective, however it is recommended that fewer, larger WTGs be considered for deployment where practically and financially possible.

Arcus is of the opinion that the impacts associated with the construction, operation and decommissioning phases of the project can be mitigated to acceptable levels provided the recommended mitigation measures of the original authorisation are implemented and that the EAs should be granted.

AVIFAUNAL SITE SENSITIVITY VERIFICATION REPORT FOR PAULPUTS NORTH WIND ENERGY FACILITY

For

PAULPUTS NORTH WIND ENERGY FACILITY (RF) (PTY) LTD

February 2021

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1 INTRODUCTION

The information presented by the online screening tool[1] was consulted to determine the sensitivity of the project site as per the requirements of National Gazette, No. 43110 of 20 March, 2020: "National Environmental Management Act (107/1998) 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 Act, when applying for Environmental Authorisation".

1.1 Site Screening

The site sensitivity verification was undertaken through the use of:

- a desk top analysis, using satellite imagery;
- a preliminary on -site inspection; and
- any other available and relevant information.

2 METHODS

2.1 Desk-top Analysis

The following relevant information was consulted to determine the baseline of the avifaunal community that could potentially occur on the project site and to assess their sensitivity to the proposed development.

- Bird distribution data of the Southern African Bird Atlas Project 2 (SABAP-2) obtained from the Avian Demography Unit of the University of Cape Town[2];
- Co-ordinated Avifaunal Road Count (CAR) project[3];
- Co-ordinated Water-bird Count (CWAC) project[4];
- The Important Bird Areas of southern Africa (IBA) project[5];
- Arcus, 2019. Final Pre-construction Monitoring Report and Avifaunal Specialist Report for Paulputs Wind Energy Facility, Northern Cape Province, June 2019; and
- The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland[6].

2.2 Site Visit

A three-day site walkthrough was conducted between 22 and 24 June 2020.

3 RESULTS

3.1 National Web-based Screening Tool

The output from the National Web-based Screening tool identified the site as low sensitivity (Figure 1).

[1] https://screening.environment.gov.za/

[2] http://sabap2.birdmap.africa/ Accessed 18 February 2020.

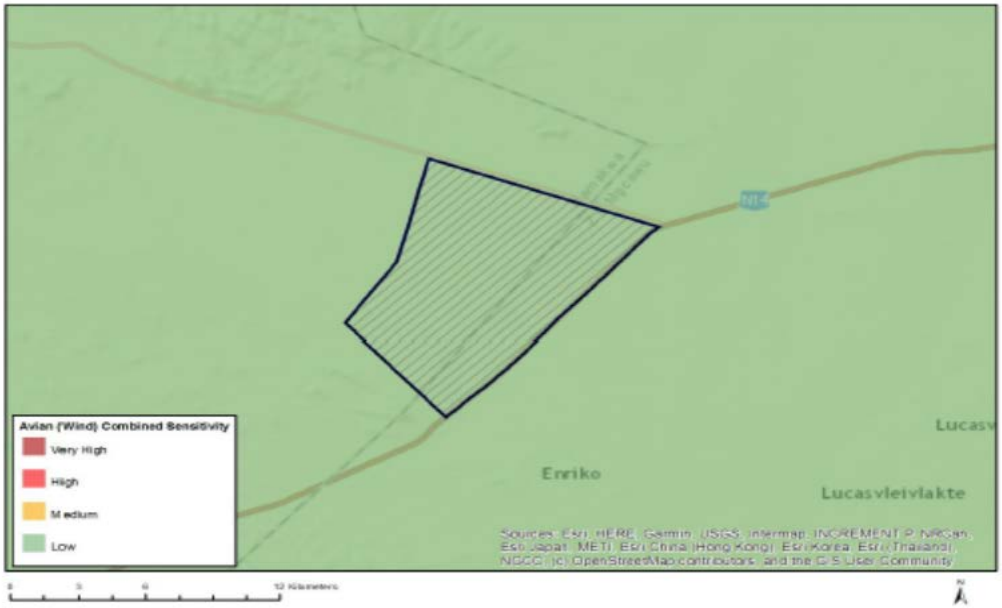
[3] Young, D.J., Harrison, J.A, Navarro, R.A., Anderson, M.A., & Colahan, B.D. (Eds). 2003. Big birds on farms: Mazda CAR Report 1993-2001. Avian Demography Unit: Cape Town.

[4] Taylor, P.B., Navarro, R.A., Wren-Sargent, M., Harrison, J.A. & Kieswetter, S.L. 1999. Coordinated waterbird Counts in South Africa, 1992-1997. Avian Demography Unit, Cape Town.

[5] Marnewick MD, Retief EF, Theron NT, Wright DR, Anderson TA. 2015. Important Bird and Biodiversity Areas of South Africa. Johannesburg: BirdLife South Africa.

[6] Taylor, M.R., Peacock, F., and Wanless, R.M. 2015. Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland.

MAP OF RELATIVE AVIAN (WIND) THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			x

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area Outside Sensitivities

Figure 1: Map of relative avian species sensitivity produced by the national web-based screening tool.

3.2 Desk-top Analysis and Site Visit

Activity and abundance of priority species and red data species were found to be very low to low by the pre-construction monitoring conducted by Arcus between May 2018 and January 2019. The diversity of these species recorded was also low. Abundances and diversity of small passerines was found to be low as well. Verreaux's Eagle were confirmed breeding 1.8 km outside of the WEF site boundary, however the species was not recorded flying on site. The WEF site does not contain any important Verreaux's Eagle habitat, even though they may traverse the site or forage there occasionally. Overall the four seasons of monitoring recorded a very low number of flights and as a result the entire site was assigned a score of Low Flight Sensitivity. The impact assessment identified aquatic features as being high avifaunal sensitivity features and a 200 m buffer was applied. Three types of raptor nests were identified and buffered according to the sensitivity of the species to collisions and standard best practise:

- Verreaux's Eagle (3 km);
- Pale Chanting Goshawk (500 m); and
- Greater Kestrel Nest (500 m).

Compared to other WEF sites flight activity of priority species was the lowest recorded on any WEF that the specialists have worked on or are aware of. The assessment concluded that the WEF site itself appears to be well suited for wind energy development from an avifaunal perspective. The site visit did not result in any additional features that would result in increased avifauna sensitivity.

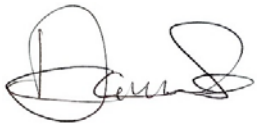
Figure 2: Image of the Paulputs North WEF site.

4 CONCLUSION

The sensitivity of the area around the Verreaux's Eagle nest is considered to be high sensitivity by this verification report. The sensitivity of drainage lines and waterbodies is considered to be elevated to high sensitivity by this verification report. The remaining areas are confirmed to be low sensitivity by this verification report.The sensitivity map resulting from the specialist assessment will be of greater accuracy, resolution and therefore utility in reducing the risk and impacts to avifauna than the map provided by the national web-based screening tool.

It is concluded in the amendment report that it is unlikely that the proposed amendments to the Paulputs WEF considered above would result in a change in impacts as assessed for the original authorisation – including cumulative impacts. The key initial mitigation measure that should be implemented at the Paulputs North WEF would be adherence to the revised buffer distances in this report. This has already been adhered to.

The use of larger WTGs with increased generation capacity considered for the amendment could possibly allow for the maximum generation capacity of the facility to be achieved from the deployment of fewer, larger WTGs than the maximum number of WTGs proposed, resulting in a reduction of the potential impacts of the facility on avifauna through a reduced number of obstacles on the landscape. The maximum number of WTGs proposed is acceptable from an avifaunal perspective, however it is recommended that fewer, larger WTGs be considered for deployment where practically and financially possible.



Dr Owen Rhys Davies

Pr. Sci. Nat (Ecology)

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DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

	(For official use only)
File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Proposed Amendment of the Paulputs Wind Energy Facility, Northern Cape Province

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address:
Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Private Bag X447
Pretoria
0001

Physical address:
Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

Specialist Company Name:	Arcus Consultancy Services South Africa (Pty) Ltd			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition	100%
Specialist name:	Dr Owen Davies			
Specialist Qualifications:	PhD Zoology (Ornithology), BSc Botany			
Professional affiliation/registration:	SACNASP, ZSSA			
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2. DECLARATION BY THE SPECIALIST

I, Owen Rhys Davies, declare that –

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, 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 have no, and will not engage in, conflicting interests in the undertaking of the activity;
- 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 application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the Specialist

Arcus Consultancy Services South Africa (Pty) Ltd

Name of Company

2020/11/30

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Owen Rhys Davies, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

Arcus Consultancy Services South Africa (Pty) Ltd

Name of Company

01/12/2020

Date

01/12/2020

Signature of the Commissioner of Oaths

Date

SUID-AFRIKAANSE POLISIEDIENS
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For attention: 25 January 2021

Arcus

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Att: Ashleigh von der Heyden

Dear Ashleigh

REVIEW OF AVIFAUNAL ASSESSMENT BY DR OWEN DAVIES FOR THE PROPOSED AMENDMENT TO THE AVIFAUNAL IMPACT ASSESSMENT CONDUCTED FOR THE PROPOSED PAULPUTS NORTH WIND ENERGY FACILITY NEAR POFADDER, NORTHERN CAPE PROVINCE

1. BACKGROUND

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- Increased hub height: from 140m to 180m;
- Increased rotor diameter: from 180m to 220m; and
- A Battery Energy Storage Facility (BESS).

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Dr Owen Davies from Arcus compiled an assessment report with to assess the impact of these proposed changes on avifauna for the proposed Paulputs North WEF. The report is titled “Amendment to the Avifaunal Impact Assessment conducted for the proposed Paulputs North Wind Energy Facility near Pofadder, Northern Cape Province” and dated August 2020.

Chris van Rooyen Consulting as approached by Arcus to review the assessment report and provide additional recommendations if necessary.

2. FINDINGS AND CONCLUSIONS OF THE AMENDMENT REPORT

The amendment report concluded It is unlikely that the proposed amendments to the Paulputs WEF would result in a change in impacts as assessed for the original authorisation – including cumulative impacts. The key initial mitigation measure that should be implemented at the Paulputs North WEF would be adherence to the revised buffer distances in this report. This has already been adhered to.

The use of larger WTGs with increased generation capacity considered for the amendment could possibly allow for the maximum generation capacity of the facility to be achieved from the deployment of fewer, larger WTGs than the maximum number of WTGs proposed, resulting in a reduction of the potential impacts of the facility on avifauna through a reduced number of obstacles on the landscape. The maximum number of WTGs proposed is acceptable from an avifaunal perspective, however it is recommended that fewer, larger WTGs be considered for deployment where practically and financially possible.

The amendment report concluded that the impacts associated with the construction, operation and decommissioning phases of the project can be mitigated to acceptable levels provided the recommended mitigation measures of the original authorisation are implemented and that the EAs should be granted.

3. CONCLUSIONS AND RECOMMENDATIONS OF REVIEWER

We are in agreement with the conclusions and recommendations of the amendment report. For us the key recommendation in the amendment report is that fewer, larger WTGs be considered for deployment where practically and financially possible.

Sincerely

Signed:
Name: Chris van Rooyen
Position: Director/ Avifaunal Specialist

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

	(For official use only)
File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

REVIEW OF AVIFAUNAL ASSESSMENT BY DR OWEN DAVIES FOR THE PROPOSED AMENDMENT TO THE AVIFAUNAL IMPACT ASSESSMENT CONDUCTED FOR THE PROPOSED PAULPUTS NORTH WIND ENERGY FACILITY NEAR POFADDER, NORTHERN CAPE PROVINCE

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address:
Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Private Bag X447
Pretoria
0001

Physical address:
Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

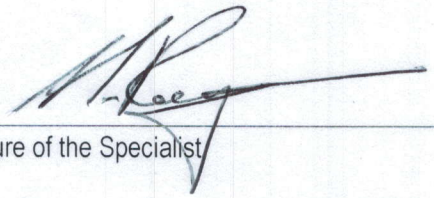
1. SPECIALIST INFORMATION

Specialist Company Name:	Afrimage Photography (Pty) Ltd t/a Chris van Rooyen Consulting			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4		
Specialist name:	Chris van Rooyen			
Specialist Qualifications:	BA LLB			
Professional affiliation/registration:	I work under the supervision of and in association with Albert Froneman (MSc Conservation Biology) (SACNASP Zoological Science Registration number 400177/09) as stipulated by the Natural Scientific Professions Act 27 of 2003.			
Physical address:	6 Pladda Drive, Plettenberg Bay, 2122			
Postal address:	P.O. Box 2676, Fourways			
Postal code:	2055			
Telephone:	0824549570			
E-mail:	Vanrooyen.chris@gmail.com			

2. DECLARATION BY THE SPECIALIST

I, Chris van Rooyen, declare that –

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, 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 have no, and will not engage in, conflicting interests in the undertaking of the activity;
- 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 application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the Specialist

Chris van Rooyen Consuilting

Name of Company:

20 July 2021

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Chris van Rooyen, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

Afrimage Photography (Pty) Ltd

Name of Company

20 July 2021

Date

25817 22.1

CSF NB21775LA

Signature of the Commissioner of Oaths

2021-07-20

Date

SOUTH AFRICAN POLICE SERVICE
PLETTENBERG BAY
2021 -07- 20
PLETTENBERGBAAI
SUID-AFRIKAANSE POLISIEDIENS