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ECOLOGICAL SPECIALIST SERVICES
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Ecological Solutions for People & the Environment

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14 April 2022

ATT: Jo-Anne Thomas
Savannah Environmental

RE: Comment on the Final Layout of the Wind Garden WEF

Savannah Environmental has requested comment on the acceptability of the final revised layout of the Wind Garden WEF located near Makhanda in the Eastern Cape. A final optimised layout of the wind farm has been produced which has reduced the number of turbines from 47 down to 23. The turbines proposed to be used will also be slightly smaller having a hub height of 115m instead of the originally proposed 120m. The rotor diameter will remain at 150m, but with a reduction in blade tip height from 200m to 190m. The change would also necessarily result in a reduction in the extent of turbine access roads and associated infrastructure. The said revision to the layout was implemented in order to address outstanding concerns from I&APs.

In order to address the above proposed changes in relation to the previously assessed layout of the development, the optimised layout of the development is considered with regards to the following:

1. An assessment of all impacts related to the proposed change, including a comparison with those impacts as assessed for the previous layout;
2. Any advantages and disadvantages associated with the proposed change in layout;
3. Any additional measures required to ensure avoidance, management and mitigation of impacts associated with the proposed change; and
4. Any changes to the EMPr.

1. An assessment of all impacts related to the proposed change, including a comparison with those impacts predicted in the EIA.

A summary assessment of ecological impacts associated with the original and optimised layout is provided below. Although the extent of the development has decreased significantly from approximately 50 ha to less than 25 ha, the assessed impacts are considered fairly robust to these changes and it is only the significance of erosion, vegetation removal and alien plant invasion that are

considered to have changed in impact significance from medium before mitigation to low before mitigation under the optimised layout. The cumulative impact related to habitat loss and impact on broad-scale ecological processes has also reduced. The other impacts associated with the optimised layout are considered to be similar to the impacts as assessed for the original layout.

Table 1. Summary of the original pre- and post-mitigation significance of impacts associated with the original Wind Garden layout and the optimised layout.

Impact	**Original Layout**		**Optimised Layout**	
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation
Construction Phase				
Impacts on vegetation and plant SCC	Medium	Medium	Medium	Low
Direct and indirect faunal impacts	Medium	Low	Medium	Low
Operational Phase				
Direct and indirect faunal impacts	Medium	Low	Medium	Low
Increased soil erosion risk	Medium	Low	Low	Low
Increased alien plant invasion risk	Medium	Low	Low	Low
Impact on CBAs and future conservation options	Medium	Low	Medium	Low
Decommissioning Phase				
Direct and indirect faunal impacts	Medium	Low	Medium	Low
Increased soil erosion risk	Medium	Low	Medium	Low
Increased alien plant invasion risk	Low	Low	Low	Low
Cumulative Impacts				
Cumulative habitat loss and impact on broad-scale ecological processes.	Medium	Low	Low	Low

2. Advantages and disadvantages associated with the proposed change

The overall impact of the optimised layout as compared to the original layout is a reduction in turbines and associated wind farm infrastructure especially within the medium and high sensitivity parts of the site in the north and west of the Wind Garden site. A total of 16 of the 20 turbines that were present in these areas are no longer present under the optimised layout. As these areas were mapped as the more sensitive parts of the site, the footprint and associated impact within these areas and hence overall for the wind farm development has been reduced. As a result of the change in the spatial distribution of the wind farm and the overall reduction in footprint, the overall impact of the development under the optimised layout would be lower than the original assessed layout and is therefore considered preferred.

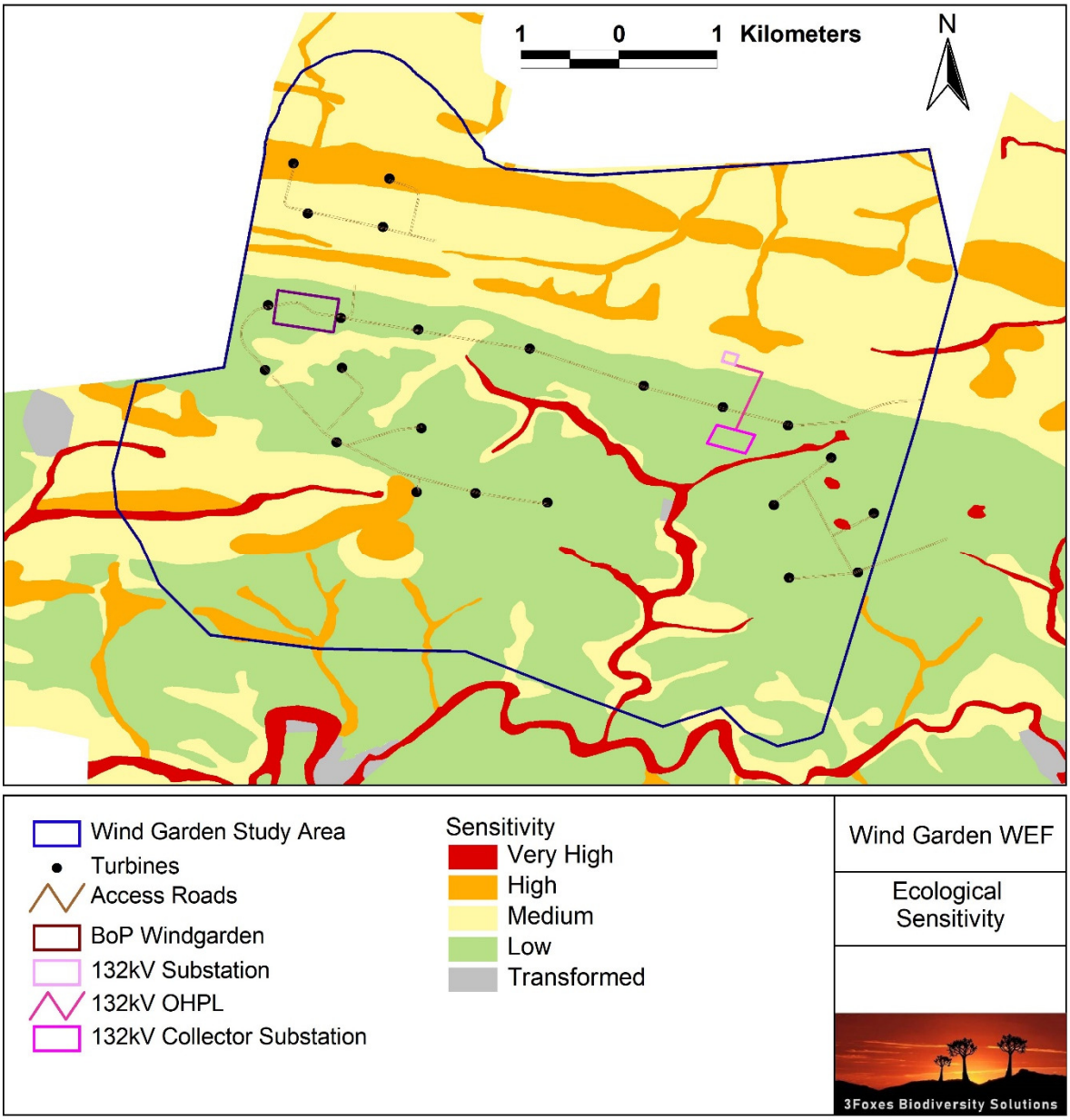

Figure 1. Sensitivity map of the Wind Garden WEF study area, showing the optimised layout of the development.

3. Additional measures to ensure avoidance, management and mitigation of impacts associated with the optimised layout

There are no additional changes to the mitigation and avoidance measures from what has been recommended in the original ecological study. All of the mitigation and avoidance measures as recommended in the ecological report are considered relevant and applicable to the optimised layout and should remain in place.

4. Any changes to the EMPr

There are no recommended changes to the EMPr and all of the mitigation and avoidance measures as recommended for the original assessed layout are applicable to the optimised layout.

Conclusions and Recommendations

The optimised layout of the Wind Garden has half the number of turbines as compared to the original assessed layout. This would reduce the overall terrestrial ecological impacts associated with the development, especially in the north and west of the site where numerous turbines have been removed from the layout. As the original assessed development layout with 47 turbines was considered to be acceptable, the optimised layout with 23 turbines is also considered acceptable and is not opposed from a terrestrial ecological point of view.

Sincerely

Simon Todd
Director
3Foxes Biodiversity Solutions