

Boulders Wind farm

Responses to the comments by the Applicant on the Avifauna report with particular reference to *Endangered Black Harriers Circus maurus*

This short document is a reply to the comments made by the Applicant for the Boulder Wind farm as recorded in the Appeal Decision in respect of the previous Environmental Authorisation granted for the Boulders Wind Farm, dated 30 August 2020 (Ref: LSA 191558). These are part of a series of objections by 17 Interested and Affected Parties to the construction of the Boulders Wind Farm. I repeat the comment or criticism relating to the avifauna study that focussed on the Endangered Black Harriers and provide a reply in bold below it.

Background: The Black Harriers is in the spotlight here, not just because it is an *Endangered* species that breeds in the area (confirmed in field work in December 2020), but because up to date population modelling indicates that even 3 extra birds killed by wind farms per year, anywhere in South Africa will cause the species to collapse in just over 100 years. As such Black Harrier -Wind farm guidelines for this highly vulnerable species were published (Simmons et al. 2020) to avoid turbine-related deaths, provide a decision-tree and recommend buffers (3.0-5.0 km) around nests, and mitigations (avoid high use Black Harrier areas) and recommend mitigations (increase blade visibility with black blades) and introduce shut-down on demand.

In December 2020 we confirmed that Black Harriers breed in Groot Paternoster Reserve and subsequent to that, young birds have been recorded in the same environment. This we predicted in the Boulders report (Simmons 2020)

Several statements were made by Applicant based on the original avian consultants BioInsight (BI). Among these were: (Applicants defence followed by my reply below in bold)

The original avian consultants are SACNASP registered and thus competent to undertake the studies.

This may be so on paper but several glaring errors or omissions were made by BI, foremost of which was that a migrant species (Lesser Kestrel) may breed in the area, (based on no evidence and highly unlikely) and their omission of any mention of the huge numbers of birds that migrate back and

forth through the area, as revealed by radar studies. Competent consultants familiar with South African birdlife would not make such errors, and would provide the most up to date studies.

While they mentioned threatened Black Harriers and Blue Cranes they recommended that the wind farm goes ahead while giving totally inadequate nest buffers and mitigations for one red data species, the Secretarybird. The nest buffer given was 500m around the nest. Mentioning only no-go areas for the placement of the turbines is not sufficient for breeding red data species. I saw no reference to other operational mitigations such as (i) black blades to increase visibility or (iii) shut down on demand.

Any competent avian specialist would recommend adequate nest buffers, and additional mitigations.

At another WEF site (proposed at Goeressoe in the Overberg) the same specialists (BI) also concluded that it was suitable for wind farm development. Dr Odette Curtis-Scott took the report to task, pointing out that they had overlooked breeding Black Harriers there, Secretarybirds and numerous Cape Vulture passing over head. The habitat itself was classified as *Critically Endangered* renosterveld!. Subsequently Dr Curtis-Scott and I have uncovered no less than 8 breeding pairs of Black Harriers there! It was fortunate therefore that the DEA heeded the complaints of the I&AFs and the project was stopped.

The fact that two long-standing, highly experienced avian specialists (Dr A Jenkins, Dr RE Simmons) independently suggest that BI did not competently-undertake the study, and BI completely mis-interpreted the importance of the Goeressoe site means this study needs to be looked at again and the study re-done.

Section 2.4.9

It is stated that according to the avifaunal studies that with the implementation of the mitigation measures that the wind farm will not cause irreplaceable loss of species.

The Black Harrier is one species that can afford no losses. The BI team did not appear to realise (i) that the area occurs within a high habitat suitability area for this *Endangered* species and (ii) that nests are likely to occur.

It must be brought to the attention of the Department of Forestry, Fisheries and Environment (DFFE) that, since the consideration of the initial avifaunal impact assessment in respect of Boulders WEF (July 2018), Black Harrier nests have been found within the Groot Paternoster reserve, and within 5km of the proposed development site. A brief report detailing this discovery, and demonstrating its location in relation to the Boulder's WEF is attached hereto, marked 'A'.

Furthermore, it should be noted that nests may therefore also be found much closer to the proposed site, as is explained in the original report by Dr Simmons (dated 2020, "Black Harriers and other red data species in the proposed Boulder Wind Farm : A re-assessment, January 2020")

Page 19. Natural vegetation that the Black Harrier is associated with has already been buffered by 200m.

A 200-m buffer is totally inadequate for a Black Harrier! The recommendations in the Black Harrier guidelines are (i) avoid the high sensitivity areas like this altogether for WEF development (ii) for nests the minimum nest buffer is 3km ! (not 200 m). This is a serious oversight and must be rectified to protect this *Endangered* species.

Page 19. While Bioinsight is aware of the [hub-height-bird fatality rate] study we also make reference to other studies that showed no relationship between hub height and fatality rates.

The study by Loss et al. (2013), referred to by BioInsight in the paragraph above, which indicates a significant connection between hub height and bird fatalities, is the largest study into this relationship, and is of more significance and accuracy than the other studies referred to by BioInsight.

Unlike the latter, the Loss et al. report excludes all studies in which lattice towers were used - lattice towers increase bird fatalities and their impacts are not directly comparable to mono poles (which would be used in the Boulder's WEF).

The inclusion of the studies that make reference to/include data pertaining to lattice towers, therefore, renders the conclusion reached by BioInsight, that there is no relationship between hub height and fatality rates, flawed. This has since been verified by a larger study by Thaxter et al. (2017)

who also found a strong relationship between hub height and avian fatalities. [Thaxter CB et al. 2017 Bird and bat species' global vulnerability to collision mortality at wind farms revealed through a trait-based assessment. Proc. R. Soc. B 284:20170829. <http://dx.doi.org/10.1098/rspb.2017.0829>]

In their report BI acknowledge the high numbers of Blue Cranes but justify their recommendation that they will not be affected by the turbines by stating that no fatalities occurred at the West Coast 1 operational facility and the radar study showed no flights in the blade swept area. However, since that report a summary of all fatalities recorded at SA wind farms has been published (Perold et al 2020). That report indicates 8 crane fatalities at wind farms, so these birds are susceptible to wind farm impacts.

In summary, the defence of their findings by BioInsight are found to hold little water and their mitigations (200 m buffers) are total inadequate for Black Harriers. The study on Black Harriers must be re-done as it has overlooked breeding birds within 5 km of the proposed site. The operational mitigations must be re-visited as none at all were given !

Dr RE Simmons

15 Feb 2021

revised/updated 17 June 2021

Addendum to Specialist Black Harrier report for the Boulders Wind farm: June 2021

Dr Rob Simmons, Black Harrier Research Group, FitzPatrick Institute, UCT

This brief report is an update on the presence and possible breeding of *Endangered* Black Harriers *Circus maurus* (Simmons 2020) near the proposed Boulders Wind Energy Facility (WEF).

In October 2020 Peter and Beverly Pickford requested that I survey the Groot Paternoster Nature Reserve for Black Harriers since they reported harriers on a regular basis foraging through the reserve.

On 15 October 2020, I located the first Black Harrier nest, in the reserve. The nest had four eggs with the adult female in attendance. Another nest was suspected but the presence of Pied Crows, a possible nest predator, kept me from locating that second nest site.

The active nest was at found within the eastern section of the reserve at:

S32°45'19.20" E 17°54'38.40"E (Figure 1).



Figure 1: The location of the Black Harrier nest (found in October 2020) and the 5 km buffer that overlaps the proposed Boulders WEF.

The significance of this nest site is that it occurs within 5 km of the proposed Paternoster site. This is within the buffer proposed in BirdLife South Africa's *Black Harrier – wind farm guidelines*, (Simmons et al. 2020) within which no turbines should be built. The 5 km buffer is shown in Figure 1.

Simmons R.E., Ralston-Paton S., Colyn R. and Garcia-Heras M.-S. 2020. Black Harriers and wind energy: guidelines for impact assessment, monitoring and mitigation. BirdLife South Africa, Johannesburg, South Africa.

Dr RE Simmons, Black Harrier Research Group, FitzPatrick Institute, UCT.

17 June 2021