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ATT: Nicole Holland
 Holland & Associates
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RE: Highlands North Wind Energy Facility (WEF) Amendment Application

Highlands North Wind Energy Facility (Pty) Ltd, wishes to increase the maximum dimensions of the Wind Turbine Generators (WTG's) for the Highlands North Wind Energy Facility (WEF), in order to align to current international WTG models. The applicant has therefore appointed Holland & Associates to manage the Environmental Authorisation Amendment process in terms of the 2014 EIA Regulations (GN R 982 of December 2014, as amended). As part of the amendment process, Holland & Associates has requested comment from 3Foxes Biodiversity Solutions regarding the potential terrestrial biodiversity implications of the proposed changes, which are detailed below.

Scope & Background to the Proposed Amendments

Highlands North Wind Energy Facility (Pty) Ltd are proposing the following changes to the Highlands North WEF as detailed in the table below.

Component	Approved	Amendment
Number of Turbines	14 turbines	Up to 12 turbines
Generation Capacity of WEF	Up to 84MW	Up to 87MW
Generation Capacity per Turbine	Up to 6MW per turbine	Remove generation capacity per turbine
Rotor/blade diameter	Maximum 150m	Maximum of 175 m (except T01 with a maximum rotor diameter of 160 m and T12 with a maximum rotor diameter of 150 m).
Hub height	Up to 135m	Up to 180m
Tip height	Up to 200m	Up to 267.5m

Foundation size	Up to approximately 25 m x 25 m in total and up to 5 m deep per turbine	Up to approximately 35 m x 35 m in total and up to 7 m deep per turbine
Hard stand per turbine	5000m ²	6000m ²
Battery Storage	Not included	Battery Energy Storage System (BESS) adjacent to the substation on the temporary laydown area (with a footprint of approximately 1ha, and a height of approximately 8m).
Length of internal roads	Approximately 50km	Approximately 45km

In addition, the following amendments are proposed:

- Slight adjustments to the turbine positions in the preliminary approved layout are proposed, in order to minimise wake effects, as well as to avoid the proposed new blade length extending into areas identified as highly sensitive for birds and bats.
- The proposed battery storage technology, adjacent to the substation (on the temporary laydown area), would have a footprint of approximately 1 ha, and a height of approximately 8 m.
- Removal of Condition 39, which states that “The development footprint must exclude the area identified as a potential target for the protected area expansion (NPAES)”.

According to the Applicant, the proposed amendments will not result in an increase in the size of the approved development footprint for the project. The footprint of the authorised facility is estimated at 30.65 ha. The development footprint with the proposed amendments would be approximately 28 ha.

In order to address the above proposed changes to the authorised layout of the development, this amendment statement letter provides an evaluation of the ecological impacts associated with the development with regards to the following:

1. An assessment of all impacts related to the proposed change, including a comparison with those impacts predicted in the Basic Assessment (BA).
2. Advantages and disadvantages associated with the proposed change
3. Measures to ensure avoidance, management and mitigation of impacts associated with the proposed change
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 BA.

A summary assessment of the original impacts as assessed in the fauna and flora specialist report for the Highlands North WEF is listed below in Table 1. Based on the layout as provided for the amendment, no impacts would be increased by the amendment application. Although the number of

turbines would be reduced this reduction would be partly offset by the increase in the size of the turbine hardstands. Overall, the difference is not considered significant and impacts would be the same as that assessed for the original approved layout and no changes to the assessed impacts would be required.

Table 1. Summary of the original pre- and post-mitigation significance of impacts associated with the original assessed and proposed amended layout of the Highlands North WEF.

Impact	Original Assessed Layout		Proposed Amended Layout	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation
Construction Phase				
Impact on Vegetation and listed plant species	Medium	Medium	Medium	Medium
Faunal Impacts due to construction	Medium	Low	Medium	Low
Operational Phase				
Faunal Impacts	Medium	Low	Medium	Low
Alien plant invasion	Medium	Low	Medium	Low
Soil Erosion	Medium	Low	Medium	Low
Impact on CBAs and broad-scale ecological processes	Medium	Low	Medium	Low
Decommissioning				
Faunal Impacts	Medium	Low	Medium	Low
Alien plant invasion	Medium	Low	Medium	Low
Soil Erosion	High	Low	High	Low
Cumulative Impacts				
Cumulative impacts on habitat loss and ability to meet conservation targets	Medium	Low	Medium	Low

2. Advantages and disadvantages associated with the proposed change

The sensitivity map for the Highlands North WEF, showing the original assessed layout and the revised proposed amended layout is illustrated below in Figure 1. The distribution of turbines and associated infrastructure in relation to the sensitive features of the site are little changed between the original assessment and the amendment. As a result, there do not appear to be any significant advantages or disadvantages of the proposed amendments, including the amended layout.

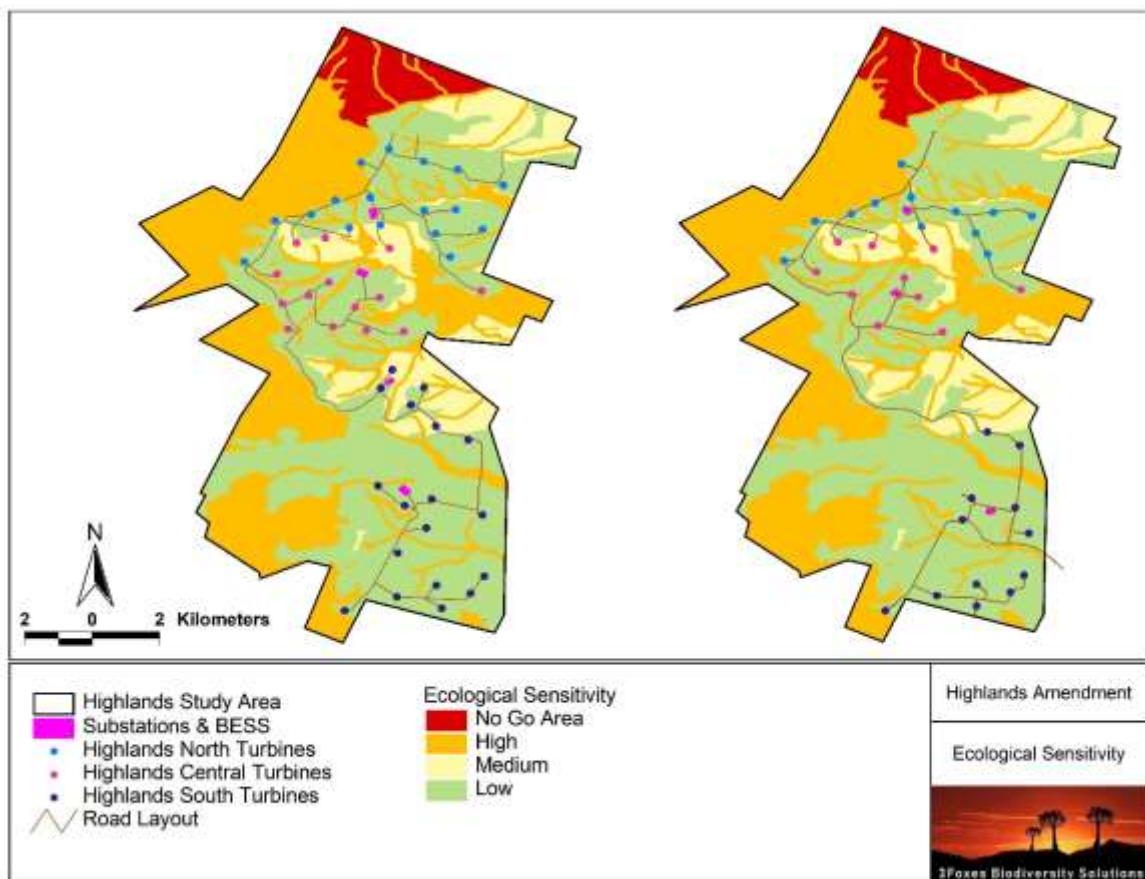


Figure 1. The sensitivity map for the Highlands North WEF showing the original layout left and the proposed amended layout right.

3. Measures to ensure avoidance, management and mitigation of impacts associated with the proposed change

The proposed amended layout of the Highlands North WEF is located in similar areas to the original footprint and there are no turbines in High or Very High sensitivity areas under either the original or amended layout. In addition, there are no new or additional impacts associated with the proposed amendments, including amended layout, with the result that there are no recommended changes to the mitigation and avoidance measures that were included in the original Fauna and Flora specialist BA study. In addition, the cumulative impacts associated with the amendment are considered to be similar to those as assessed in the BA and thus there would be no changes to the overall cumulative impacts associated with the change. All of the mitigation and avoidance measures as recommended in the Fauna and Flora specialist BA are upheld by the current study and should be applicable to the amended layout as well.

4. Any changes to the EMPr

There are no recommended changes to the EMPr and all of the mitigation and avoidance measures as recommended in the Fauna and Flora specialist BA are applicable to the proposed amendments, including the amended layout.

5. Removal of Condition 39

The amendment requests removal of Condition 39 which states that “The development footprint must exclude the area identified as a potential target for the protected area expansion (NPAES)”. This condition is contrary to the findings of the specialist study which found that the impact on the 2011 NPAES was acceptable. The BA study states: “*The affected Camdeboo Escarpment Focus area is over 421 000ha in extent and the loss of less than 10 000ha from this focus area is not considered highly significant.*” The potential loss of the entire Highlands site to development represents less than 0.25% of the affected Focus Area. As such, this cannot be considered to represent a significant impact, especially given that the site is not particularly unique or known to harbour an abundance of species of concern. In addition, the low impact on the NPAES is further supported by the fact that the Highlands WEF area does not fall within an NPAES Focus Area under the more recent 2016 NPAES Layer. The original assessed impact of the development on the NPAES was assessed as **Low** and this is upheld again here. Consequently, the specialist does not find sufficient motivation to support removing the areas falling within the 2011 NPAES from the development footprint, and the request of the developer to remove this condition is not opposed.

Conclusions and Recommendations

The major change associated with the amendment would be an increase in the size of the turbines and a slight reduction in the overall number of turbines as well as the addition of the BESS to the facility. The changes are however not considered significant from an ecological point of view and the impacts associated with the amendment are considered consistent with the original impacts as assessed in the BA study. There would therefore be no impacts associated with the proposed amendments, including the amended layout, that would be higher than the original layout as assessed. No additional mitigation or avoidance measures, beyond those already recommended in the Fauna and Flora specialist BA study are required for the amendment. In terms of Condition 39, the request of the developer to have this condition removed is not opposed. As such, there are no reasons to oppose the proposed amendment and it can therefore be supported from an ecological point of view.

Sincerely



Simon Todd

Director

3Foxes Biodiversity Solutions
