

**AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION: PROPOSED WITBERG WIND ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE,
WESTERN CAPE PROVINCE**

DEA Ref. No: 12/12/20/1966/AM7

COMMENTS AND RESPONSES REPORT

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The Amendment Motivation Report's availability was announced on Wednesday, 14 November 2018 and was made available for an initial 30-day review and comment period from **Wednesday, 14 November** to **Friday, 14 December 2018**. All written comments received during the review and comment period is captured in the Comments and Responses Report.

The Revised Amendment Motivation Report's availability was announced on **Tuesday, 19 March 2019** and is made available for a 30-day review and comment period from **Wednesday 20, March 2019** to **Tuesday 23, April 2019**. Comments received during the review and comment period will be included in the Comments and Responses Report and included as **Appendix I5** to the Final Revised Motivation Report's submission to the Department of Environmental Affairs

LIST OF ABBREVIATIONS / ACRONYMS

C&RR	Comments and Responses Report	DAFF	Department of Agriculture, Forestry and Fisheries
DD	Deputy Director	DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation	EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner	EMPr	Environmental Management Programme
EWT	Endangered Wildlife Trust	RI&AP	Registered Interested and Affected Party
SACAA	South African Civil Aviation Authority	SAHRA	South African Heritage Resources Agency
SANRAL	South African National Roads Agency Ltd	WC DEA&DP	Western Cape: Department of Environmental Affairs and Development Planning
WC T&PW	Western Cape: Transport and Public Works		

1. COMMENTS RECEIVED FROM ORGANS OF STATE

NO.	COMMENT	RAISED BY	RESPONSE
1.	The Directorate: Biodiversity Conservation has reviewed and evaluated the aforementioned report including its specialist's studies and have the following recommendations for implementation:	Mr Stanley Tshitwamulomoni Acting Director: Biodiversity	
1.1.	The pre-construction walk through with an ecological specialist must be undertaken to fine tune the final positioning of the turbines in order to avoid impacting on species of conservation concern;	Conservation DEA Letter: 10 Dec 2018	A pre-construction walk-through has been recommended by the ecological specialist (Appendix D). This requirement has also been added to the EMPr (Appendix K). The pre-construction walk-through will accordingly advise on the final micro-siting of the wind farm and final layout, which will need to be approved by the Department of Environmental Affairs (DEA). The pre-construction walk through will identify the ecological species of conservation concern that will either need to be avoided by the micro-siting of the wind turbines and other project components, or will advise which specific plant species will require a permit for removal / relocation.
1.2.	Limit construction activities to seasons when birds are not breeding;		It is stated as a mitigation measure in the avifaunal addendum report (Appendix B) construction activities not to take place during the breeding season for sensitive species including the Verreaux's and Booted Eagle. In this respect, the avifaunal's specialist mitigation measures are as follows: (i) not constructing within 1000-m of Verreaux's Eagle nests or Booted Eagle nest during their early breeding season (May – June) or small-chick rearing season (June – July). For breeding Booted Eagles, the seasons to avoid are August – September. These measures have been included in the EMPr for implementation (Appendix K).

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1.3.	No construction is allowed within the 1000m of Verreaux's Eagle nests or Booted Eagle nest during their early breeding season or small chick rearing season;		As per comment above.
1.4.	Post-construction monitoring must effectively duplicate the baseline work, with the addition of surveys for collision and electrocution victims under the turbines and ancillary power infrastructure;		This has been included as a mitigation measure (see Section 4.3 of the EMPr in Appendix K).
1.5.	All species listed in terms of TOPs and Red Data list must not be disturbed or removed without a permit from relevant authorities;		<p>All permits that are required will be applied for from the Western Cape Department of Environmental Affairs and Development Planning (WC DEA&DP) and / or the Department of Agriculture, Forestry and Fisheries (DAFF) as and where required, and implemented prior to construction.</p> <p>In addition to obtaining the relevant permits, the layout has been amended as a mitigation measure to avoid the avifaunal no-go area (see Figure 7.1 and Figure 7.2 in the Revised Motivation Report) to avoid disturbance to red data avifaunal species (Verreaux's and Booted Eagle).</p>
1.6.	Vegetation clearing prior and during construction must be limited to the footprint of the proposed development;		This has been included as a mitigation measure (see Section 4.1 & Section 4.2 of the EMPr in Appendix K).
1.7.	Anti-collision devices such as bird flappers must be installed on all high risk sections of the powerline to forewarn birds of the risk,		This has been included as a mitigation measure (see Section 4.1 of the EMPr in Appendix K).
1.8.	All disturbed and cleared areas must be re-vegetated with indigenous perennial shrubs and grasses from the local area; and		This has been included as a mitigation measure (see Section 4.1 of the EMPr in Appendix K).
1.9.	Concurrent rehabilitation and alien vegetation control program within all sensitive areas must be implemented.		A re-vegetation and habitat rehabilitation plan his provided in the ecological specialist letter (Appendix D). These have been included accordingly in Appendix C of the EMPr (see

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			Appendix K). The requirement for concurrent rehabilitation and alien vegetation control program in sensitive areas is included as a mitigation measure in the EMPr (see Section 4.2 of the EMPr in Appendix K).
	The overall biodiversity objective is to minimise loss to biodiversity as possible. In order to achieve this objective, the above-mentioned recommendations must be adhered to.		The recommendations have been taken in to account and included in the EMPr (Appendix K) as appropriate.
2.	The Department has the following comments on the abovementioned amendment application:	Mr Coenrad Agenbach	
2.1.	Amendments applied for:	DD: Strategic Infrastructure Developments DEA	
	(i) Amendment 6, as applied for requests the department to amend the wind monitoring mast from 80m to 120m. It must be noted that the EA does not include the wind monitoring mast. As such, the EAP is to provide the details in the EIAR where the mast was specified, provide confirmation if the mast was constructed or not, the date it was constructed and provide the authorisation for said wind monitoring masts.	Letter: 13 Dec 2018	Amendment 6 has been removed from the request for amendment. As such, the requested details are not required for the proposed amendment and have not been included in this application. The Application and revised motivation report have been updated accordingly to reflect the change.
	(ii) The EAP is requested to consolidate all the conditions from the previous amendments and appeal decisions that needs to be added into the EA.		See Section 2 of the revised motivation report.
	(iii) The EAP is required to submit a revised, signed application form that does not include the proposed amendment number 6.		Amendment 6 has been removed from the request for amendment and has been removed from the updated application form submitted to the DEA.
2.2.	Public participation:		

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	<p>(i) Please ensure that comments from all relevant stakeholders are submitted to the Department with the final report. This includes but is not limited to the Western Cape Department of Environmental Affairs and Development Planning, the Department of Forestry and Fisheries (DAFF), the Western Cape Department of Agriculture, the South African Civil Aviation Authority (SACAA), the Department of Transport, the Laingsburg Local Municipality, the Department of Water and Sanitation (DWS), the South African National Roads Agency Limited (SANRAL), the South African Heritage Resources Agency (SAHRA), the Endangered Wildlife Trust (EWT), BirdLife SA, the Department of Mineral Resources, the Department of Rural Development and Land Reform, and the Department of Environmental Affairs: Directorate Biodiversity and Conservation.</p>		<p>It can be confirmed that the Organs of State and Stakeholders mentioned are registered on the project database, and received the initial draft Motivation Report for comment. The <u>Revised</u> Motivation Report will also be released to these Organs of State and stakeholder for comment.</p> <p>Proof of delivery will be included in the Final Revised Motivation Report.</p> <p>The SACAA has provided conditional approval for the 27-wind turbine layout and this is attached to the revised motivation report (See Appendix L of the revised motivation report). However, please note that the Holder of the EA will request the SACAA for an amendment of this conditional approval to refer to the correct layout and updated turbine specifications, once this Part 2 Amendment has been concluded and deemed successful.</p>
	<p>(ii) Please ensure that all issues raised and comments received during the circulation of the draft report from registered I&APs and organs of state which have jurisdiction in respect of the proposed activity are adequately addressed in the final report. Proof of correspondence with the various stakeholders must be included in the final report. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments. The Public Participation Process must be conducted in terms of</p>		<p>All comments received from stakeholders and RI&APs are captured in this C&RR, and comments received on the Revised Motivation Report will be included in the Final Revised Motivation Report which will be submitted to the DEA for decision-making.</p> <p>Proof of delivery and follow-up e-mails will also be included in the Final Revised Motivation Report.</p>

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	<p>Regulation 39, 40, 41, 42, 43 & 44 of the EIA Regulations 2014 as amended.</p> <p>(iii) A Comments and Response trail report (C&R) must be submitted with the final report. The C&R report must incorporate all comments for this development. The C&R report must be a separate document from the main report and the format must be in the table format as indicated in Annexure 1 of this comments letter. Please refrain from summarising comments made by I&APs. All comments from I&APs must be copied verbatim and responded to clearly. Please note that a response such as “noted” is not regarded as an adequate response to I&AP's comments.</p> <p>(iv) The final report must also indicate that this draft report has been subjected to a public participation process.</p>		<p>It can be confirmed that the C&RR format complies with the DEA requirements as set out in their letter dated 13 December 2018 and that comments have not been summarized, but captured verbatim.</p> <p>Proof of circulation of the draft Motivation Report and the Revised Motivation Report will be included in the Final Revised Motivation Report.</p>
2.3.	<p>Layout & Sensitivity Maps</p> <p>(i) All preferred turbine positions must be clearly numbered. The turbine position numbers must be consistently used in all maps to be included in the final report.</p> <p>(ii) The final report must provide the technical details for the proposed facility in a table format as well as their description and/or dimensions. A sample for the minimum information required is listed under point 2 of the EIA information required for wind energy facilities below.</p>		<p>Refer to the Revised Motivation Report (Figure 2.1 and Figure 7.1).</p> <p>Refer to Section 2.4 d) of the Revised Motivation Report.</p>

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	(iii) A copy of the final layout map must be submitted with the final report. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	➤ The envisioned area for the wind energy facility; i.e. placing of wind turbines and all associated infrastructure should be mapped at an appropriate scale.		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	➤ All supporting onsite infrastructure such as laydown area, guard house, control room, and buildings, including accommodation etc.		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report. Note that there is no guard house and accommodation proposed on the site.
	➤ All necessary details regarding all possible locations and sizes of the proposed satellite substation, the main substation and internal powerlines;		Refer to Section 2.4 d) of the Revised Motivation Report and to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	➤ All existing infrastructure on the site, especially internal roads infrastructure;		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	➤ The location of sensitive environmental features on site e.g. CBAs, heritage sites, wetlands, drainage lines etc. that will be affected by the facility and its associated infrastructure;		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	➤ Buffer areas; and		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	➤ All "no-go" areas.		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.
	(iv) The final report must include an environmental sensitivity map indicating environmental sensitive		Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.

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	<p>areas and features identified during the assessment process.</p> <p>(v) The final report must include a map combining the final layout map superimposed (overlain) on the environmental sensitivity map.</p>		<p>Refer to Figure 7.1 and Figure 7.2 of the Revised Motivation Report.</p>
2.4.	<p>Specialist assessments</p> <p>(i) All the attached specialist studies must indicate and make recommendations for 25 wind turbine positions. There seems to be discrepancies between the number of turbines requested for the amendment, and the numbers being assessed in the various studies</p> <p>(ii) The maps used within the specialist studies must comply with comment c(i) of this comments letter</p> <p>(iii) The EAP must ensure that the terms of reference for all the identified specialist studies must include the following:</p> <ul style="list-style-type: none"> ➤ A detailed description of the study's methodology; indication of the locations and descriptions of the development footprint, and all other associated infrastructures that they have assessed and are recommending for authorisations. 		<p>All the attached specialist studies indicate and make recommendations for the 25 wind turbine positions, as requested (see Appendix A – H).</p> <p>All the attached specialist studies (see Appendix A – H) contain maps (where relevant) with all preferred turbine positions clearly numbered and are consistently used in all maps within the revised motivation report.</p> <p>Detailed methodologies have been provided for the collision risk modelling (Appendix A), bats, (Appendix C), ecology (Appendix D), heritage (Appendix E), visual (Appendix G) and social (Appendix H) have in the original specialist studies. Therefore, it is not required that these methodologies are repeated in the addendum reports. However, detailed methodologies have been provided for avifauna (Appendix B) and noise (Appendix F) addendum reports as required.</p>

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	<p>➤ Provide a detailed description of all limitations to the studies. All specialist studies must be conducted in the right season and providing that as a limitation will not be allowed.</p> <hr/> <p>➤ Please note that the Department considers a 'no-go' area, as an area where no development of any infrastructure is allowed; therefore, no development of associated infrastructure including access roads is allowed in the 'no-go' areas.</p> <hr/> <p>➤ Should the specialist definition of 'no-go' area differ from the Departments definition; this must be Clearly indicated. The specialist must also indicate the 'no-go' areas buffer if applicable.</p>		<p>All specialist studies have provided a description of all limitations to the respective studies (Appendix A – H), with the exception of ecology and bats as there were no limitations to the addendum studies. However, the limitations were provided in the original specialist study and therefore did not need to be repeated in the addendum report.</p> <p>In addition, no limitations in terms of timing of the assessments have been provided in any of the specialist studies (Appendix A – H).</p> <hr/> <p>This is acknowledged. Please see response below.</p> <hr/> <p>The classification of sensitivity areas used by the specialists are as follows:</p> <ul style="list-style-type: none"> • Very High sensitivity – no-go; • High sensitivity (including associated buffers) – acceptable with intense mitigation; • Medium sensitivity (including associated buffers) – acceptable with mitigation; • Low – acceptable. <p>The definition of a no-go area for the avifaunal specialist study differs slightly from the above classification however, in that it considers that no wind farm related development and associated infrastructure are allowed in the “no-go” areas</p>

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	<ul style="list-style-type: none"> <li data-bbox="365 352 1048 496">➤ All specialist studies must be final, and provide detailed/practical mitigation measures and recommendations, and must not recommend further studies to be completed post EA. <li data-bbox="365 592 1048 695">➤ Should specialist recommend specific mitigation measures for identified turbine positions, these must be clearly indicated. <li data-bbox="365 903 1048 1054">➤ Clearly defined cumulative impacts and where possible the size of the identified impact must be quantified and indicated, i.e. hectares of cumulatively transformed land. <li data-bbox="365 1062 1048 1326">➤ A detailed process flow to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project. 		<p data-bbox="1373 233 2150 336">with the exception of the access roads required for the proposed development. Refer to the avifauna specialist addendum report (Appendix B – see Section 5, Table 10).</p> <p data-bbox="1373 352 2150 576">All specialist studies have provided practical mitigation measures and recommendations where relevant (Appendix A - H). No further addendum specialist studies have been recommended for further study to inform the proposed amendment. The specialist studies submitted are considered final for the amendment application.</p> <p data-bbox="1373 592 2150 895">No specific mitigation measures have been provided for identified turbine numbers (see Appendix A - H). However, at a general level, the ecological specialist has recommended that the final development footprint should be subject to a pre-construction walk-through to inform the final placement of roads and turbines as well as locate and identify species of conservation concern that are within the development footprint (Appendix D).</p> <p data-bbox="1373 911 2150 975">Assessment of cumulative impacts have been provided for all specialist studies (Appendix A – H), as requested.</p> <p data-bbox="1373 1062 2150 1134">Please refer to cumulative impact section in all specialist studies (Appendix A – H).</p>

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	<ul style="list-style-type: none"> ➤ Identified cumulative impacts associated with the proposed development must be rated with the significance rating methodology used in the process. ➤ The significance rating must also inform the need and desirability of the proposed development. ➤ A cumulative impact environmental statement on whether the proposed development must proceed. <p>(iv) Should the appointed specialists specify contradicting recommendations, the EAP must clearly indicate the most reasonable recommendation and substantiate this with defensible reasons: and were necessary, include further expertise advice.</p>		<p>Please refer to cumulative impact section in all specialist studies (Appendix A – H).</p> <p>Please refer to cumulative impact section in all specialist studies (Appendix A – H).</p> <p>Please refer to cumulative impact section in all specialist studies (Appendix A – H).</p> <p>No contradicting recommendations have been proposed by the specialists with that of the recommendations of the EAP (see Appendix A - H).</p>
2.5.	<p>The Environmental Management Programme (EMPr) to be submitted as part of the final report must include the following:</p> <ul style="list-style-type: none"> (i) All recommendations and mitigation measures recorded in the final report and the specialist studies conducted. (ii) The final site layout map. (iii) Measures as dictated by the final site layout map and micro-siting. (iv) An environmental sensitivity map indicating environmental sensitive areas and features identified during the basic assessment process. 		<p>All recommendations and mitigation measures recorded in the revised motivation report and associated specialist studies are included in the EMPr (Appendix K).</p> <p>Refer to Section 1 of the EMPr (Appendix K).</p> <p>Refer to Section 1 of the EMPr (Appendix K).</p> <p>Note that an EIA process was undertaken and not a Basic Assessment process for the original application. An amendment application is now being undertaken as submitted herein. For the environmental sensitivity map</p>

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	<p>(v) A map combining the final layout map superimposed (overlain) on the environmental sensitivity map.</p> <p>(vi) An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.</p> <p>(vii) A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled by a vegetation specialist familiar with the site and be implemented prior to commencement of the construction phase.</p> <p>(viii) An avifauna monitoring and management plan to be implemented during the construction and operation of the facility. This plan must be drafted by a suitably qualified avifauna specialist.</p>		<p>indicating environmental sensitive areas, please refer to Section 1 of the EMPr (Appendix K).</p> <p>Refer to Section 1 of the EMPr (Appendix K).</p> <p>Refer to Appendix B of the EMPr (Appendix K).</p> <p>Refer to Appendix D of the EMPr (Appendix K).</p> <p>Refer to Appendix G of the EMPr (Appendix K). Reputable avifaunal specialists' have formulated the current Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa. At this stage, it is premature to compile a detailed avifauna monitoring and management plan for the construction and operation phase of the Witberg WEF, as it is unknown when construction of the facility will commence given the uncertainty of the current REIPPP programme bid process, and where possible updates to the guidelines may have been made at a later stage which will need to be incorporated into the detailed avifauna monitoring and</p>

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			management plan for the construction and operation phase. As such, the Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa are provided to which are to be complied with when the detailed avifauna monitoring and management plan is compiled. This must however must be undertaken prior to construction.
	(ix) A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.		Refer to Appendix C of the EMPr (Appendix K).
	(x) An open space management plan to be implemented during the construction and operation of the facility.		Refer to Appendix E of the EMPr (Appendix K).
	(xi) A traffic management plan for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimize impacts on local commuters e.g. limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time and avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.		Refer to Appendix H of the EMPr (Appendix K).

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	(xii) A transportation plan for the transport of components, main assembly cranes and other large pieces of equipment.		Refer to Appendix H of the EMPr (Appendix K).
	(xiii) A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion, The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.		Refer to Appendix I of the EMPr (Appendix K).
	(xiv) A fire management plan to be implemented during the construction and operation of the facility.		Refer to Appendix J of the EMPr (Appendix K).
	(xv) An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.		Refer to Appendix F of the EMPr (Appendix K).
	(xvi) An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.		Refer to Appendix K of the EMPr (Appendix K).

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	(xvii) Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants.		Refer to Section 4.2 Objective 13 of the EMPr (Appendix K).
	The EAP must provide detailed motivation if any of the above requirements is not required by the proposed development and not included in the EMPr.		Detailed motivation has been provided for DEA comment (e)(viii) above. No other detailed motivation is required.
2.6.	General		
	Please ensure that all mitigation recommendations are in line with applicable and most recent guidelines.		It can be confirmed that the mitigation recommendations are in line with applicable and most recent guidelines.
	Please note that in terms of regulation 32 of EIA regulations 2014 as amended, the applicant is required within a specified timeframe to submit a report to this Department in light of the proposed amendments.		The revised motivation report will be submitted within the legislated timeframes as required (i.e. submission deadline 14 May 2019).
3.	Due to the reduction, change in location and specification of the turbines as well as other changes, it prompted an application for an amendment of the environmental authorization. This Branch offers no objection to the application.	SW Carstens WC T&PW Letter: 12 Dec 2018	No objection to the project is hereby acknowledged.
4.	Please find consolidated comment from various directorates within the Department on the Amendment Motivation Report.	WC DEA&DP Letter: 14 Dec 2018	
4.1.	Increase the range of hub height from 92m to a range from 02m up to 120m;	Ms Jessica Christie Directorate:	
4.1.1.	Since it is requested that the amendments and appeal decisions for this project are consolidated into one environmental authorisation, it is unclear to this	Development Management	Please refer to Section 2 of the revised motivation report.

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	<p>Directorate whether the consolidated EA, if granted, would be aligned with the requirements of the 2014 Environmental Impact Assessment ("EIA") Regulations (as amended). This Directorate believes that it should be aligned, and that all similarly listed activities should have been considered and included in the amendment application.</p>		
4.1.2.	<p>The Ornithological Collision Risk Modelling Update Report dated 25 July 2018 compiled by Ecology Consulting was based on the approved layout that authorised 27 turbines. Since the compilation of said report, a statement was issued by the specialist on 21 August 2018, assessing the new proposed layout of 25 wind turbines. It is unclear from the Ornithological Collision Risk Modelling Update Report how the collision risk modelling predictions were determined. It is however noted that there are tables with calculations, but the process is still not clear. This Directorate is concerned that interested and affected parties ("IA&Ps") may not understand the risk modelling process as the report is highly technical.</p>		<p>Please refer to Section 4 of the CRM report (Appendix A).</p>
4.1.3.	<p>As with the collision risk modelling predictions indicated above, it is not clear how the predictions in the Avifauna Impact Report compiled by Birds Unlimited were determined. The following extract is taken from page 3 of the Avifauna Impact Report: <i>"The CRM estimated 0.36 Verreaux's Eagle adult and juvenile fatalities annually (Percival 2018) with taller 120-m turbines, (and 0.41 eagles for 105-m turbines, and 0.46 eagles for 92-m turbines). We conclude that by</i></p>		<p>Please refer to Section 5 and Appendix 1 of the avifauna addendum report (Appendix B).</p>

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	<p><i>combining the two models we estimate that between 0.72 Verreaux's Eagles (120- m turbines), 0.82 eagles (105- m turbines) and 0.92 eagles (92-m turbines) may be killed annually. For Booted Eagles the equivalent figures are 0.08 Booted Eagle <u>Aquila hieraetus</u> fatalities (for all turbine heights) will occur per year. Further mitigations are required if the level of eagle fatalities exceeds 1.0 Verreaux's Eagles per year to reach acceptable levels."</i></p>		
4.1.3.1.	<p>However, further in the Avifauna Impact Report it is written that through the review of data from operational farms, a median rate of mortality was determined as 4.1 birds/turbine/year. Further along the report, (page 22) it is written that the model forecasting fatalities at the new hub height of 120m and 25 wind turbines is 400 birds (assumed per annum?) and for eagles alone, the model suggests a 2-fold increase in fatalities when hub heights are increased from 92m to 120m.</p>		<p>Please note that the avifauna report has been updated. Please refer to Appendix B for the latest revision and figures.</p>
4.1.3.2.	<p>These values appear to question the suitability of the entire development proposal since the number of eagles in the area are already very limited and what can be deduced from all these calculations and predictions in the various reports, is that the populations of the eagles will be decimated within 2-3 years once the WEF is operational.</p>		<p>Please note that the avifauna report has been updated. Please refer to Appendix B for the latest revision and figures.</p>
4.1.4.	<p>The comparative assessment of heritage impacts indicates that the main impact on heritage resources was identified in 2011. However, the methodology used in determining the impact ratings (extent, duration, magnitude, probability, significance, reversibility, etc.)</p>		<p>Please refer to Appendix 1 in the updated Heritage Addendum Report (Appendix E).</p>

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	<p>was not included and it is thus difficult to understand how the description of the nature of the impact relates to the magnitude and the probability of the impact, given that the visual impact of the WEF is high, which obviously has a definite impact on the sense of place.</p>		
4.1.5.	<p>Section 5.5.1 of the Amendment Motivation Report states that "The impact relates to the affect (sic) the proposal will have on the setting around the site, especially with respect to important heritage sites such as Matjiesfontein that has a remote sense of place on the edge of the great Karoo. The industrialising of the surrounding rural and remote areas will have an impact on the sense of place.</p> <p>This impact related mostly to the operational phase of the project." It is unclear how the probability and the significance of the proposed amendment could be rated as "probable" and "medium" when the increased wind turbine specifications will cause a greater impact, compared to the probability of "definitive" and "high" negative significance for the authorised development</p>		<p>The proposed impact has been rated as "probable" and "medium", given that the proposed amendments have not yet been approved which decreases the likelihood of the impact occurring. In addition, the magnitude is medium given that the wind turbines have been reduced to 25 wind turbines when compared with the 27 wind turbine layout, and two wind turbines (turbines 10 and 18) have been relocated which reduces the potential magnitude of the impact.</p>
4.1.6.	<p>The advantages and the disadvantages regarding the wind turbines as indicated in the Amendment Report to the Visual Impact Assessment ("VIA") compiled by Bernard Oberholzer dated 5 November 2018, are unclear</p>		<p>To clarify, the reduction of wind turbines from a 27-wind turbine layout to a 25-wind turbine layout mean that the clutter of turbine in totality are reduced which is an advantage. In addition to this, and with the relocation of wind turbines two wind turbines (turbines 10 and 18), the viewshed analysis and photomontages have changed slightly in terms of visibility, thereby indicating that the visibility of the turbines would be largely imperceptible.</p>

NO.	COMMENT	RAISED BY	RESPONSE
4.1.6.1.	Said report indicates that "the relocation of three turbines further west" could be regarded as an advantage. It is unclear which three turbines and where west is, is referred to.		Please refer Section 6 of the updated visual addendum report (Appendix G). This advantage has been revised.
4.1.6.2.	The statement that "the relocation of the substation on the same ridge as the turbines" could also be an advantage, is also unclear as it is not indicated on a plan. Based on the maps provided, the relocation of the substation could not be detected as the Amendment Report to the VIA was the only specialist study that indicated this.		Please refer Section 6 of the updated visual addendum report (Appendix G). This advantage has been revised.
4.1.6.3.	The powerline connection further east is also not understood, as it is unclear where the original position was. Again, no other specialist report indicated this change and the impact it may or may not have.		The powerline connection is clearly shown in the relevant specialist addendum reports (Appendix A – H), and was taken into consideration accordingly. Please refer to the updated specialist reports.
4.1.6.4.	The impact that the access roads where the turbine positions have changed, was also not indicated in the Amendment Report to the VIA.		Please refer to Figure 2 and Figure 3 of the visual addendum report which shows the change in access roads (Appendix G).
4.1.7.	The Environmental Management Programme ("EMPr") dated November 2018 must comply with the requirements of section 24N of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"). Since the EMPr was not yet approved, it must also comply with Appendix 4 of the EIA Regulations, 2014 (as amended). Unfortunately, the EMPr does not meet all the requirements of Appendix 4 of the EIA Regulations, 2014 (as amended) and should be updated to reflect the requirements of the applicable legislation.		Please refer to the revised EMPr (Appendix K). The EMPr has been revised in accordance with Appendix 4 of the EIA Regulations (2014), as amended.

NO.	COMMENT	RAISED BY	RESPONSE
4.1.8.	<p>The section in the EMPr dealing with bird and bat monitoring post-construction, indicates that for both animal species, post-construction monitoring must be undertaken in accordance with the relevant conditions of the environmental authorisation and the latest applicable bird monitoring guidelines for wind energy facilities. This Directorate is concerned about these statements as the specialists must provide monitoring procedures and recommendations for monitoring. The specialists and environmental assessment practitioner should provide recommendations to the competent authority for post-construction monitoring, and the competent authority should then decide whether these recommendations are sufficient. Failure to include such information in the EMPr highlights severe gaps in knowledge in the amendment application</p>		<p>Recommendations have been provided by the avifaunal specialist for requirements that need to be included in the avifaunal construction and operation monitoring and management plan. However, as motivated for the response to DEA comment (e)(viii) above, at this early stage, it is premature to compile a detailed avifauna monitoring and management plan for the construction and operation phase of the Witberg WEF, as it is unknown when construction of the facility will commence given the uncertainty of the current REIPPP programme bid process, and where possible updates to the guidelines may have been made at a later stage which will need to be incorporated into the detailed avifauna monitoring and management plan for the construction and operation phase. As such, the Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa are provided (see Appendix G of the EMPr in Appendix K of the revised motivation report) to which are to be complied with when the detailed avifauna monitoring and management plan is compiled. This must however must be undertaken prior to construction.</p> <p>In terms of bat monitoring and management plans, much like the motivation provided in terms of the response to DEA comment (e)(viii) above, the study design of the operational monitoring must comply with the latest version of South South African Bat Assessment Advisory Panel (SABAAP) operational guidelines that will be in force at the time that such a study</p>

NO.	COMMENT	RAISED BY	RESPONSE
			can be designed once the layout is finalised and approved. And of course, that time is only in the future and it cannot be predicted what details will be in the guidelines by then. The detailed bat monitoring and management plans has been recommended to be compiled prior to construction when that may be at some time in the future.
4.1.9.	Based on the insufficient information stated above, this Directorate recommends that the Amendment Motivation Report and relevant specialist studies be revised, and sufficient information be provided to allow this Directorate to provide more informed comments.		The relevant comments and updates to the revised motivation report and associated specialist comments have been responded to herein and are provided accordingly in the revised motivation report and associated appendices (Appendix A – H) .
4.2.	The following amendments to the EMPr are proposed:	Ms Simone Bugan Directorate: Waste Management	Please refer to Objective 16.2 in Section 4.1 of the revised EMPr (Appendix K) . Please refer to Objective 3.6 & 5.9 in Section 4.2 of the revised EMPr (Appendix K) . Please refer to Objective 5.10 in Section 4.2 of the revised EMPr (Appendix K) . Please refer to Objective 5.11 in Section 4.2 of the revised EMPr (Appendix K) . Please refer to Objective 5.12 in Section 4.2 of the revised EMPr (Appendix K) .
4.2.1.	Aspect 16 in section 4.1 should be amended to ensure that waste skips should be covered as far as possible to limit the occurrence of wind-blown litter.		
4.2.2.	Vegetation clearance should preferably be phased as work is required in certain areas, as opposed to clearance of the entirety of the site at once. If this is not practical, and the entire site will be cleared at the start of the contract, the cleared areas must be stabilised immediately to control dust.		
4.2.3.	Wherever possible, indigenous vegetation should be trimmed rather than cleared.		
4.2.4.	Cleared vegetation is not allowed to be dumped anywhere, other than at an approved waste disposal facility or at an area agreed to by the environmental control officer.		
4.2.5.	Wherever possible and where the material is suitable, vegetation should be chipped for later use as mulch in		

NO.	COMMENT	RAISED BY	RESPONSE
	landscaped areas or for stabilisation purposes; or it should be taken to a green waste/ compost facility for compost production.		
4.2.6.	Invasive alien plants that are removed from the site should not be chipped for mulch if they are in a seed-bearing stage to prevent further distribution of alien plant seeds. Such material should be disposed of at a suitable waste disposal facility. Wherever possible, suitable larger stumps should be made available to the local community for further use.		Please refer to Objective 5.13 in Section 4.2 of the revised EMPr (Appendix K).
4.2.7.	The EMPr must provide an indication of the expected quantities of waste to be generated during the construction and operational phases of the proposed development. Whilst it is recognised that very little solid waste will be generated during the operational phase, please be advised that should more than 100m ³ of general waste, and/or more than 80m ³ of hazardous waste be stored for a period exceeding 90 days, the storage of such waste must adhere to the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008): National Norms and Standards for the Storage of Waste promulgated in Government Notice ("GN") No. 926 of 29 November 2013. If the above thresholds are met, the waste storage facility must also be registered on this Department's Integrated Pollutant and Waste Information System (http://ipwis.pgwc.gov.za/ipwis3/public).		It is confirmed that no more than 100m ³ of general waste, and/or more than 80m ³ of hazardous waste will be stored for a period exceeding 90 days, such that the storage of such waste does not trigger the requirements in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008): National Norms and Standards for the Storage of Waste promulgated in Government Notice ("GN") No. 926 of 29 November 2013.
4.3.		Mr Peter Harmse	

NO.	COMMENT	RAISED BY	RESPONSE
		Directorate: Air Quality Management	
4.3.1.	This Directorate notes that potential dust impacts during the various phases of the proposed development have been addressed in the EMPr. The generation of dust must comply with the National Dust Control Regulations (GN No. R. 827 of 1 November 2013), promulgated in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). The Amendment Motivation Report and EMPr must be amended to include the requirements of the NEM:AQA and the National Dust Control Regulations.		Please refer to Objective 3.7 in Section 4.2 of the revised EMPr (Appendix K).
4.3.2.	The EMPr must provide more information on what the dust abatement measures will entail.		Please refer to Appendix C and Appendix H in the revised EMPr (Appendix K) for further dust abatement measures.
4.3.3.	This Directorate notes that the Re-Modelling of the Noise Impact Assessment compiled by Safetech dated 1 August 2018 indicated that the proposed amendment would not exceed the current SANS 10103: 2008 limit of 45 dB(A) at any of the noise sensitive areas, including the cumulative impacts from other wind energy facilities. The findings of the Noise Impact Assessment re-modelling exercise are acceptable to this Directorate.		The acceptability of the findings of the Noise Impact Assessment re-modelling exercise from Directorate are hereby acknowledged.
4.3.4.	The applicant is reminded of its general duty of care and the remediation of environmental damage in terms of section 28(1) of the NEMA, 1998 which specifically states that: "...Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent		The revised EMPr has been compiled in response to this to ensure that reasonable measures have been provided to prevent such pollution or degradation from occurring, continuing or recurring. Please refer to Appendix K for the revised EMPr.

NO.	COMMENT	RAISED BY	RESPONSE
	<i>such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment..."</i>		
4.4.	The Department reserves the right to revise or withdraw comments and request further information based on any or new information received.	WC DEA&DP	The Department's right to reserve the right to revise or withdraw comments and request further information based on any or new information received is hereby acknowledged.

2. COMMENTS RECEIVED FROM STAKEHOLDERS

NO.	COMMENT	RAISED BY	RESPONSE
1.	Following a review of the EA motivation report and appendices, CapeNature would like to make the following comments/recommendations:	Mr Colin Fordham Manager: Scientific Services CapeNature Letter: 13 Dec 2018	
1.1.	The cumulative impact needs to be assessed relative to all approved WEFs in the region and all specialists need to take this into consideration.		Please refer to cumulative impact section in all specialist studies (Appendix A – H).
1.2.	All maps still seem to illustrate the extent of 27 turbines and it is unclear where the new locations of the 25 turbines will be situated?		Please refer to the updated all specialist studies (Appendix A – H) which refer to a 25-wind turbine layout.
1.3.	The noise impact on fauna was not considered, has this changed considerably?		It is not expected that the noise impact on fauna will have changed considerably to what was assessed.
1.4.	The ecological specialist report and all other relevant reports, need to be updated to include consideration of		Consideration was given in the relevant ecological specialist letter (Appendix A). It was noted that in terms of

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	<p>the WCBSP (2017) data, in terms of impact assessment and sensitivity ratings, not Skowno et al. (2009). In addition to which the following aspects WCBSP (2017) data need to be considered:</p>		<p>this layer there are no CBA1 or CBA 2 areas within the development footprint. The drainage features of the site are classified as Ecological Support Areas and as these areas are classified as Very High sensitivity, impact on these features would be minimal and provided that erosion and other impacts on the site are adequately mitigated, then impact on the functioning of the ESAs would be low</p>
1.4.1.	<p>CBA regions are areas delineated that are in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. As stipulated in the Land Use Advice (LUA) Handbook (Pool-Stanvliet et al. 2017) although the Farms may have undergone a level of disturbance, this cannot be used as motivation for establishing of development within CBA or ESA areas. It should be noted that it is the landowner's responsibility to ensure his property is suitably maintained at a level consistent with LUA guidelines. The loss of the CBA on the site will therefore compromise conservation targets and the loss of ESA would compromise the CBA. Could the EAP discuss this development in context with the CapeNature LUA guideline document? Reference to this document was not found within any of the reports.</p>		<p>It was confirmed with the specialist that in terms of the 2017 Western Cape Biodiversity Sector Plan (WC BSP) layer, there are no CBA 1 or CBA 2 areas within the proposed development footprint. The drainage features of the site are classified as Ecological Support Areas and as these areas are classified as Very High sensitivity, impact on these features would be minimal however, and provided that erosion and other impacts on the site are adequately mitigated, then impact on the functioning of the ESAs would be low.</p> <p>In terms of CapeNature Land Use Advice (LUA) Handbook, the development of a wind farm is compatible with areas that are classified as Other Natural Areas.</p>
1.4.2.	<p>Should the EAP wish to determine why particular WCBSP layers are present in a region, the reasons layer of the dataset should be interrogated accordingly.</p>		<p>The technical assistance provided in terms of why particular WCBSP layers are present in a region are hereby appreciated.</p>
1.4.3.	<p>There is no mention of the stewardship sites located to the north and south of the WEF properties and how these</p>		<p>It has been stated by the ecological specialist that although there are some stewardship sites in the broader vicinity of the site, these are more than 1.5km away from the turbines</p>

NO.	COMMENT	RAISED BY	RESPONSE
	may influence impact assessment ratings, from a biodiversity perspective.		and direct impact on terrestrial fauna and flora within these areas is not likely.
1.5.	CapeNature has previously received disturbing reports one a number of controversies attached to this WEF development, including the removal of an Eagle nest and harassing birds to get them to move out of the area. The previous Avifaunal specialist reports (while thorough), did not make provision for how the newly fledged chicks of the Verreaux's Eagle would use the landscape. This study was commissioned in order to provide this information and CapeNature has the following comments and recommendations:		A recommendation Eagle persecution agreement has been included as a recommendation that is to be included in the environmental authorisation. Please refer to Section 6 of the avifaunal report (Appendix B), as well as Section 9 of the revised motivation report.
1.5.1.	CapeNature remains concerned that this is the third specialist employed on this site, was the current specialist supplied all of the data collated by previous specialists? If so, it is unclear why this was stipulated to be only a one year study, when only one of the five eagle nests were active? This severely constrains the results and conclusions due to limitation associated with such a small sample set. CapeNature however, strongly maintains all mitigations as supplied by the specialist must be implemented as and when required. These include (but are not limited to):		It can be confirmed that all relevant reports and data have been provided to the avifauna specialists for the proposed amendment application for consideration in this amendment. Please refer to Appendix A & Appendix B for the latest assessments.
1.5.1.1.	Bird flight diverters be fitted to all overhead power lines and where possible lines should be buried especially on-site		Please refer to Objective 21.8 in Section 4.1 and Objective 10.5 in Section 4.2 of the revised EMPr (Appendix K).
1.5.1.2.	Post-construction monitoring is imperative. If eagle fatalities exceed 0.72 per year for the site mitigation measures must be implemented. Turbines killing one or		Please refer to Objectives 11.3 to 11.7 in Section 4.3 of the revised EMPr (Appendix K).

NO.	COMMENT	RAISED BY	RESPONSE
	<p>more threatened species per year must be mitigated which may include one or more of the following:</p> <ul style="list-style-type: none"> • One blade painted a different (colour subject to Civil Aviation regulations) • Fitting turbines with automated deterrents • Shut-down-on-demand of specific turbines 		
1.5.1.3.	<p>Post-construction monitoring to be done over a period of a minimum of 24 months, which can be extended based on the outcomes of the monitoring.</p>		<p>A post-construction and operation monitoring and management plan will be undertaken in accordance with the latest South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa as and when required. At this stage, it is premature to compile a detailed avifauna monitoring and management plan for the construction and operation phase of the Witberg WEF, as it is unknown when construction of the facility will commence given the uncertainty of the current REIPPP programme bid process, and where possible updates to the guidelines may have been made at a later stage which will need to be incorporated into the detailed avifauna monitoring and management plan for the construction and operation phase. As such, the Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa are provided to which are to be complied with when the detailed avifauna monitoring and management plan is compiled. This must however must be undertaken prior to construction.</p>
1.5.1.4.	<p>No turbines to be constructed within at least 1.5 km from known Verreaux's Eagle Nests. CapeNature noted in previous letters that there were 5 different nests, yet in this</p>		<p>Please refer to the latest avifauna addendum assessment which included for a recent follow up site visit, and the resultant findings in terms of nesting activity (Appendix B).</p>

NO.	COMMENT	RAISED BY	RESPONSE
	assessment there was only one, which is a direct concern.		Further please note that all turbines are located 1.5km away from the known Verreux's Eagle Nests.
1.5.1.5.	Considering the issues around the removal of the nests, a written agreement with the landowner regarding the protection of the nest and allowing monitors onto the property to monitor nests must be reached as a condition in the authorisation		This recommendation is proposed in the revised motivation report. Please refer to Section 9 of the revised motivation report.
1.5.1.6.	No construction work within 1000m of the nests of any Booted and Verreux's Eagles during the breeding season of these two species.		Please refer to Objectives 10 in Section 4.2 of the revised EMPr (Appendix K).
1.6.	Lastly on page 25 of the avifaunal report by Birds & Bats Unlimited the authors refer to a monitoring program that the Witberg Wind Power (Pty) Ltd will develop as one of the conditions specified by the Department of Environmental Affairs. From the paragraph it is deduced that this has already be compiled and CapeNature would like to request a copy if possible?		A post-construction and operation monitoring and management plan will be undertaken in accordance with the latest South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa as and when required. At this stage, it is premature to compile a detailed avifauna monitoring and management plan for the construction and operation phase of the Witberg WEF, as it is unknown when construction of the facility will commence given the uncertainty of the current REIPPP programme bid process, and where possible updates to the guidelines may have been made at a later stage which will need to be incorporated into the detailed avifauna monitoring and management plan for the construction and operation phase. As such, the Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa are provided to which are to be complied with when the detailed avifauna

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			monitoring and management plan is compiled. This must however must be undertaken prior to construction.
1.7.	Given the above there is insufficient information for CapeNature to formulate an informed opinion on the proposed EA amendment application. CapeNature reserves the right to revise initial comments and request further information based on any additional information that may be received.		Cape Nature's right to reserve the right to revise initial comments and request further information based on any or new information received is hereby acknowledged. However, Cape Nature are referred to the revised motivation report and associated specialist studies (Appendix A - H) and EMPr (Appendix K) for consideration.
2.	<p>The South African National Roads Agency SOC Limited (SANRAL) has received background information and a site layout plan for this project and based on the proximity of the project in relation to the nearest National Road N1, it appears that SANRAL could be impacted by this development.</p> <p>If services need to be constructed over or under the national road, (in this case the N1) or within 60m measured from the road reserve fence, the service owner must apply for a written permission from SANRAL, before any work may be carried out. Attached please find an application form for the proposed encroachment.</p>	<p>Nicole Abrahams Environmental Coordinator: Western Region SANRAL</p> <p>Letter: 11 Jan 2019</p>	Should the amendments received environmental authorization and should the project proceed to construction, the service owner will apply for a written permission from SANRAL, before any work is carried out.
3.	On the 11 December 2018 I received an email reminder that the comment period for the draft Motivation Report for the above project ended on Friday, 14 December 2018. However, I had not received the any notices prior to this, other than an email in August asking for confirmation that BirdLife South Africa wanted to remain an interested and affected party (I&AP). My colleague,	<p>Samantha Rolston- Paton Birds and Renewable Energy Manager BirdLife SA</p> <p>Letter: 11 Jan 2019</p>	The matter was researched and found that the e-mail notification of the availability of the draft Amendment Motivation Report was sent to all Registered I&APs on the project database.

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	<p>Dale Wright, also received the reminder, but not the first notification of the opportunity to comment. It is unclear if this problem extended to other I&APs. On 12 December I requested an extension, but received no response from Savannah. On returning from leave I followed up, inquiring what a reasonable deadline was for comment and still await a response to this question. We trust that this input will be considered and encourage you to follow up with other I&APs to confirm if they received the initial notification.</p>		<p>It can be confirmed that no other RI&AP reported not receiving the e-mail notification of the availability of the draft Amendment Motivation Report.</p> <p>Follow up emails were sent subsequent to this, and receipt of emails from our publicprocess@savannahsa.com email address used to communicate with Registered I&APs, was confirmed on the 19 March 2019 by Mr. Dale Wright.</p>
3.1.	<p>Changes in turbine specifications:</p> <p>There is limited scientific literature to shed light on the debate whether larger turbines will result in increased fatality rates and if this could be balanced by the increase power output (see for e.g. Marques et al. 2014).</p> <p>While we welcome the proposed reduction in the number of turbines, we remain concerned that the data collected is out of date and inadequate for the purposes of assessing and mitigating the impacts associated with increasing the turbine size (see below, plus our comments dated 29 July 2015).</p>		<p>The response from the avifaunal specialist (Dr. Rob Simmons) is as follows:</p> <p>Loss et al. (2013) summarised and re-analysed the data from 53 studies on exactly this topic in the USA. They found a strong and positive relationship between turbine height and fatalities – higher turbines kill significantly more birds than smaller turbines. Because it is an exponential increase it is difficult to see how a decrease in turbines (to reduce fatalities) could compensate for the decrease in total power output. Nevertheless, the Collision-Risk model using flight data from the previous work indicated that at the Witberg fewer fatalities of Verreaux's Eagles are expected.</p> <p>It is not certain how the data can be considered "inadequate". The data cover two and a half years and over 350 hours and assessed all nest sites in all seasons under all weather conditions. It is doubted that there are many other wind farm sites that have this high level of focused research. It is also noted that the data were collected in a</p>

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			<p>period when rainfall was normal, (in fact 100-150% above average in 2012 according to SAWS) and thus the eagles were breeding. There has been a drought in the Karoo since 2016 according to SAWS, and the two Witberg landowners that were spoken to recently by the avifaunal specialist in February 2019, stated that as little as 0-25% of the average (July 2016-June 2017) and 25-75% of the average (July -Dec 2018) was received. Given these drought conditions, had we collected data more recently it is likely that no breeding Verreaux's Eagles (VE) would have been apparent and a false impression of breeding and flights would have been apparent. It is accepted that the original flight heights were collected in bands (0-30 m, 30-130m and above 130 m) and this made it difficult to re-calibrate the risks to eagles in the CRM when the turbine dimensions changed. However, the specialist is satisfied that the data used in the assessment is adequate, but not perfect.</p>
3.2.	<p>Extension of the validity of the EA: BirdLife South Africa is of the opinion that there are very good reasons to limit the period that environmental authorisations are valid for. These include that:</p>		
3.2.1.	<p>The receiving environment, and thus the environmental impact (including cumulative impact) may change;</p>		<p>See response to Point 3.4 below.</p>
3.2.2.	<p>There could be advances in our understanding of the nature and significance of impacts, and how to assess and mitigate impacts;</p>		<p>See response to Point 3.5 below.</p>

NO.	COMMENT	RAISED BY	RESPONSE
3.2.3.	There could be economic and technological advances, both with regards to the project infrastructure and mitigation options;		See response to Point 3.6 below.
3.2.4.	The need and desirability of the project, and availability of alternatives to meet the need, could change; and		See response to Point 3.7 below.
3.2.5.	Lessons could be learned from procedural and operational challenges faced at operational projects.		See response to Point 3.8 below.
3.3.	<p>A project approved some years ago may not be the best practicable environmental option when considered with today's insights.</p> <p>While BirdLife South Africa understand the challenges renewable energy developers face with regards to the timing of the Renewable Energy Independent Power Producer Procurement Programme, and we encourage the adoption of new, more efficient technologies, we do suggest that it is important to revisit impact assessment with the above points in mind and avoid perpetuating mistakes of the past.</p>		<p>The above points were taken into consideration as per the avifaunal specialist report (refer to Appendix B).</p>
3.4.	<p><i>Has the receiving environment, and thus the environmental impact (including cumulative impact) changed?</i></p> <p>Although the amendment report by Birds and Bats Unlimited concludes that the baseline environment has not changed, we can find no evidence that they visited the site more recently than January 2015. We suggest that as a minimum a site visit, and nest site survey would have been appropriate. In particular we suggest</p>		<p>The response from the avifaunal specialist (Dr. Rob Simmons) is as follows:</p> <p>This statement is true and this precipitated a 2019 site visit to check on nests, habitat and the general environment. This was undertaken early February 2019. Please note that the original data were collected on the Elandsfontein nest site when it was active in 2011-2012. So those data are included in the original Turpie et al. (2012) report.</p>

NO.	COMMENT	RAISED BY	RESPONSE
	<p>that it would be important to determine if the Verreaux's Eagle territory where the nest was illegally destroyed prior to the 20-14/2015 survey (i.e. Elandsfontein) has been reoccupied and if nesting has resumed. Similarly, it would be useful to record any other changes in the use of and location of other nesting areas as this may affect flight patterns and thus the risk of collisions. In short, we do not know if the receiving environment has changed.</p>		<p>The 3-day site visit in February 2019 determined if the receiving environment had indeed changed and the whether the number of eagles and nests on site had changed. Our visit took place from 9-11 February and included:</p> <ul style="list-style-type: none"> (i) surveys of all four large eagle nests (Verreaux's and Martial) known on the site, (ii) vantage point surveys along the top ridge for flying eagles (iii) photographic records of all the known nests, (iv) walking surveys of different sections of the veld to determine health and differences from 2015. (v) discussions with the two land-owners/farmers (Lawrence Hart and Jan du Plessis) <p>The results are added to the Amendment Report, with the main conclusions that:</p> <ul style="list-style-type: none"> a) the habitat has been severely negatively affected by a combination of a large wild fire in February 2016 and two years of drought; b) fewer small birds were recorded on both the Witberg Ridge and the surrounding plains; c) nevertheless, eagles were present: An adult Martial Eagle was present on the transmission line pylons below the proposed WEF and at least one of the two Verreaux's Eagle (VE) nests on the north-facing ridge had been active this year (Nest 1 eastern-

NO.	COMMENT	RAISED BY	RESPONSE
			<p>most) as judged by fresh “white-wash” (faeces). Both were photographed;</p> <p>d) The VE nest on Elandsfontein was still absent – no nests have been re-built on this southern-most cliff-face;</p> <p>e) However, the pair of eagles were recorded perched above the nest site and hunting along the southern ridge that runs east-west from Mr du Plessis's farm house, using the ridge tops as vantage points for hunting.</p>
3.5.	<p><i>Have there been advances in our understanding of the nature and significance of impacts, or how to assess and mitigate impacts?</i></p> <p>The potential significance of impacts on birds has changed from when the environmental authorisation was issued in 2011. At that time of the EIA, Verreux's Eagle was not threatened; it is now listed as regionally Vulnerable.</p> <p>Martial Eagle has also been up-listed from Vulnerable to Endangered. At the time of the initial EIA, there were also no confirmed fatalities of Verreux's Eagle or Martial Eagle at wind energy facilities. We now know that these species are at risk, including beyond the recommended nest buffers. We also know that the area as exceptionally high passage rates of Verreux's Eagle.</p>		<p>The response from the avifaunal specialist (Dr. Rob Simmons) is as follows:</p> <p>This was known and pointed out in the 2015 report by Birds Unlimited (Appendix B) on the flights of the juvenile Verreux's Eagles (Simmons and Martins 2015).</p> <p>It is accepted by the avifaunal specialist that for the farm, overall the passage rate were high, but most of the hunting was done out over the plains to the north of nest 1 and 2. Within the areas close to the nests- with the precautionary buffers around the eagle nests- have exceptionally low Passage Rates for Verreux's Eagles (and zero for Martial Eagles) as reported in our Amendment report. There were 7 flights in 333 hours within the 3.0 -1.5 km buffer around the VE 1 Bantam nest (a very low Passage Rate of 0.021 eagles/h) for example. Therefore, the BLSA statement needs some qualification – in the critical areas.</p>

NO.	COMMENT	RAISED BY	RESPONSE
	<p>There have also been significant improvements in the type and amount of data collected for avifaunal impact assessments in South Africa. The first avifaunal impact assessment study falls well short of what is currently considered to be international best practice.</p> <p>These shortcomings have been addressed, to some extent, through the pre-construction monitoring programme and subsequent reports. However, project has been compromised incremental decision- making. Once the EA was issued (which was based on inadequate information) the focus of specialist assessments was how to minimise impacts, not whether or not the project should go ahead.</p> <p>The additional avifaunal studies also fall short of what is recommended in BirdLife South Africa's 2017 Guidelines on Verreaux's Eagle and Wind Farms. This recommends that if wind turbines are proposed within areas likely to include Verreaux's Eagle territory, vantage points should be monitored for at least 72 hours per year, and if turbines are proposed within areas associated with high flight activity or risky behaviour (including topographic features and within 3 km of nests), monitoring should be extended for two years.</p>		<p>The avifaunal specialist has stated in response that this is true since the guidelines were not available in 2012, but from the number of hours and the years covered, sufficient data was collected to get a good understanding of the sensitive areas.</p> <p>It was responded by the avifaunal specialist that it is true that all the monitoring took place before the VE guidelines were published in 2017. Nevertheless, in total, 6 visits (and 213 hours) were undertaken in 2011-2012 and another 4 visits (and 160 hours) in 2014-2015. The recent 2019 visit logged a further 28 hours. This cover 2.5 years of monitoring, satisfying BLSA's 2-year monitoring requirements. It is also close to the number of hours recommended given that there were 3 VPs and a total of [213+160+28 =] 401 hours of VP observations in the WEF over 2 years; the number of hours per VP per year (401 / 3 / 2) was 67 h /VP/yr – not far short of the 72 h suggested by BLSA, well before it was published. Thus, it is felt that most of the requirements required were satisfied to gain a good understanding of where the adult and juvenile Verreaux's Eagles at Witberg fly and thus the risks.</p> <p>It was responded by the avifaunal specialist that the assessment of flight heights in the bands explained above was an oversight, but the fact that the eagle rarely ventured into band between 3 km and 1.5 km means that the heights become less important.</p>
3.6.	<i>Have there been economic and technological advances?</i>		The response from the avifaunal specialist (Dr. Rob Simmons) is as follows:

NO.	COMMENT	RAISED BY	RESPONSE
	<p>This appears to be the only issue that has been considered in the application. We put forward that just as the applicant should be able to benefit from technological advances, the environment should also benefit from new information and better understanding of the issues.</p>		<p>It is acknowledged that as the applicant should be able to benefit from technological advances, the environment should also benefit from new information and better understanding of the issues. As such, the latest scientific research and technology in terms of mitigation measures will be applied such as with the stipulated mitigation measures proposed by the avifaunal specialist (refer to Section 5 of the avifaunal addendum report – Appendix B).</p>
3.7.	<p><i>Has the need and desirability of the project changed?</i></p> <p>While there is undoubtedly a need for renewable energy in South Africa, we now know that much of South Africa has feasible wind resource. A substantial number of wind farms also have environmental authorisation in South Africa; enough for our energy targets to be met. The need and desirability of the project has almost certainly changed.</p>		<p>In terms of meeting the national requirements of the IRP (2010) with regards to renewable energy objectives, this need and desirability has not changed and serves as the main reason for the applicant wishing to proceed with the proposed development.</p>
3.8.	<p><i>Lessons from procedural and operational challenges at other wind energy facilities.</i></p> <p>We are of the opinion that it is a good idea to revisit the conditions of authorisation and EMPr's whenever amendments or extensions to the validity of authorisations are applied for, as this is an opportunity to address any shortcomings and implementation challenges identified at operational projects.</p>		<p>The conditions of the original environmental authorisation, subsequent appeal decisions and amendments have been revisited in the revised motivation report. Please refer to Section 2 and 3 of the revised motivation report.</p>

NO.	COMMENT	RAISED BY	RESPONSE
	<p>We note the following points for completeness sake, but this should not be construed as an endorsement of the application.</p> <p>To reduce the risk of fatalities as a result of electrocution or collisions with powerline infrastructure we recommend the inclusion of a new condition of approval. This should require that all internal powerlines (i.e. between turbines) must be underground and follow the access roads, except where this is not a geotechnically feasible. The design of all above-ground powerlines must be confirmed to bird-friendly by the Endangered Wildlife Trust's Wildlife and Energy Programme, and should be marked with bird flight diverters.</p>		<p>The recommendations of BLSA to bury all internal powerlines (except where it is not geotechnically feasible) have been provided for in the EMPr (Appendix K) which will be required to be implemented.</p>

NO.	COMMENT	RAISED BY	RESPONSE
	<p>We have encountered significant reluctance to implement operational phase mitigation (e.g. shutdown on demand, or painting a turbine blade) at operational wind farms in South Africa. Concerns expressed include the cost, impact on turbine manufacturer guarantees, and that there is limited evidence to demonstrate the effectiveness of this approach in similar circumstances. There has also been some debate around appropriate thresholds for action. To date, only one wind farm in South Africa has implemented any sort of shut-down-on-demand programme and none have expressed any willingness to paint turbine blades. We therefore recommend that the EMPr and EAs be far more explicit with regards to the EMPr objectives, targets, actions, and thresholds for additional mitigation.</p> <p>The condition 40 of the authorization (as amended) is therefore of concern (i.e. "should any unanticipated negative impacts be recorded, Witberg Wind (Pty) Ltd commits to reducing these impacts. Mitigation measures to achieve this include shutting down problem turbines, if this is deemed necessary"). This condition is open-ended and ambiguous. Reference to "unanticipated" impacts is problematic as bird fatalities, including of threatened species, are anticipated at this proposed wind farm - it is the number of fatalities that is uncertain. It is also not clear who is responsible for deciding when and what mitigation is "necessary" and what criteria should be used.</p>		<p>It is agreed that explicit conditions and thresholds are required to be enforced if fatalities are encountered. The applicant has agreed to look into the possibility of black-blade mitigation at the Witberg site if deemed required.</p> <p>An adaptive avifaunal monitoring and management plan will be compiled should the project receive preferred bidder status, which will detail the specific mitigation measures, including shutting down of problem turbines etc. It is uncertain at this stage, when the project may actually proceed. Therefore, it is premature to have detailed roles and responsibilities in terms of this at this point.</p>

NO.	COMMENT	RAISED BY	RESPONSE
	<p>The EMPr and amendment application does make some proposals for thresholds for additional mitigation, but are we very concerned that this could be interpreted sanctioning unsustainable fatality rates. The threshold put forward in the EMPr is that all turbines killing one or more Red Data Book bird per year must be painted or fitted with an automated deterrent or curtailment device (operational phase objective 11). In other words, if fatalities are spread equally across the wind farm, 25 Red Data Book birds could be killed at the wind farm, with no mitigation action recommended by the EMPr!</p> <p>The amendment report by Birds and Bats Unlimited suggests a very different threshold – i.e. one Verreaux’s Eagle fatality per year for the whole wind farm - but it does suggest that turbines with high fatality rates (e.g. Red Data Book bird per turbine per year) should be the focus of mitigation efforts. Given that multiple threatened birds have been precited to be killed at the facility over its lifetime, we also question the “wait and see” approach to implanting operational phase mitigation. We suggest that the proactive implementation of automated shutdown on demand would help minimise fatalities from the outset.</p>		<p>The avifaunal specialist responded that in their own work at an operational wind farm in the Eastern Cape, 25% of the turbines killed 75% of all raptors (Simmons and Martins unpubl report 2019). Similar numbers are apparent from other wind farms like Altamont and in Spain where 15% of the turbines killed the majority of raptors. Given this, it is very likely that mitigating a few turbines with a single black-blade will reduce any mortality to low levels on the farm. Therefore, by mitigating a few turbines fatalities can be reduced substantially. Theoretically, BLSA are correct that 25 eagles could be killed, but empirical evidence suggests this is far from reality.</p> <p>The response from the avifaunal specialist (Dr. Rob Simmons) is as follows: It is reminded that the main mitigation already planned and implemented is to place the turbines away from high use raptor areas. This has been done in numerous iterations and the two collision-risk models. The black blade and shut down on demand are secondary measures to reduce fatalities, not the primary ones. However, BESA agreed to look into black blade mitigation as the turbines are constructed not after they are operational.</p>
3.9.	In general, the EMPr is poorly written, with little apparent attention to detail. For example:		Please refer to the revised EMPr (Appendix K).

NO.	COMMENT	RAISED BY	RESPONSE
3.9.1.	The stated objective (11) of the operational phase EMPr is “Loss of habitat-disturbance or destruction and monitor potential injury to avifauna and fatalities” – the objective should surly be to minimize the loss of habitat etc.?		Please refer to Section 10 and 11 the revised EMPr (Appendix K), the objectives have been seperated.
3.9.2.	It fails to recognize that shortcomings of the impact assessment and mitigation strategy could be responsible for high fatality rates, citing the major risk being a result of changes in flight patterns (11.3, operational phase).		<p>Please see responses above in terms of adequate mitigation measures, and requirement for adaptive management in Objective 11.5 in the revised EMPr (Appendix K).</p> <p>In general, this criticism could be raised for any wind farm, as before operations begin it is always unknown what fatalities may occur. The mitigations in terms of reduction in the number of turbines and their placement outside high use areas – gleaned from over 400 h of observations over 2.5 years in all seasons, allows some certainty that all adequate precautions have been undertaken. Moreover, Dr. Steve Percival's CRM (Appendix A) shows that the proposed wind turbine placement are suitable positions to reduce eagle fatalities, strengthens this position.</p>
3.9.3.	There is unnecessary repetition (e.g. 21.6 and 21.8 of construction phase EMPr could be merged).		Please refer to the revised EMPr (Appendix K). Note that there are no objectives in terms of 21.6 and 21.8 in Section 4.2 construction phase of the EMPr. If the error is still present, please state the page number for ease of reference.
3.9.4.	It includes outdated reference to pre-construction monitoring (e.g. 21.7, construction phase).		Please refer to the revised EMPr (Appendix K). Note that there are no objectives in terms of 21.6 and 21.8 in Section 4.2 construction phase of the EMPr. If the error is still present, please state the page number for ease of reference.
3.9.5.	Is inconsistent with some of the recommendations of the specialist (e.g. Dr Simmons recommends construction		Please refer to the revised EMPr (Appendix K) and the updated avifaunal specialist report (Appendix B). The updated avifaunal specialist report refers to 24 months

NO.	COMMENT	RAISED BY	RESPONSE
	<p>phase monitoring of birds, this is recommended in the EMPr).</p>		<p>which is consistent with the current South Africa Best Practice Guidelines 2015. However, a post-construction and operation monitoring and management plan will be undertaken in accordance with the latest South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa as and when required. At this stage, it is premature to compile a detailed avifauna monitoring and management plan for the construction and operation phase of the Witberg WEF, as it is unknown when construction of the facility will commence given the uncertainty of the current REIPPP programme bid process, and where possible updates to the guidelines may have been made at a later stage which will need to be incorporated into the detailed avifauna monitoring and management plan for the construction and operation phase. As such, the Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa are provided to which are to be complied with when the detailed avifauna monitoring and management plan is compiled. This must however must be undertaken prior to construction.</p>
3.9.6.	<p>It is inconsistent with the recommendations of BirdLife South Africa and EWT's Best Practice Guidelines (e.g. with regards to the recommended duration of post-construction monitoring (11, operational phase).</p>		<p>It has been recommended that a post-construction and operation monitoring and management plan will be undertaken in accordance with the latest South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa as and when required. At this stage, it is premature to compile a detailed avifauna monitoring and management plan for the construction and operation phase of the Witberg WEF, as it</p>

NO.	COMMENT	RAISED BY	RESPONSE
			<p>is unknown when construction of the facility will commence given the uncertainty of the current REIPPP programme bid process, and where possible updates to the guidelines may have been made at a later stage which will need to be incorporated into the detailed avifauna monitoring and management plan for the construction and operation phase. As such, the Birdlife South Africa Best Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in South Africa are provided to which are to be complied with when the detailed avifauna monitoring and management plan is compiled. This must however must be undertaken prior to construction.</p>
3.9.7.	<p>It does not provide details on the roles and responsibilities for drafting and implementing the Adaptive Management Plan, or I&AP consultation related to this</p>		<p>Please refer to the revised EMPr (Appendix K).</p>
3.9.8.	<p>It does not address the protection and monitoring of Verreux's Eagle nest sites, has been recommended by Dr. Simmons.</p>		<p>Protection measures have been included in Section 9 of the revised motivation report with regards to including a condition in the EA that the landowners do not persecute the Vulnerable red data eagles breeding on their property. In addition, please refer to the comment 3.9.6 above in terms of post-construction and operation monitoring and management.</p>
3.10.	<p><i>Conclusion</i></p> <p>BirdLife South Africa does not support the application to extend the validity of the environmental authorisation. While we respect the applicant's wish to benefit from the increased efficiency of new, larger turbines, we suggest that that the entire project should be considered in light</p>		<p>The conclusion of BLSA is respected and the detail with which have been brought to bear in their critique. However, it is countered that BLSA have overlooked all the Collision-Risk modelling, turbine placement adjustments, reduced turbine numbers and future mitigation measures that have been put in place to minimise negative impacts to the eagle. The current avifaunal specialist report have made a</p>

NO.	COMMENT	RAISED BY	RESPONSE
	<p>of the most recent information and insights, not just one aspect of it. We caution against continuing with incremental decision-making.</p> <p>Based on the available information we are of the opinion that there are more suitable areas for the development of wind energy in South Africa, and that the proposed Witberg Wind Farm poses an unnecessary risk to biodiversity. There is no certainty that mitigation will be effective, and we do not believe that the EMPr is adequate to ensure that the predicted impacts on threatened species will be mitigated.</p>		<p>number of improvements including of which is a recent site visit to provide updated and recent findings on the activity of the red data raptor species of concern on the Witberg site. In addition, the extensive observations of over 400 h and the two CRMs have shown the turbines are very unlikely to be risky to the eagles. However, if the wind turbines still present a risk or result in an actual collision, then another set of mitigations will be triggered to reduce fatalities to minimal levels.</p>

3. OTHER

5.1. General Comments

NO.	COMMENT	RAISED BY	RESPONSE
1.	<p>After receiving the reminder e-mail that the review and comment period on the draft Amendment Motivation Report is nearing its end, Savannah Environmental was informed that as a RI&AP he requested that all communication be sent to him by registered mail</p>	<p>Adv Abrie Meiring RI&AP Telephone: 11 Dec 2018</p>	<p>The information regarding the request to received communication and documentation per registered mail has not been forwarded from the EAP who undertook the EA process for the project.</p> <p>In was agreed with Adv Meiring that the draft Amendment Motivation Report will be courier to him. The Report was courier on the 20th of December 2018 and received by Adv Meiring at his place of retreat in Betty's Bay on the 21st of December 2018.</p> <p>Proof of Delivery included in Appendix I.</p>

NO.	COMMENT	RAISED BY	RESPONSE
2.	In response to Savannah Environmental's e-mail reminder for comments on the draft Motivation Report dated 11 Dec 2018, Savannah Environmental's attention was drawn to the fact that BirdLife SA did not receive the notification informing them of the availability of the report for review and comment.	Samantha Ralston-Paton, Birds and Renewable Energy Manager BirdLife SA Telephone: 11 Dec 2018	The matter was researched and found that the e-mail notification of the availability of the draft Amendment Motivation Report was sent to all RI&APs on the project database. BirdLife SA was informed on 11 Dec 2018, per SMS, of the Release Code to download the report from Savannah Environmental's website. Proof of SMS included in Appendix I.

5.2. Request for Registration as I&AP

NO.	COMMENT	RAISED BY	RESPONSE
1.	I would hereby wish to register as an I&AP for this particular project.	Nicole Abrahams Environmental Coordinator: Western Region SANRAL Letter: 11 Jan 2019	Nicole Abrahams has been included accordingly in the I&AP database for the project. Please refer to Appendix I2 in the revised amendment motivation report.