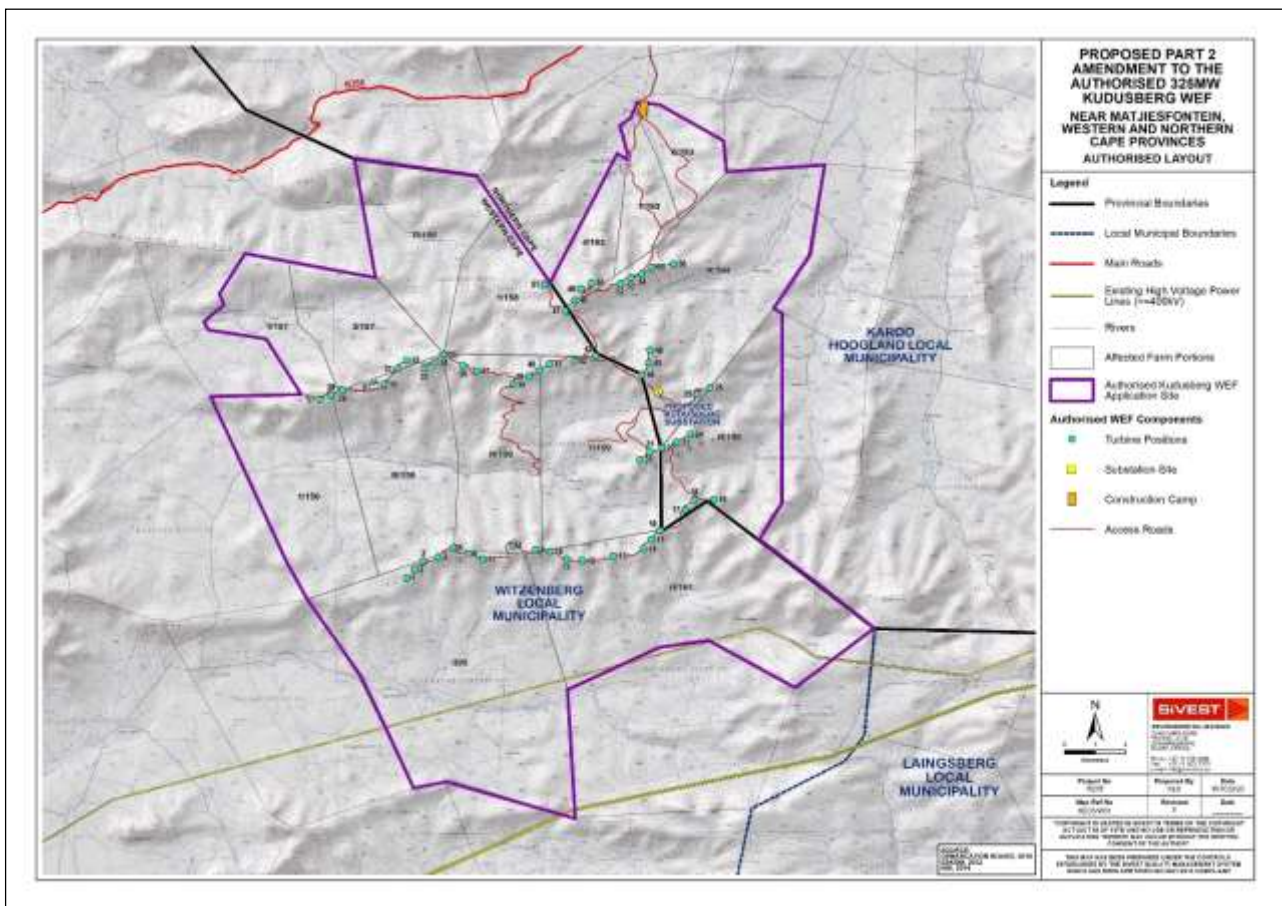


**BIRD SPECIALIST LETTER ON THE SPLIT OF THE AUTHORISED KUDUSBERG WEF (14/12/16/3/3/1/1976/AM1) INTO TWO SEPARATE SMALLER WEF PROJECTS (OYA WEF AND KUDUSBERG WEF)**

**KUDUSBERG WEF**

Kudusberg Wind Farm (Pty) Ltd. (hereafter referred to as “Kudusberg WEF”) was issued with an Environmental Authorisation (EA) for the proposed construction of the 325 MW Kudusberg Wind Energy Facility (WEF) and associated infrastructure on 25<sup>th</sup> March 2019, and subsequently amended on 4<sup>th</sup> April 2019 to correct a minor naming error. The layout for the authorised Kudusberg WEF is presented in **Figure 1** below.



**Figure 1: Layout map for authorised Kudusberg WEF (14/12/16/3/3/1/1976/AM1)**

This follows after an extensive 1-year bird monitoring programme was conducted in 2015/2016, in accordance with the relevant best practice guidelines available at the time (Jenkins, *et al.*, 2015). Kudusberg WEF is now proposing to submit a Part 2 EA Amendment Application to split the authorised Kudusberg WEF into two separate smaller WEF projects, namely Kudusberg WEF (in the south) and Oya WEF (in the north), which will result in a number of technical and administrative changes detailed below in **Table 1**. The split is being proposed to allow the projects to be suitable for numerous opportunities such as either the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP), other government run

procurement programmes that may arise or for sale to private entities, if enabled and/or required in the drive for energy security in South Africa.

Following the split, the northern section of the authorised WEF will become the Oya WEF (**Figure 2**), while the southern section of the authorised WEF will remain known as the Kudusberg WEF (authorised under 14/12/16/3/3/1/1976/AM1) (**Table 1**) (**Figure 3**).

The respective layouts for the proposed Kudusberg WEF (southern section of the authorised WEF) and Oya WEF (northern section of the authorised WEF) are presented in **Figure 2** and **Figure 3** below.

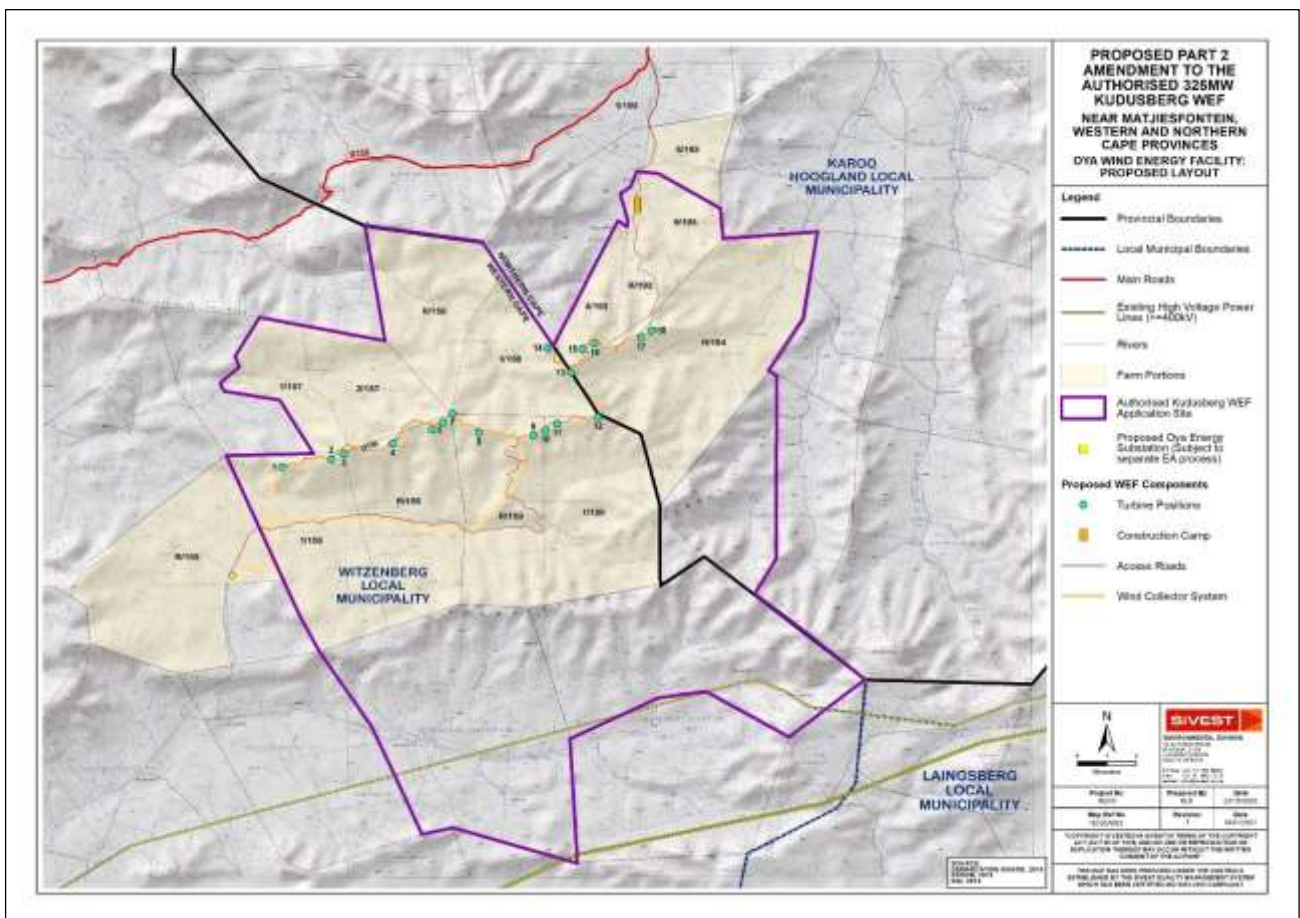


Figure 2: Layout map for proposed Oya WEF (northern section of the authorised WEF)

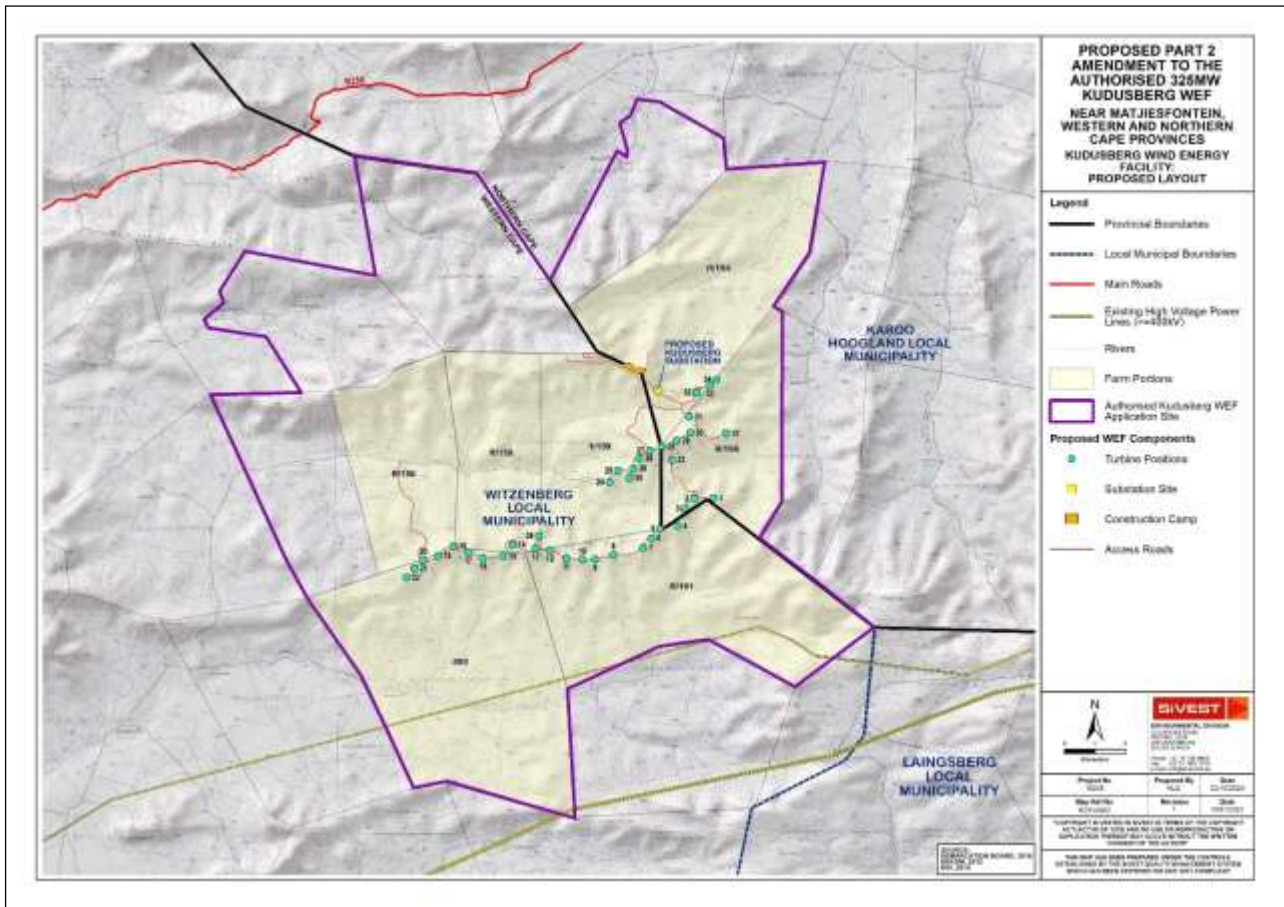


Figure 3: Layout map for proposed Kudusberg WEF (southern section of the authorised WEF)

Furthermore, the approved EMPr authorised as part of the Kudusberg EA is being amended to each WEF and to incorporate the final layout for the Oya WEF, management plans and the walk-throughs.

The amendments detailed in **Table 1** below are proposed for each of the two (2) WEFs mentioned above.



Table 1: Proposed Amendments

Aspect to be amended	Authorised	Proposed Amendment	
		Oya WEF	Kudusberg WEF
<b>Administrative Aspects</b>			
<b>Amend the holder of the EA's</b>	Kudusberg Wind Farm (Pty) Ltd	Oya Energy (Pty) Ltd	Kudusberg Wind Farm (Pty) Ltd
<b>Amend the name of the WEFs</b>	Kudusberg Wind Energy Facility	Oya Wind Energy Facility	Kudusberg Wind Energy Facility
<b>Contact Details</b>	<a href="mailto:kudusberg@g7energies.com">kudusberg@g7energies.com</a>	<a href="mailto:oya@g7energies.com">oya@g7energies.com</a>	<a href="mailto:kudusberg@g7energies.com">kudusberg@g7energies.com</a>
<b>Extend the validity of the EA</b>	This activity must commence within a period of five (05) years from the date of issue of this environmental authorization.	This activity must commence within a period of five (05) years from the date of issue of this amended environmental authorization.	This activity must commence within a period of five (05) years from the date of issue of this amended environmental authorization.
<b>Location of Activity and SG codes</b>	<p><b>Western Cape</b></p> <ul style="list-style-type: none"> <li>▪ Portion 1 of 156 Gats Rivier Farm: C0190000000015600001</li> <li>▪ Portion 3 of 156 Gats River Farm: C0190000000015600002</li> <li>▪ Remainder of 156 Gats Rivier Farm: C0190000000015600000</li> <li>▪ Portion 1 of 157 Riet Fontein Farm: C0190000000015700001</li> <li>▪ Portion 1 of 158 Amandelbloom Farm: C0190000000015800001</li> <li>▪ Remainder of 158 Amandelboom Farm: C0190000000015800000</li> <li>▪ Portion 1 of 159 Oliviers Berg Farm: C0190000000015900001</li> <li>▪ Remainder of 159 Oliviers Berg Farm: C0190000000015900000</li> <li>▪ Portion 2 of 157 Riet Fontein Farm: C0190000000015700002</li> <li>▪ Remainder of 161 Muishond Rivier Farm: C0190000000016100000</li> </ul>	<p><b>Western Cape</b></p> <ul style="list-style-type: none"> <li>▪ Portion 1 of the Farm Gats Rivier No 156: C0190000000015600001</li> <li>▪ Portion 2 of the Farm Gats Rivier No 156: C0190000000015600002</li> <li>▪ Remainder of the Farm Gats Rivier No 156: C0190000000015600000</li> <li>▪ Portion 1 of the Farm Riet Fontein No 157: C0190000000015700001</li> <li>▪ Portion 2 of the Farm Riet Fontein No 157: C0190000000015700002</li> <li>▪ Portion 1 of the Farm Amandelbloom No 158: C0190000000015800001</li> <li>▪ Remainder of the Farm Amandelboom No 158: C0190000000015800000</li> <li>▪ Portion 1 of the Farm Oliviers Berg No 159: C0190000000015900001</li> <li>▪ Remainder of the Farm Oliviers Berg No 159: C0190000000015900000</li> </ul> <p><b>Northern Cape</b></p>	<p><b>Western Cape</b></p> <ul style="list-style-type: none"> <li>▪ Portion 1 of the Farm Gats Rivier No 156: C0190000000015600001</li> <li>▪ Remainder of the Farm Gats Rivier No 156: C0190000000015600000</li> <li>▪ Portion 1 of the Farm Oliviers Berg No 159: C0190000000015900001</li> <li>▪ Remainder of the Farm Oliviers Berg No 159: C0190000000015900000</li> <li>▪ Klipbanks Fontein No 395: C0190000000039500000</li> <li>▪ Remainder of the Farm Muishond Rivier No 159: C0190000000016100000</li> </ul> <p><b>Northern Cape</b></p> <ul style="list-style-type: none"> <li>▪ Remainder of the Farm Karee Kloof No 196: C0720000000019600000</li> <li>▪ Remainder of the Farm Matjes Fontein No 194: C0720000000019400000</li> </ul> <p><b>Properties affected by public road:</b></p>



	<ul style="list-style-type: none"> <li>▪ Remainder of 395 Klipbanks Fontein Farm: C01900000000019500000</li> </ul> <p><b>Northern Cape</b></p> <ul style="list-style-type: none"> <li>▪ Portion 4 of 193 Urias Gat Farm: C07200000000019300004</li> <li>▪ Portion 6 of 193 Urias Gat Farm: C07200000000019300006</li> <li>▪ Remainder of 193 Urias Gat Farm: C07200000000019300000</li> <li>▪ Remainder of 194 Matjes Fontein Farm: C07200000000019400000</li> <li>▪ Remainder of 196 Karree Kloof Farm: C07200000000019600000</li> </ul> <p><b>Properties affected by public road:</b></p> <ul style="list-style-type: none"> <li>▪ 169 Zeekoegat Farm: C07200000000016900000</li> <li>▪ Portion 1 of 170 Roodeheuveld Farm: C07200000000017000001</li> <li>▪ Remainder of 170 Roodeheuveld Farm: C07200000000017000000</li> <li>▪ Remainder of 190 Wind Heuveld Farm: C07200000000019000000</li> <li>▪ Portion 1 of 190 Wind Heuveld Farm: C07200000000019000001</li> <li>▪ Portion 5 of 193 Urias Gat Farm: C07200000000019300005</li> <li>▪ Remainder of 171 Vinke Kuil Farm: C07200000000017100000</li> <li>▪ Alkant Re/220 Farm: C07200000000022000000</li> <li>▪ Portion 1 of 174 Lange Huis Farm: C07200000000017400001</li> </ul>	<ul style="list-style-type: none"> <li>▪ Portion 4 of the Farm Urias Gat No 193: C07200000000019300004</li> <li>▪ Portion 6 of the Farm Urias Gat No 193: C07200000000019300006</li> <li>▪ Remainder of the Farm Urias Gat No 193: C07200000000019300000</li> <li>▪ Remainder of the Farm Matjies Fontein No 194: C07200000000019400000</li> <li>▪ Portion 5 of the Farm Urias Gat No 193: C07200000000019300005</li> </ul> <p><b>Properties affected by access road:</b></p> <ul style="list-style-type: none"> <li>▪ Zeekoegat Farm No 169: C07200000000016900000</li> <li>▪ Portion 1 of the Farm Roodeheuveld No 170: C07200000000017000001</li> <li>▪ Remainder of the Farm Roodeheuveld No 170: C07200000000017000000</li> <li>▪ Remainder of the Farm Wind Heuveld No 190: C07200000000019000000</li> <li>▪ Portion 1 of the Farm Wind Heuveld No 190: C07200000000019000001</li> <li>▪ Portion 5 of the Farm Urias Gat No 193: C07200000000019300005</li> <li>▪ Remainder of the Farm Vinke Kuil No 171: C07200000000017100000</li> <li>▪ Alkant Farm No 220: C07200000000022000000</li> <li>▪ Portion 1 of the Farm Lange Huis No 174: C07200000000017400001</li> <li>▪ Remainder of the Farm Baakens Rivier No. 155: C01900000000015500000</li> </ul>	<ul style="list-style-type: none"> <li>▪ Zeekoegat Farm No 169: C07200000000016900000</li> <li>▪ Portion 1 of the Farm Roodeheuveld No 170: C07200000000017000001</li> <li>▪ Remainder of the Farm Roodeheuveld No 170: C07200000000017000000</li> <li>▪ Remainder of the Farm Wind Heuveld No 190: C07200000000019000000</li> <li>▪ Portion 1 of the Farm Wind Heuveld No 190: C07200000000019000001</li> <li>▪ Portion 5 of the Farm Urias Gat No 193: C07200000000019300005</li> <li>▪ Remainder of the Farm Vinke Kuil No 171: C07200000000017100000</li> <li>▪ The Farm Alkant No 220: C07200000000022000000</li> <li>▪ Portion 1 of the Farm Lange Huis No 174: C07200000000017400001</li> </ul>
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Technical Aspects			
<b>Overall Capacity</b>	325 MW	99 MW	226 MW
<b>Number of turbines</b>	56	18	38
<b>Hub height</b>	Up to 140 m	Up to 101 m above the foundation	No Change i.e. up to 140 m
<b>Rotor diameter</b>	Up to 180 m	Up to 158 m	No Change i.e. up to 180 m
<b>Blade length</b>	Up to 90 m	Up to 79 m	No Change i.e. up to 90 m
<b>Wind Measuring Lattice Masts</b>	Up to 4 x 140 m high depending the final hub height	2 x height of the hub height	2 x up to 140 m high depending the final hub height
<b>Layout</b>	-	Layout submitted for final approval	Final layout to be submitted prior to the start of construction
<b>EMPr</b>	The EMPr submitted as part of the Application for EA is hereby approved.	Approve Final EMPr	To be submitted based on final approval of layout.



It is the client's intention for Bioinsight to comment on the acceptability of this split, from a bird perspective.

From indications provided to Bioinsight, the Authorised Kudusberg WEF (14/12/16/3/3/1/1976/AM1) is merely proposed to undergo a direct split, in which the 325MW facility will be shared among two separate facilities, namely: Oya WEF (northern Ridge of authorised WEF – 99MW) and Kudusberg WEF (southern Ridge of authorised – 226MW). The number of turbines, overall, has not changed. A total of 56 turbines were approved for the authorised Kudusberg WEF. The proposed split subsequently allows 18 wind turbines to be situated on Oya WEF and 38 wind turbines to be situated on Kudusberg WEF.

Based on the above information, Bioinsight finds that this split is merely administrative and should hold no significant impact on the bird community on site. It is also not envisaged that the conclusions of the final specialist impact assessment report (Bioinsight, 2018) will change, as a result of this split. This being said, however, it is noted that minor disadvantages may occur as a result of the split. As an example, the proposed split may potentially result in additional infrastructures being built (in comparison to what would exist in a single facility). This may potentially include (but not limited to) additional construction camps (estimated that two are to be built), batching plants, offices / control centres etc. In addition to this, it can also be noted that two separate smaller facilities will be assessed separately for real impacts during the operational phase. This could potentially result in a perception that few birds are potentially being impacted. Although challenging and potentially not possible (due to different bidding and construction times), it would be idea if the two facilities could be evaluated jointly (once both are in operation) in order to understand the real impact of all turbines in the area, collectively. Careful consideration should be taken with this, and both wind farms should ideally work closely together during the operational phase so that the relevant avifauna specialist(s) can have access to fatality data from both facilities, wherever possible. No specific advantages (as a result of the proposed split) for the bird community were identified at this stage.

Based on the above, Bioinsight finds the split acceptable for the bird community on site. No changes or additions to mitigation measures are proposed at this stage. It will however be important for all relevant management/mitigation measures (as described in Bioinsight [2018]) to be strictly adhered to for each wind farm, independently. Wherever possible, it will also be useful for a relevant site walk-through to be conducted at both wind farms (Oya WEF walk-through already completed), prior to construction, in order to assess any relevant sensitivities against proposed infrastructures – for further approval of final site layouts. Additionally, we find our previous impact assessment (Bioinsight, 2018) for the authorised Kudusberg WEF to still be valid in present day conditions. Given that the authorised project is to be split into two separate smaller ones, Bioinsight emphasises the importance that each individual wind farm must have its own unique monitoring plan with sampling design, going forward (to assess real impacts in the construction and/or post-construction phases).



12<sup>th</sup> January 2021

on Behalf of Bioinsight (Pty) Ltd

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## References

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

Jenkins, A., van Rooyen, C., Smallie, J., Harrison, J., Diamond, M., Smit-Robinson, H., & Ralston, S. (2015). Best-Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in southern Africa.