



## BIRD SPECIALIST RESPONSE TO COMMENTS RECEIVED DURING AN APPEAL PROCESS FOR THE BOULDERS WIND FARM PROJECT

### Background

The Boulders Wind Farm Project is a proposed wind energy facility on the west coast of South Africa. It is located near the town of Vredenburg in the western cape. This project was subjected to a full Scoping (S) and Environmental Impact Assessment (EIA) process, of which Bioinsight (Pty) Ltd. was appointed to conduct the bird component for this project.

The project itself received environmental authorisation in early 2020. Since then, an appeal process has been initiated by certain registered Interested & Affected Parties (I&AP's). It has been brought to Bioinsight's attention that as part of the appeal process, Dr. Rob Simmons (FitzPatrick Institute of African Ornithology ; Independent Avifaunal Specialist) has been contracted to re-assess some of the Red Data species in the area and review the avian EIA report prepared by Bioinsight (2018), and subsequently draw up a specialist report with relevant findings.

As a result of this, Bioinsight has been requested by the project development team to provide a response in relation to Dr. Rob Simmons' comments, as per the aforementioned report drawn up for the formal appeal process.

This document subsequently serves as the official avifaunal specialist response to the report compiled by Dr. Rob Simmons (Simmons, 2020).

### Specialist Response

Bioinsight would like to start by thanking Dr. Rob Simmons for the comments provided. These comments have been viewed as being helpful for the process going forward, of which certain aspects of his results can be taken into consideration during upcoming project phases. We note that the author has tried to be quite objective as far as possible. There are some points / assumptions that have been put forward, leading to conclusions that Bioinsight, throughout a detailed analysis, notes that shouldn't be taken in such assertive way as presented by Dr. Rob Simmons – since there is some uncertainty on some of the topics. This will be further expanded on in the paragraphs to follow.

Bioinsight notes that the main themes/concerns raised by Dr. Simmons are mostly related to information pertaining to (1) the Black Harrier (*Circus maurus*) species (and their potential impact due to collision with turbines), as well as (2) some additional information on other red-listed species such as Blue Cranes, for example. Particularly the interactions between Blue Cranes and the WEF / powerline infrastructure.

We must start off by acknowledging that the monitoring campaign was conducted in compliance with the best practice guidelines made available at the time (Jenkins, et al., 2012). In fact, the bird monitoring guidelines state that a minimum of four surveys (one for each season) should be sampled each year. During



the 12-month monitoring campaign, Bioinsight sampled twice per season – translating into eight field surveys (i.e. double than what was required) during the entire duration of the monitoring programme. In addition to this monitoring, a separate radar study was also conducted by another independent specialist – the results of which have been presented in the relevant assessment report associated with it (Millikin, 2015). All these thorough data capturing techniques allowed for a very extensive data set to be used for the overall assessment and conclusions in the final IA report, which was developed in compliance with the guidelines available at the time (Jenkins *et al.*, 2015). In relation to the single 3-day site visit conducted by Dr. Simmons, we consider our information to be fairly robust for the purposes of the assessment.

In addition to the pre-construction monitoring campaign, the bird specialist team conducted an additional reconnaissance site visit to the study area in October 2017, to determine whether or not the receiving environment has significantly changed. For the purposes of the environmental authorisation, specifically, it was determined that the general characteristics of the study area had not significantly changed since the completion of the initial bird monitoring campaign, in May 2015. As such, the monitoring data was deemed viable for use – provided that the EIA application commenced within three years after the completion of the initial bird pre-construction monitoring campaign and impact assessment.

Dr. Simmons has pointed out that Bioinsight appears to have overlooked the threats that the wind farm may have on the Black Harrier species. Bioinsight clarifies that all groups of birds in the Boulders WEF area have been assessed during the pre-construction monitoring campaign and the final specialist IA report. As such, we point out that the final specialist IA report includes all sensitive species that can be negatively affected by the presence of the wind farm, including the Black Harrier. This considered a broad list of bibliographic sources and, as previously stated, all field data that was collected during the study period (which included all observations and flight patterns of the species).

Regarding the new contents presented by the author regarding Black Harriers, several assumptions on the negative impacts due to the presence of the species and the existence of suitable breeding habitat near the wind farm can be highlighted as the focal points in Dr. Simmons' report.

The population viability modelling (for the Black Harrier) conducted by Dr. Simmons is relevant in showing the decline of the species' population. This result is in accordance with bibliographic data that specifies that the species has a decreasing population trend (Taylor, 2015). Also relevant to note is that the Black Harrier population currently has a declining trend independent of wind farm impacts, i.e., regardless of whether or not the presence of a wind energy development exists. Nonetheless, as specialists, Bioinsight concurs that wind farms may be an aggravating factor if significant fatalities occur and if significant negative impacts are proven to compromise the viability of the Black Harrier population during the lifetime of a wind farm.

Dr. Simmons is implying that the facility will likely cause Black Harrier fatalities. This assumption is based, among other factors, on the relation of results between the proposed Boulders wind farm and that of its neighbouring West Coast One wind farm (currently in operation). Bioinsight reaffirms that the potential occurrence of mortality of Black Harriers due to the Boulders WEF operation is a potential negative effect that was duly assessed in the final IA report. We also reiterate information considered in the assessment of this species:

- The presence of the species was also confirmed by Bioinsight. The evidence that we possess tells us that it is true that the Black Harrier uses the area. However, in accordance with the results of field data, the species wasn't registered in high abundances and the majority of Black Harrier flights were observed below the rotor swept zone.



- Although there is always uncertainty surrounding potential fatalities on proposed wind farms, the comparison with nearby wind farms located in similar habitats may serve as reference, as in the example of the West Coast One wind farm. Bioinsight notes that, from the information made available to us, the results from the neighbouring West Coast One wind farm have not yet yielded any indication that the species is being negatively affected in terms of mortality in the area, since no fatality occurrences of Black Harriers have yet been identified (Jenkins *et al.*, 2017) (Arcus Consulting, 2019).

Regarding the indication in Dr. Simmons report that the area forms suitable breeding habitat for Black Harrier, Bioinsight also confirms that this has already been noted in the final specialist IA report. In fact, it is stated that the broader area is known for the breeding of certain species such as Black Harriers. It was also mentioned that natural vegetation was relevant for some endemic bird species, such as the Black Harrier. As such, based on the data gathered, this type of vegetation, together with drainage lines, has already been classified as sensitive areas and subsequently buffered by 200m. These areas have been defined as “No-Go” areas for the placement of wind turbines.

In his report, Dr. Simmons also suggests that the matter of varying turbine heights were also somewhat overlooked. He makes mention to the fact that taller turbines kill disproportionately more birds than shorter ones (Loss *et al.*, 2013), and that as a result – Boulders WEF will be worse than the neighbouring West Coast One project, in terms of the fatalities that it causes. While Bioinsight is aware of this article/research, we also make reference to other studies, whereby they found that no relation exists between bird fatalities and turbine heights. More specifically:

1. Everaert (2014) found that the mortality rate and collision risk were not significantly related to turbine size;
2. Barclay *et al.* (2007) found that the diameter of rotor blades did not influence bird or bat fatality rates, and that the height of the tower had no effect on bird fatalities per turbine;
3. Krijgsveld *et al.* (2009) found that the collision risks for birds, for larger multi-MW turbines, appears to be similar to that being observed for smaller earlier-generation wind turbines;
4. Smallwood (2013) states that adjusted fatality rates were inversely correlated with wind turbine size for all raptors (as a group) across the United States;
5. Thaxter CB *et al.* (2017) found that in order to minimise bird collisions, wind farm electricity generation capacity should be met through developing fewer, larger turbines, rather than many smaller ones.

In summary, given all the above, although we acknowledge the relevance of the information provided by Dr. Simmons regarding the Black Harrier, we found no evidence that could justify changes to the conclusions in the final IA report, at this stage.

Regarding Blue Cranes, Bioinsight notes that the interactions between such red-listed species and the development (WEF and Powerline) have already been considered in the final IA report and were extensively addressed during the public consultation phase. Several responses to comments were duly provided during this time. It is also important to note that the powerline infrastructure, specifically, has been subjected to a separate basic assessment process and assessed by a different independent avifaunal specialist (Arcus



Consulting, 2019). Bioinsight is therefore unable to provide specific comment on this, other than that which has already been provided in the final specialist IA report (Bioinsight, 2018).

Lastly, Bioinsight wishes to acknowledge that we understand and agree with the demonstrated concern over the issues brought forward. For this reason, we wish to note that all aspects of sensitivity have been assessed for the proposed development, and that certain areas have been recommended to be excluded from development – which they subsequently have. This takes into account possible impacts on priority species that may occur in the area. As such, it is maintained that the precautionary principle has been adequately followed, with the inclusion of specific recommendations for the construction and post-construction phases of the project, that will allow to continue to assess the bird communities on site – complementing the information gathered during the pre-construction phase and allowing for the detection of potential changes and effects caused by the project. An adaptive management approach will be followed, whereby adequate mitigation measures should be put into place (if considered necessary) and continuously adjusted to the specific context of the site and its impacts being observed.

## Conclusion

We acknowledge the concerns brought forward by Dr. Simmons and understand all the relevant points being raised. However through a thorough analysis made on his report (as per the information presented in this document), we find insufficient evidence, at this stage, to justify changing our final conclusions, as were presented in the final specialist IA report (Bioinsight, 2018). Regardless, careful attention should always be placed on potential future negative effects that may occur. Appropriate management/mitigation protocols are necessary to be established (as per recommendations in the final specialist IA report), in the event that any negative impacts are observed.



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on Behalf of Bioinsight (Pty) Ltd

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