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**Ref:** Korana WEF

Savannah Environmental (Pty) Ltd  
PO Box 148  
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**Attention: Ms. Hermien Slabbert / Thalita Koster**

Dear Madam

**SPECIALIST STUDY: NOISE IMPACT ASSESSMENT: PROPOSED KORANA WIND ENERGY FACILITY SOUTH OF POFADDER: CHANGE OF WIND TURBINE SPECIFICATIONS**

The above-mentioned issue as well as report SE-MPWEF/ENIA/201411-Rev 0 is of relevance.

I conducted an Environmental Noise Impact Assessment (ENIA) during 2014 for the proposed Korana Wind Energy Facility (WEF). With the input data as used, this assessment indicated that the proposed project will have a noise impact of a **low significance** on all Noise Sensitive Developments (NSDs) in the area during both the construction and operational phases using the Vestas V117 3.3MW wind turbine for all wind speeds. This wind turbine has a maximum sound power generation level of 107.0 dBA. The projected maximum noise levels would be less than 35 dBA at the closest NSD.

The wind energy market is fast changing and adapting to new technologies as well as site specific constraints. Optimizing the technical specifications can add value through, for example, minimizing environmental impact and maximizing energy yield. As such the developer has been evaluating several turbine models, however the selection will only be finalized at a later stage once the most optimal wind turbine are identified (factors such as meteorological data, price and financing options, guarantees and maintenance costs, etc. must be considered).

Because of the availability of more optimal or efficient wind turbines, the developer of the WEF is considering changing the wind turbine specifications. As the specifications of the final selection are not yet defined, this review evaluates a potential worst-case scenario, with a wind turbine with a sound power emission level of 109 dBA. Other changes include:

- Rotor Diameter increase up to **200m**
- Hub height up to **200m**
- Increasing the individual wind turbine capacity from **2.0 MW to up to 7.0 MW**

All of the proposed wind turbines are further than 2,000m from any potential noise-sensitive receptors and even with the higher potential sound power emission level (worst-case of 109 dBA), the maximum projected noise level will be less than 35 dBA at the closest NSD.

Considering the location of the wind turbines and the potential noise impact, it is my opinion that the change will not increase the significance of the noise impact. A full noise impact assessment with

new modeling will not be required and the findings and recommendations as contained in the previous document (report SE-MPWEF/ENIA/201411-Rev 0) will still be valid.

Should you require any further details, or have any additional questions, please do not hesitate to call me on the above numbers.

Yours Faithfully,

  
Morné de Jager  
Enviro-Acoustic Research cc

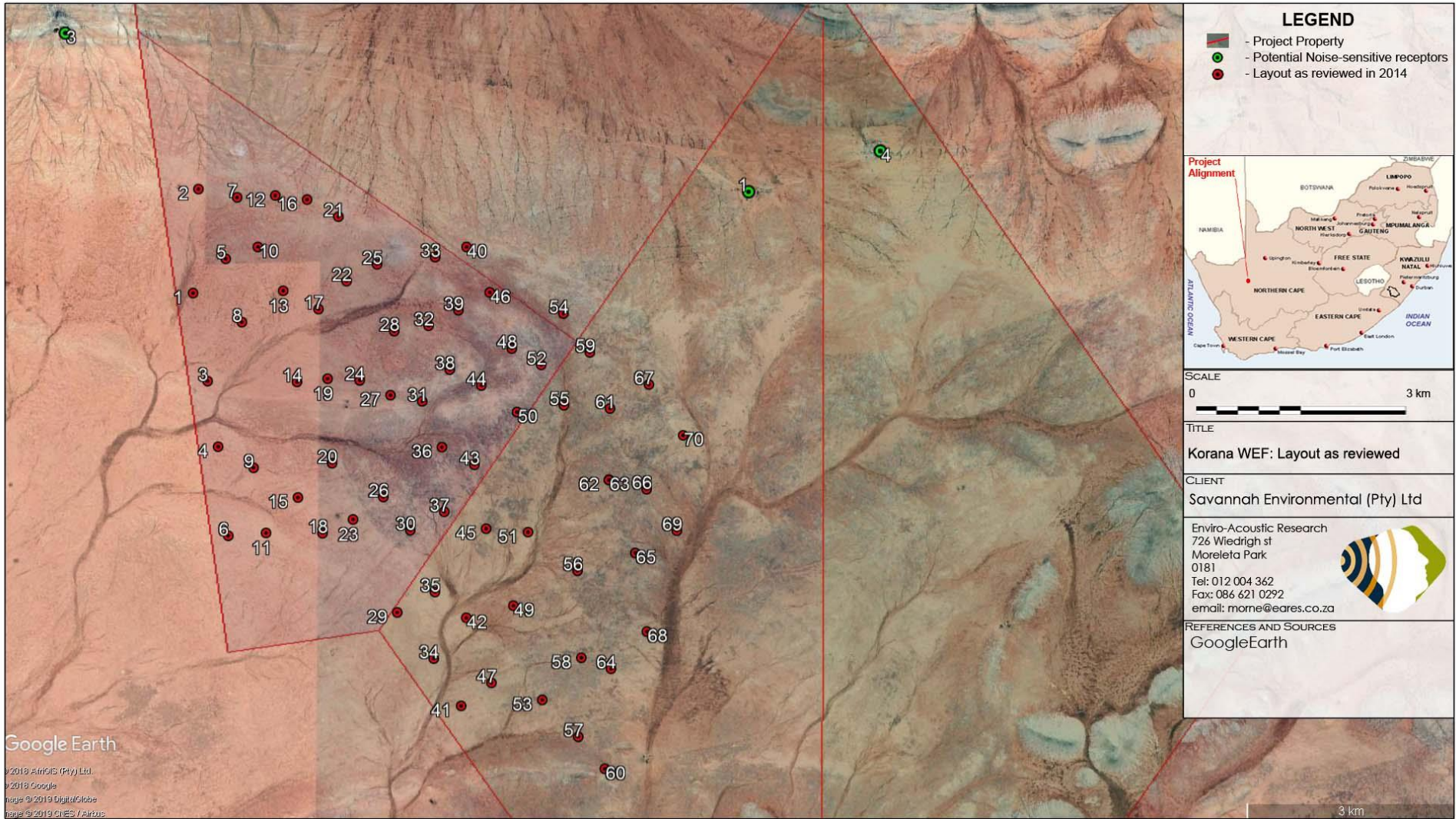


Figure 1: Locations of wind turbines as evaluated