

Proposed Witberg Wind Energy Facility Amendment 2018

Supplementary assessment of the proposed amendments.

(Assessment conducted under Section 38 (8) of the
National Heritage Resources Act (No. 25 of 1999) as part of an EIA)

Prepared for
Savannah Environmental Pty Ltd

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Summary

The proposed Witberg amendment (Laingsburg district), which sees a revised amended layout proposed with 27 turbines with an individual turbine capacity of up to 5 MW each, lies within a project area subject to a previous HIA study (dated 2011). The main area of concern was the visual impact that would be experienced from the Grade 2 Provincial Heritage Site of Matjiesfontein. Subject to some layout adjustments, the original 40 turbine layout and access road received approval from HWC in 2012.

The current proposed amended layout has been assessed and found to be beneficial (compared with earlier proposals), which were assessed to have a high negative impact on setting and cultural landscape.

The proposed amended layout is an improvement in that:

- The fewer number of turbines would help to decrease the potential visual clutter of turbines on the exposed ridgeline.
- The turbines are positioned in such a way that visual dominance of the Witberg Ridge is avoided.

Other heritage impacts which are of a lesser order, remain unchanged as does mitigation.

From a heritage perspective, the proposed activity is considered acceptable.

Table of Contents

1	Introduction	4
1.1	The proposed amendment	5
1.2	Terms of reference.....	5
2	Findings of the Assessment.....	8
2.1	The impacts relating to the proposed amendments	8
2.1.1	Power lines and other associated infrastructure.....	9
2.2	Comparative impact assessment	9
3	Conclusion.....	11
3.1	Mitigation.....	11
4	Reference	11

1 Introduction

ACO Associates CC have been appointed by Savannah Pty Ltd to provide an assessment of an amended layout for the Proposed Witberg Wind Energy Facility (*Witberg Wind Energy Facility DEA ref. 12/12/20/1966*) to be situated on the Witberg Ridge in the Laingsburg Municipality of the Western Cape Province (Figure 1). The proponents (Witberg Wind Power) also wish to apply for an amendment of the authorised turbine specifications (increase in range of rotor diameter up to 136m, increase in range of hub height up to 120m and an increase of individual wind turbine output capacity up to 5MW), and other non-spatial amendments (including but not limited to, an extension to the Environmental Authorisation (EA) for another 2 years etc.).

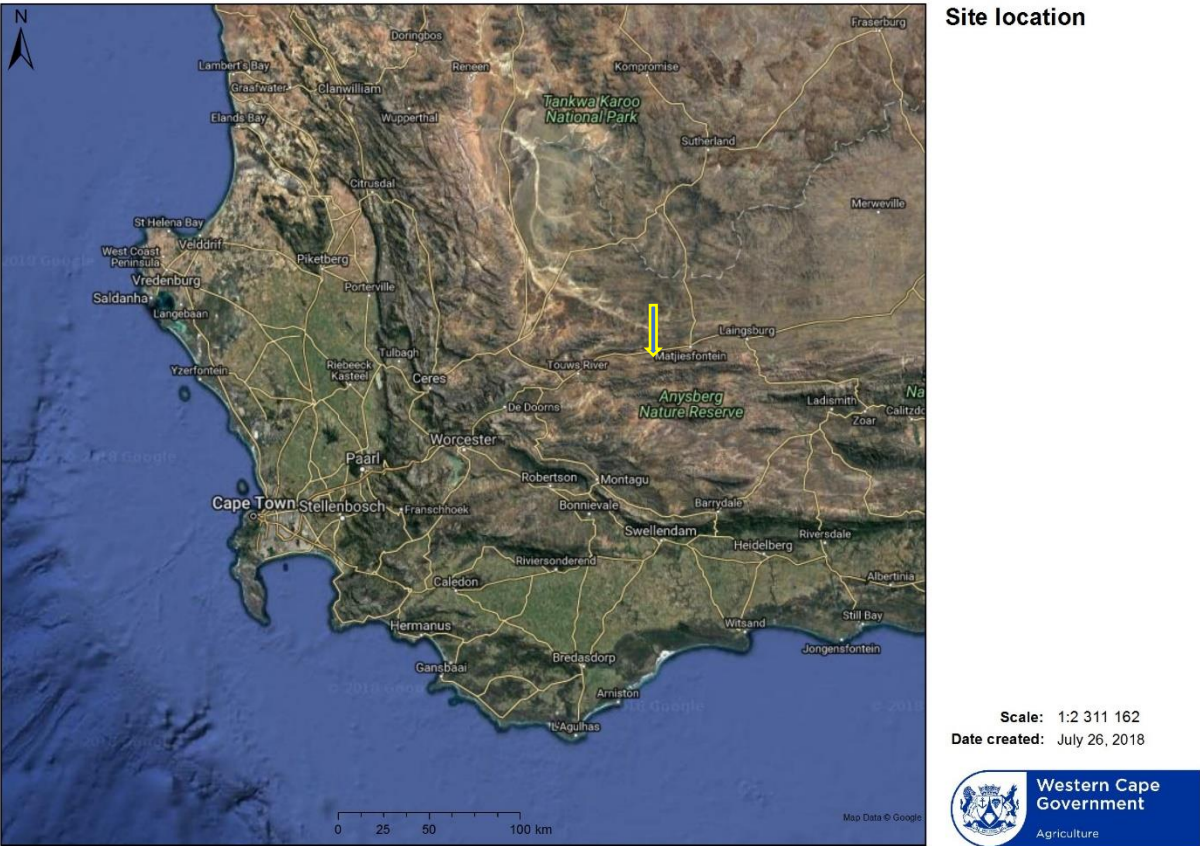


Figure 1 Site location

ACO Associates has had a long involvement with this project having subjected it to a Heritage Impact Assessment and survey for an Environmental Impact Assessment (EIA) process led by ERM Pty Ltd in 2012. At that time there was an extensive proposal for up to 70 turbines with a hub height of some 80m, along with the required associated infrastructure. After this there were further assessments undertaken for the access road, as well as further comments solicited by the proponent for various layout changes, the latest one being in 2015. In 2011 ACO Associates responded to the initial development proposal by conducting an extensive survey of the land parcels involved. The impact of greatest significance related to the visual

changes that would be experienced from the Matjiesfontein grade 2 (Provincial) heritage site. The matter was extensively debated at Heritage Western Cape (HWC) with the result that the proposal was not supported. Mr Ashley Lillie was then appointed by the proponent to steer the proposal through HWC for a second time. After a site visit, HWC determined that the impacts were tolerable, and a positive comment resulted. **This approval does not have an expiry date and remains valid currently** (Figure 2).

1.1 The proposed amendment

Witberg Wind Power (Pty) Ltd is proposing to amend the wind farm layout as well as the turbine specifications for the Witberg Wind Energy Facility (WEF). The intended wind turbine specification amendments include:

- Increase in hub height from the authorised 92m , to a hub height range of up to 120m;
- Increase the rotor diameter from the authorised 116m, to a rotor diameter range of up to 136m;
- Increase the output capacity for each wind turbine from 3MW, to up to 5MW.

Other non-spatial amendments being requested include the following:

- Change the details of the physical address and addition of the cell phone details of the holder of the environmental authorisation;
- Correction of details in the two (2) of the listed activities authorised in the original EA (dated 13 October 2011);
- Extend the validity period of the environmental authorisation by an additional 2 years;
- Amendment of the height of the wind measuring masts from 80m to 120m; and
- Amendment of Condition 40 of the additional Conditions to be added to the EA (Ref: LSA 105-439) to refer to Witberg Wind Power (Pty) Ltd instead of G7.

1.2 Terms of reference

An assessment is required to assess the impacts associated with the proposed amendments to the wind farm layout and turbine specifications, and to conduct a comparative assessment between the impacts identified during the EIA process and the impacts associated with the proposed wind farm layout and wind turbine specifications. The assessment must include:

- An assessment of all impacts related to the proposed changes;
- Advantages and disadvantages associated with the changes;
- Comparative assessment of the impacts before the changes and after the changes; and
- Measures to ensure avoidance, management and mitigation of impacts associated with such proposed changes, and any changes to the EMPr.

- The assessment must be clear on whether each of the proposed changes to the EA will:
 - Increase the significance of impacts originally identified in the EIA report or lead to any additional impacts; or
 - Have a zero or negligible effect on the significance of impacts identified in the EIA report; or
 - Lead to a reduction in any of the identified impacts in the EIA report.

Our Ref: HM\CENTRAL KAROO\LAINGSBURG\WITBERG WIND FARM



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Date:

12 October 2011

Case No:

110520JL19

Auto IDs:

1197 - 1540

FINAL COMMENT

**In terms of section 38(8) of the National Heritage Resources Act (Act 25 of 1999)
and the Western Cape Provincial Gazette 6061, Notice 298 of 2003**

Attention: Ms Claire Alborough
ERM Southern Africa
Silverwood House, Block A
Silverwood Close, Steenberg Office Park
Steenberg, 7945, Cape Town

CASE NUMBER: 110520JL19

DRAFT EIA: PROPOSED WITBERG WIND FARM

The matter above has reference.

Heritage Western Cape conducted a site visit on Wednesday 28 September 2011.

It was found that:

1. The proposed WEF will only be marginally visible from the town of Matjiesfontein as it is screened by buildings and trees.
2. The proposed WEF is situated west of the existing tower on the Witberg ridgeline
3. The view from which the proposed WEF will have the most impact is on the approach to Matjiesfontein along the N1 from Beaufort West.

Decision:

1. Given that we understand that only one of the two proposed WEFs of Witberg and Konstabel will be approved, the committee has no objection to the proposed development noting that the Konstabel WEF development is preferred to this proposal.

Terms and Conditions:

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for the proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to Heritage Western Cape immediately.

Should you have any further queries, please contact the official above and quote the case number above.

Yours faithfully

Andrew B Hall
Chief Executive Officer
Heritage Western Cape

Figure 2 The record of decision for the Witberg WEF

2 Findings of the Assessment

2.1 *The impacts relating to the proposed amendments*

During the 2011 assessment, it was determined that the main heritage impacts related to possible impacts to palaeontology and the setting or cultural landscape. Impacts to archaeology, built environment and graves were of low significance.

The proposed new layout will not change the impacts to paleontology which relates to the construction of the turbines bases in potentially sensitive rock formations, and particularly the access road where deep cuttings and incline changes will cause impacts. The significance of these is moderate negative without mitigation, however scientific benefit can be obtained if suitable mitigation is carried out (Hart 2011).

In terms of impacts to the cultural landscape or setting, the 2011 study found that there would be a high negative impact that could not be easily mitigated without reducing the number of turbines and placing them as far from Matjiesfontein as possible. The reduction of the number of turbines is likely to be an improvement with the significance of the impact shifting from high negative to medium negative. The VIA suggests that the overall impact of the turbines will remain largely unchanged from that already authorized. In heritage terms **an advantage of the amended layout, which now sees turbines less dominantly placed 11 km from Matjiesfontein as opposed to 9 km in the original proposal, will help alleviate visual impacts from the heritage town. Please see the impact table presented hereafter. From this perspective the amendment is supported.**

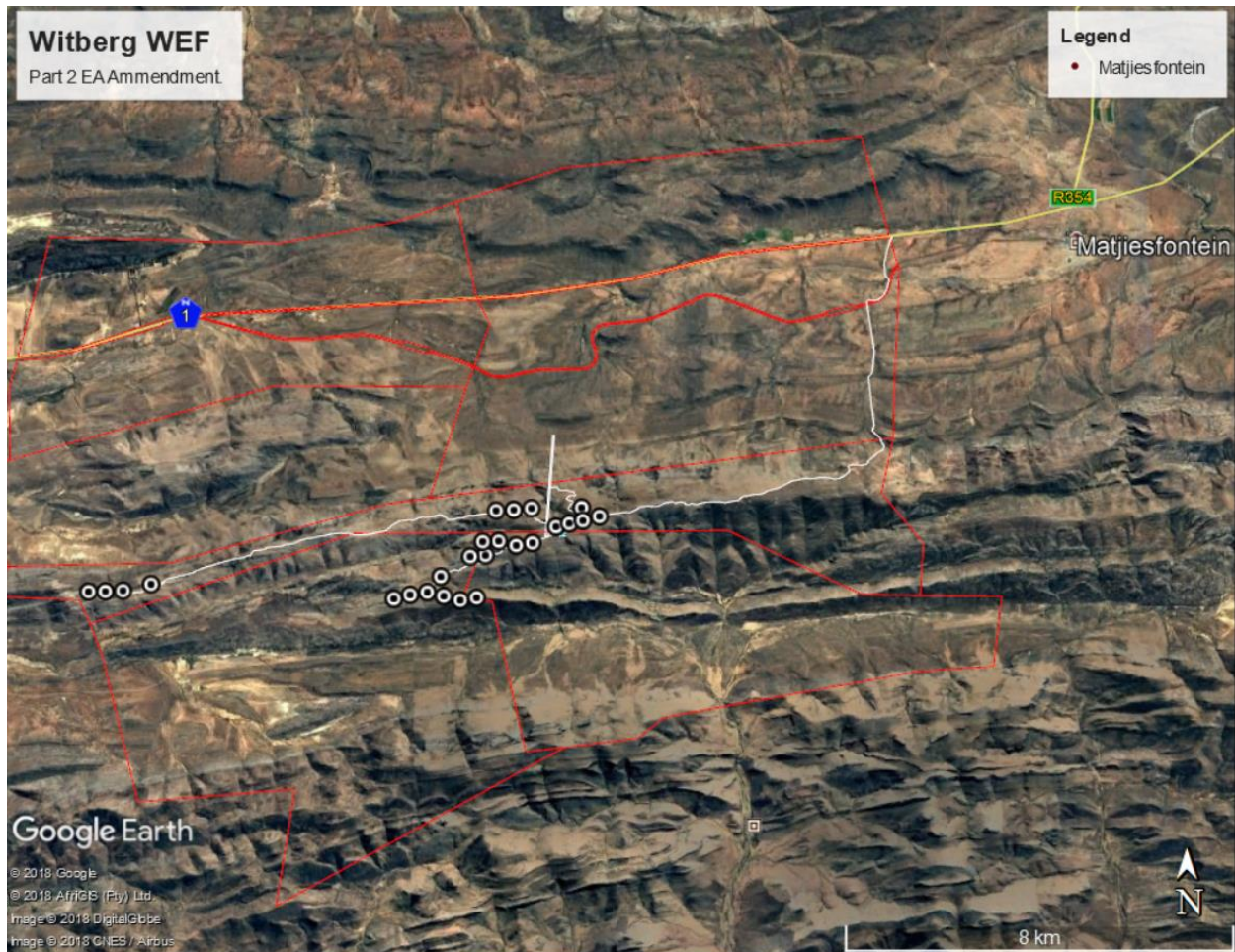


Figure 3 The amended layout.

2.1.1 Power lines and other associated infrastructure.

The power lines, access road and substation sites are all situated within the already HWC approved envelope of land that was comprehensively surveyed in 2011. This survey, which in fact exceeded the study area of the 2018 amendment, established that the heritage sensitivity was related to palaeontology. The significance ratings and mitigation recommended remains unchanged for this component in terms of the proposed amended layout.

2.2 Comparative impact assessment

The table below contrasts the main impact identified in 2011 to that of the proposed amendment. The amendment has resulted in a decrease in the impacts to setting and landscape.

Nature of impact: Setting and cultural landscape.

The impact relates to the affect the proposal will have on the setting around the site, especially with respect to important heritage sites such as Matjiesfontein that has a remote sense of place on the edge of the great Karoo. The industrialising of the surrounding rural and remote areas will have an impact on the sense of place. This impact related mostly to the operational phase of the project.

	Authorised		Proposed amendment	
	Without mitigation	With mitigation	Without mitigation	With mitigation
Extent	Low (1)	Low (1)	Low (1)	Low (1)
Duration	Permanent (5)	Permanent (5)	Permanent (5)	Permanent (5)
Magnitude	High (8)	High (8)	Medium (5)	Medium (5)
Probability	Definite (5)	Definite (5)	Probable (3)	Probable (3)
Significance	70 (high)	70 (high)	33 (Medium)	33 (Medium)
Status (positive or negative)	Negative	Negative	Negative	Negative
Reversibility	Very low	Very low	Very low	Very low
Irreplaceable loss of resources?	No	No	No	No
Can impacts be mitigated?	No	No	No	No

Mitigation: No mitigation possible. Please refer to visual impact assessment.

Cumulative impacts:

Since 2012 when the first EIA was completed, the amount of Wind Energy Facilities has increased. In particular on the Sutherland Escarpment and Moordenaars Karoo and Tanqua Karoo has seen a number of proposals. While these are not directly in sight of Witberg, there is a regional change of character in terms of loss of wilderness qualities and sense of place.

Residual Risks:

Residual risks are few and relate to chance encounters of archaeological and palaeontological material after the proposed development is in place.

3 Conclusion

The assessment finds that the amended layout and turbine specifications along with the non-spatial amendments proposed should be supported. No other potential impacts identified have changed and no new potential impacts have been identified.

From a heritage perspective, the proposed amendments are considered acceptable.

3.1 Mitigation

Mitigation measures remain unchanged.

4 Reference

Hart, T. 2011. Proposed Witberg Wind Farm. Jantjesfontein (Farm RE/164), Besten Weg (Farm 1/150 and Farm RE/150), Tweedside (Farm RE/151), and Elandskrag (Farm 1/269), Laingsburg, Western Cape Province. ACO Associates report prepared for ERM.

Lawson, Q and Oberholzer, B 2018. Witberg WEF Part 2 EA Ammedment. Visual statement.