



08 November 2012

To whom it may concern

**RE: Sere Wind Facility Amendment to EA 12/12/20/913 - Specialist Avifaunal comment with regards to new technologies and a change in turbine design.**

**BACKGROUND**

An avifaunal specialist study (Jenkins, A . 2007) was conducted by the EWT for the abovementioned project, during which potential impacts of up to 100 proposed wind turbines, with a hub height of 80m and a blade length of 45m, were assessed. Two amended authorisations have been obtained, on the 29 October 2010 and the 29 August 2011, due to subsequent developments in wind technology to optimise the wind energy capture for the project. These amendments were as follows:

*Amendment to EA (29 October 2010):*

- 100 wind turbine units (120m in height) with a 90m diameter rotor (consisting of 3 x 45m blades);

*Amendment to EA (28 August 2011):*

- 67 wind turbine units (120m in height) with a 90m diameter rotor (consisting of 3 x 45m blades);
- A workshop/office building and visitors centre approximately 8 000m<sup>2</sup>

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The Endangered Wildlife Trust is a non-profit, public benefit organisation dedicated to conserving species and ecosystems in southern Africa to the benefit of all people.

**NPO Number:** 015-502, **PBO number:** 930 001 777, **Member of IUCN** - The International Union for Conservation of Nature  
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Subsequently, the EWT was approached to give comment on further changes to the scope of works and changes in technology, with regards to the proposed turbines. *The proposed new amendments to be commented on are as follows:*

- Approximately 50 wind turbine units (120m in height) with a 106m rotor diameter (consisting of 3 x 53m blades); and
- a concrete foundation (20mx20m) to support each tower

**COMMENT:**

A thorough review of the original avifaunal report was conducted. The report found that the possible impacts on avifauna include mortality from collision with turbines and associated power lines, habitat destruction and disturbance. Thirty five priority species were identified, and the impacts of the WEF were evaluated in terms of these species. The study raised special concern for Ludwig's Bustard, Black Hairier and Secretarybird.

**The EWT hereby confirms that the proposed project changes do not present any change in the significance of the collision and disturbance impacts on priority species as previously assessed.** The impact of habitat destruction may in fact be reduced, as discussed further below.

The data available on bird flight movement, and particularly flight height, is not accurate enough to allow us to make predictions on the change in impact significance (bird collisions with turbine blades) based on a difference in turbine height and/or rotor diameter. In order to obtain such data, as well as to determine the actual impacts of the project, **it is crucial that pre- and post – construction monitoring is implemented on the site, as recommended in the original avifaunal report.** Calculations of the total Rotor Swept Area (RSA) for the WEF, show that RSA =  $\pm 426,019.5 \text{ m}^2$  for 67 turbines with blade lengths of 45m and; RSA =  $\pm 441,013.0 \text{ m}^2$  for 50 turbines with blade lengths of 53m. This means that the proposed change in turbine design will actually result in more "air space" being "swept" by turbine blades. Having said this, the increased turbine size (and RSA) is

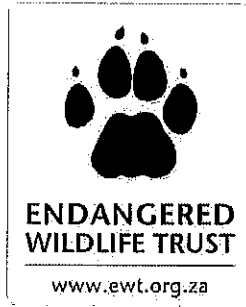
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accompanied by a decrease in the proposed number of turbines and there will be “fewer structures” and “fewer blades” in the sky. This may in fact balance out any increased impact from the increase in RSA. Furthermore, a reduction in the number of turbines will result in less access roads and overhead powerlines (or underground cabling) required, which is likely to reduce the impact of habitat destruction on birds.

**Therefore, the impact ratings, conclusions and recommendations of the original avifaunal report remain the same.**

We trust that you will find this sufficient clarification.

Regards

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(EWT: Wildlife and Energy Program- EIA specialist)

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