



Annelize Erasmus
Landscape Dynamics
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25 July 2022

Dear Annelize,

RE: Avifaunal Specialist Input for the Mulilo De Aar PV project near De Aar, Northern Cape Province

The purpose of this letter is to provide an avifaunal specialist opinion regarding the Mulilo De Aar PV EA Amendment Application for Extension of Validity of Environmental Authorisation. This includes the identification of any additional monitoring requirements that may be necessary to update the baseline and facilitate repeatable data collection to measure the impacts during the construction and operational phases.

Three previous avifaunal studies that included the area under consideration were included in the preparation of this letter, namely Harebottle (2012)¹, Avisense (2014)² and Arcus (2021)³. Harebottle (2012) noted that no solar energy guidelines for birds was available at the time of the study and adapted the birds and wind energy guidelines at the time (Jenkins 2011)⁴ to suit the study. Based on this, Harebottle (2012) noted that those guidelines indicate that monitoring should take place once per quarter for a period of up to 12 months prior to construction and 12 months after construction (operation phase). However he went on to say that "*[w]hether such an intensive monitoring programme is required for all three PVEFs is difficult to ascertain, but due to the overall medium impact significance across all sites monitoring could be reduced to once every six months; this could be negotiated with the client*". Avisense (2014) nevertheless conducted three avifaunal monitoring surveys that included the end of autumn, winter and summer 2013/2014 and included the period of peak avifaunal abundance.

Avisense (2014) established a suitable baseline of the avifaunal community in the receiving environment to appropriately inform the impact assessment. However, the study included several transects within the development footprint and while this is valuable, recommended (and often necessary) practice employed to assess the potential impacts of the development, it precludes repeated sampling of those transects during the construction and operational phases. This therefore reduced the opportunity to measure the scale of impacts that may be associated with those phases (such as disturbance effects). Arcus (2021) recommended that additional pre-construction monitoring should be conducted to update the avifaunal baseline of the receiving environment to facilitate the measurement of any construction and post-construction impacts (e.g. through before-after-control-impact analyses). A site visit was subsequently conducted in August/September 2021, during which the latest applicable protocols and guidelines were applied. Fifteen walk-transects were conducted which approximately aligned with the survey effort conducted by Avisense (2014).

¹ Harebottle, D. M. 2012. Construction of Three Photovoltaic Energy Facilities near De Aar, Northern Cape- Avifaunal Impact Assessment. Avifaunal Specialist Report Compiled for Mulilo Renewable Energy (Pty) Ltd, on behalf of Aurecon (Pty) Ltd (Unpublished report).

² Jenkins, A. and du Plessis, J. AVISENSE Consulting. 2014. Badenhorst Dam Solar PV Development Area - Pre-construction bird monitoring. Avifaunal Specialist Report Compiled for Mulilo Renewable Energy (Pty) Ltd (Unpublished report).

³ Arcus Consultancy Services South Africa. 2021. Avifaunal Specialist Letter Compiled for Mulilo Renewable Energy (Pty) Ltd (Unpublished report).

⁴ Jenkins, A.R., van Rooyen, C.S., Smallie, J.J., Anderson, M.D. and Smit, H.A. 2011. Best practice guidelines for monitoring and impact mitigation at wind energy development sites in southern Africa. Endangered Wildlife Trust/BirdLife South Africa, Johannesburg.

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The avifaunal community observed and recorded during the recent monitoring conducted by Arcus (2021) was comparable to the observations made by the previous studies and comprised of relatively low diversity and abundance of smaller passerine birds compared to the overall diversity of the broader region. This is due to the relatively low level of habitat diversity across the site, comprising largely of flat, lowland scrub. The current status of the environment under consideration is therefore considered to be practically unchanged from an avifaunal perspective since the original Environmental Impact Assessment was conducted (Harebottle 2012).

The surrounding area has been the focus of interest for various developments for a relatively long period of time, with the initial assessment considering the cumulative impacts of multiple renewable energy facilities within 30 km of the proposed site, including wind energy and solar energy facilities (Harebottle 2012). The National Web-based Screening Tool currently lists 27 approved solar energy facilities within 30 km.

Several impacts with significance to avifauna are already present in and around the development site, including operational solar PV facilities and overhead power lines that converge on the nearby existing Hydra Main Transmission Substation. The primary impacts associated with solar PV facilities are considered to include habitat destruction, disturbance and displacement and direct mortality through collisions with solar arrays or associated infrastructure such as overhead transmission lines. The relatively low avifaunal abundance and diversity recorded across the site makes it unlikely that the development will contribute significantly to the cumulative negative impact of habitat destruction to the avifaunal community of the receiving environment. The surrounding area is largely contiguous natural habitat that is more favourable to avifaunal species of conservation concern than the development site given the site's proximity to De Aar and the existing network of overhead power lines.

Harebottle (2012) notes that *"[a]lthough disturbance and displacement of localised endemic/range-restricted species are likely to occur during construction and operational phases of the development, the construction of above-ground transmission cables pose a higher risk to the area's avifauna"*. Indeed, overhead power lines present a risk of collision for species such as Ludwig's Bustard, Blue Crane, Black Harrier, Kori Bustard, Secretarybird and many other large-bodied species. However, the development is unlikely to have a significant contribution to the negative impact that already exists across the site given the large number of overhead power lines present.

Overall, it is considered unlikely that the development will contribute significantly to the cumulative impact in the area on avifauna beyond acceptable levels in the context of existing current impacts and can proceed from an avifaunal perspective. The site appears to be well suited for the development of a solar PV facility.

The MTHS Layout as approved in 2012 is therefore still applicable, the impact assessment undertaken during the initial assessment (Harebottle 2012) remains valid and the mitigation measures provided therein are also still applicable.

Additional requirements of the updated guidelines for pre-construction avifaunal monitoring have been addressed by recent studies in the area (Arcus 2021) and additional requirements for the construction and operational phases of avifaunal monitoring can be appropriately implemented during the relevant periods should the competent authority extend the validity of the Environmental Authorisation.

In conclusion, sufficient baseline data of the avifaunal community in the receiving environment exists through the pre-construction monitoring that was conducted by Avisense (2014) over three seasons (including the period of peak avifaunal abundance), as well as the site visit conducted by Arcus in August/September 2021, to inform the assessment and measure potential future impacts that may occur.

The environment in terms of the avifaunal community has not changed significantly since 2012; therefore, there is **no objection** to the extension of the validity of the Environmental Authorisation from an avifaunal perspective.

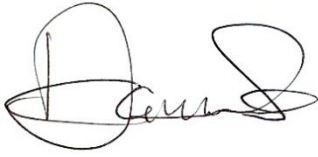
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Yours sincerely,

A handwritten signature in black ink, appearing to read 'Owen Rhys Davies', written in a cursive style.

Dr Owen Rhys Davies Pr. Sci. Nat (Ecology)
Avifaunal Specialist