



Simon Todd
23 De Villiers Road
Kommetjie
7975

Savannah Environmental (Pty) Ltd
P.O. Box 148
Sunninghill
2157
Tel. 011 656 3237
Att: **Jo-Anne Thomas**

05 May 2020

RE: Amendment Application for the Korana Wind Energy Facility

Mainstream Renewable Energy South Africa (Pty) Ltd has requested an amendment to the authorised Korana Wind Energy Facility located near Pofadder in the Northern Cape. The Environmental Authorisation (EA) Amendment Application proposes changes to the preferred access route and consequently Savannah Environmental has requested a comparative assessment and comments from 3Foxes Biodiversity Solutions on the ecological implications of the proposed changes to the layout. The motivation for and nature of the intended amendment include the following:

- The preferred access route (currently Alternative A1: Namies Suid) be amended to Alternative A2 (Poortjies South). The authorised route as per the Environmental Authorisation is Alternative A1 (Namies Suid).
- Adjustments to the width and vertical alignment will have to be undertaken for the Namies Suid 49,5km long access before safe abnormal load access can be guaranteed. There are also road sections through the proposed land parcels that may require widening to accommodate abnormal load access. Approximately 5.3km of new road will have to be constructed within the site.
- The Poortjies South access road is longer (63km) but has a more suitable vertical and horizontal alignment for abnormal load access. There is only one corner that may require horizontal re-alignment within the current road reserve.
- The amendment to the preferred access route alternative specifications is not a listed activity and will not trigger any new listed activities as the both access routes will fall within the originally authorised footprint of the facility and have not deviated from the initial routes presented within the EIA.

As the amendment will result in a new access route, which may have different impacts from the original authorised route, Savannah Environmental has requested confirmation regarding the assessed impacts in terms of the following:

1. Discussion on the change in impact or any new impacts, if any
2. Additional mitigation measures, if any
3. Any disadvantages and advantages that may result due to the amendment

In order to address the above questions, I have reviewed the original botanical and faunal studies conducted for the Korana and Khai-Ma Wind Energy Facilities as well as the closely inspected the proposed route alternatives in Google Earth in order to assess whether there are any material differences in sensitive features or potential impacts associated with each alternative. The results of this review and desktop study are provided below after which a conclusion is drawn as to the acceptability of the proposed amendment.

1. Change in Impact or any New Impact Due to the Proposed Amended Layout

I have reviewed the proposed amended access road in reference to both the authorised access road as well as the results of the original faunal and botanical studies for the development. The Botanical Study (Bergwind 2014), does not provide a statement as to the acceptability or preference in terms of the two access road alternatives. The study makes the following two general conclusions (among others) regarding the sensitivity of the site and the acceptability of the development:

- *Construction of the wind energy facility at Korana WEF would also result in a **Low negative** impact on the vegetation and ecological processes due to the high absorptive capacity of the receiving environment.*
- *Construction of access roads should be designed for minimal impact and should not bisect drainage lines.*

As such, there do not appear to be any a priori reasons to support one access road over the other. However, the study recommends that the “access roads should be designed for minimal impact and should not bisect drainage lines”. Consequently, it is worth investigating the potential impact of each access road alternative on the drainage systems of the site. Alternative 1, the authorised alternative, traverses a complicated gravel plain with numerous small washes and drainage lines as it crosses Namies 212/1. Alternative 2 traverses far fewer minor drainage features than Alternative 1, but there is a single large and two smaller drainage lines that would be crossed by Alternative 2 that are not crossed by Alternative 1. With the appropriate mitigation which includes ensuring that the access road does not disrupt or alter the flow of water along these drainage lines, then it is likely that Access Road Alternative 2 will have **low impacts** on these features. As such, Alternative 1 is not viewed as being preferable to Alternative 2 in this regard and overall, the impact on hydrological features and their associated botanical communities are likely to be similarly low for each alternative.

As with the Botanical Study, the Terrestrial Fauna Study (Animalia 2014), did not state a preference with regards to the two access road alternatives and as such, it is assumed that these are equally acceptable. In terms of the faunal sensitivity map produced as part of the study, both alternatives traverse hydrological features considered to be of High faunal sensitivity. The study concludes with the following statement in this regard:

- *Areas of High sensitivity and their buffers must be avoided by turbine placement, laydown areas and other associated infrastructure. Only access and connecting roads may intrude on High sensitivity buffers if no other alternatives exist.*

Based on the sensitivity map presented in the faunal study, it would appear that Alternative 2 is preferable to Alternative 1 in that Alternative 2 traverses significantly less habitat considered to be Moderate sensitivity and traverses only a single feature considered to be High sensitivity while Alternative 1 traverses several such features, which although smaller, result in significantly greater extent of High sensitivity buffer area. As such, the conclusion in terms of fauna, is that Alternative 2 is seen as preferable to Alternative 1.

2. Impact on CBAs and Broad-Scale Ecological Processes

The specialist studies for the Korana Wind Farm were produced in 2014 and since that time, a new CBA map has been developed for the Northern Cape which replaces the one used on the current studies. The CBA map for the study area is depicted below in Figure 1. Both alternatives include large areas of CBA 2 and Alternative 1 also includes significant portions of CBA 1. It is clear from the CBA map that Alternative 2 would be the preferred alternative in terms of potential impacts on CBAs. Although this map was not available at the time of the original studies, it bears relevance now in terms of which alternative should now be seen as the new preferred alternative under the current best available baseline information.

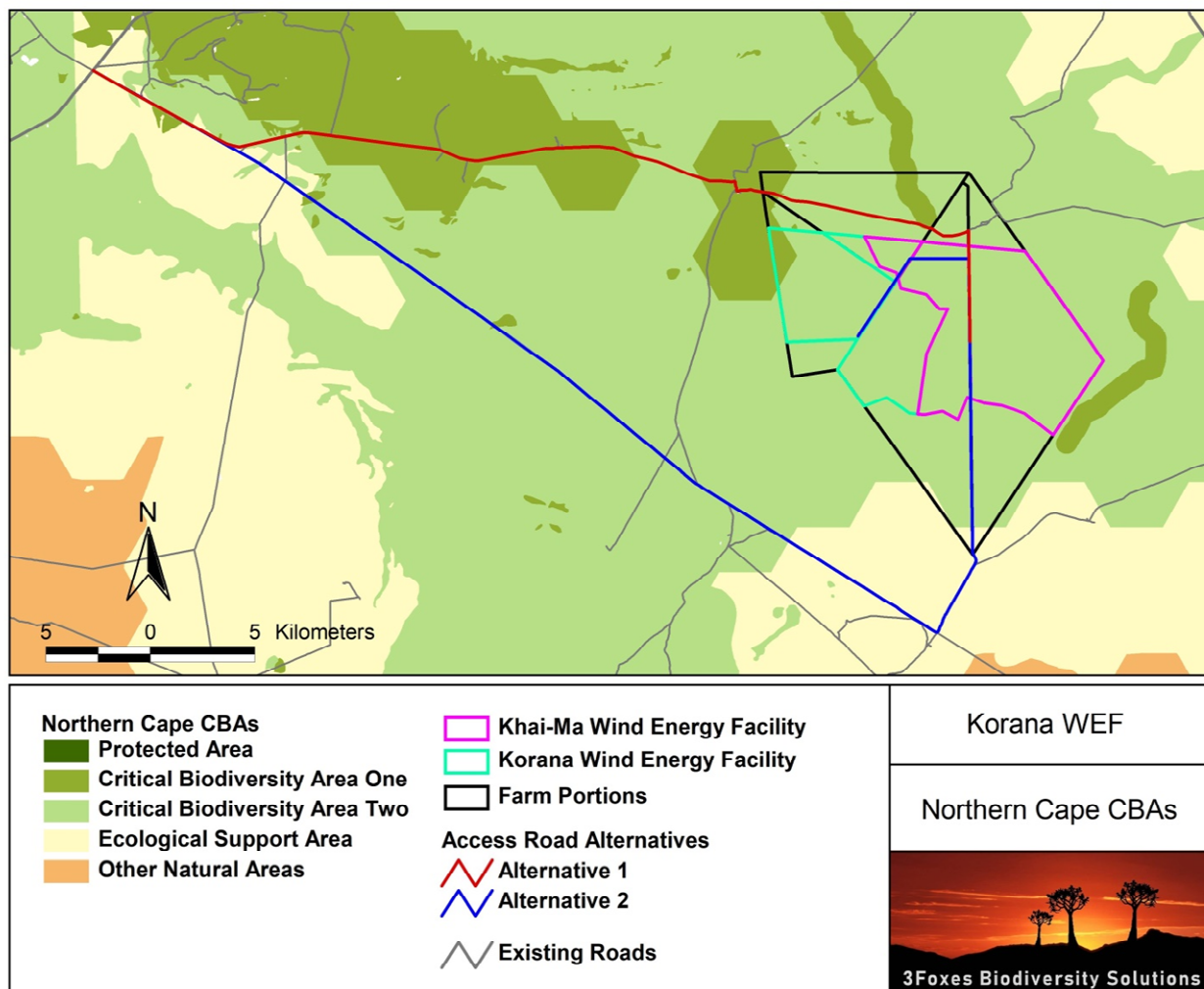


Figure 1. Extract from the CBA map for the Northern Cape, showing the location of the two access route alternatives.

3. Additional Mitigation Measures

No additional mitigation measures or changes to the EMPr mitigation measures would be required in terms of this amendment because no significant change to impacts or new impacts will occur. All the original avoidance and mitigation measures as indicated in the original botanical and faunal studies are still relevant and applicable to the amended layout and must be implemented.

4. Advantages and Disadvantages of the Proposed Amendment

The change from Access Road Alternative 1 to Access Road Alternative 2 as the preferred alternative would not result in any significant changes to the ecological impacts associated with the Korana Wind Energy Facility as originally assessed. However, Alternative 2 would have lower risk of impact on CBAs and based on the current CBA maps, Alternative 2 would now be the preferred route. As there would not be any changes to the assessed impacts, the amendment is supported from an ecological perspective as it

would not increase or change any impacts or lead to new impacts associated with the change in road alternative.

Conclusions and Summary Findings

- The Access Road amendment is supported from a botanical and faunal perspective as it will result in similar assessed impacts on fauna, flora and habitats at the site. Consequently, the proposed amended access road Alternative 2 would not result in a change in the assessed impacts and no adjustment to the original assessed impacts is required.
- The Korana Wind Energy Facility Access Road amendment is therefore supported in terms of terrestrial ecology impacts. The impact of the amended road alternative on fauna and flora would be similar to the authorised layout.
- In addition, the potential impact of Alternative 2 on CBAs is likely to be lower than that posed by Alternative 1 and as such, under the current CBA mapping, Alternative 2 would be seen as the preferred alternative.

Prepared by Simon Todd

12 May 2020



Pr.Sci.Nat
SACNASP 400425/11.
