

SAHRA Case No. 6537

AMMENDMENT TO REPORT

Archaeological Impact Assessment Proposed Springbok Wind Energy Facility near Springbok, Northern Cape Province

Application for Amendment of Environmental Authorisation

Prepared for:

HOLLAND & ASSOCIATES ENVIRONMENTAL CONSULTANTS

Att: Ms Nicole Holland

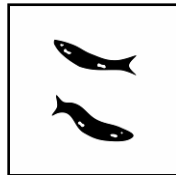
P.O Box 31108, Tokai, 7966

Email: Nicole@hollandassociates.net

On behalf of:

Mulilo Springbok Wind Power (Pty) Ltd

By



Jonathan Kaplan

Agency for Cultural Resource Management

5 Stuart Road, Rondebosch, 7700

Mobile: 082 321 0172

Email: acrm@wcaces.co.za

**JANUARY
2017**

Table of Contents

	Page
1. INTRODUCTION	2
1.1 Background and brief	2
1.2 Application for Amendment	3
2. TERMS OF REFERENCE	4
3. SUMMARY OF ANTICIPATED ARCHAEOLOGICAL IMPACTS	7
4. STATEMENT OF SIGNIFICANCE	8
5. MITIGATION AND MANAGEMENT ACTIONS	8
6. REFERENCES	8

1. INTRODUCTION

1.1 Background and brief

This report is an amendment to an Archaeological Impact Assessment (or AIA) conducted by ACRM in 2010¹ (Kaplan 2010).

The original development proposal entailed the establishment of a wind energy facility (WEF) near Springbok in the Namaqualand region of the Northern Cape, comprising 37 turbines and associated infrastructure including underground cables, overhead power lines, a substation, internal access roads, and construction camps/laydown areas (Figure 1).

The following heritage resources were recorded at the time:

Proposed wind turbines

➤ No archaeological remains were located during an assessment of the layout of the proposed wind turbines. The location sites for the turbines are situated at high altitudes (over 1000m ASL) on a formerly mined mountain range.

Proposed transmission line

➤ Two indeterminate quartzite flakes of *low* (Grade 3C) significance were recorded in the proposed 3.8km long overhead powerline.

➤ A grave was recorded in the powerline servitude. All graves are rated as having *high* (Grade 2A) significance.

➤ The ruin of a collapsed stone kraal of *low* (Grade 3C) significance was recorded.

Proposed substation

➤ No archaeological remains were found in the footprint area of the proposed substation.

Proposed construction camp sites

➤ A Middle Stone Age (MSA) flake of *low* (Grade 3C significance) was recorded in the footprint area of Construction Camp 1.

➤ Several isolated MSA tools, and a few Later Stone Age lithics and some faded rock art of *low* (Grade C) significance were recorded close to the footprint area of Construction Camp 2.

➤ A Christian grave was recorded about 75m west of the rock art site/overhang on the edge of proposed Construction Camp 2. Graves are rated as having *high* (Grade 2A) significance.

¹ (SAHRA Case No. 6537).

The following recommendations were made (Kaplan 2010):

1. The grave in the proposed powerline servitude must be cordoned/fenced off.
2. The grave on the edge of the Construction Camp 2 must be cordoned/fenced off.
3. No plant equipment, material or buildings must be located near the grave, or close to the rock art site in the laydown area/Construction Camp 2.
4. In archaeological terms, no fatal flaws occur and the proposed Springbok WEF should be allowed to proceed.

On reviewing the AIA, South African Heritage Resource Agency (SAHRA) issued a 'Final Comment' on 7 October, 2014 (Ref. 9/2/066/0004), in which the following was requested:

1. A walk through survey of the final powerline corridor must be undertaken by a heritage specialist to identify areas where mitigation may be required.
2. The position of the turbines in the final layout must be inspected by an archaeologist before construction.
3. During the construction phase the shelter and the identified graves should be cordoned off to ensure that no accidental damage to the heritage sites occurs.
4. A report from the survey must be submitted to SAHRA APM unit for further comments.

1.2 Application for Amendment

Mulilo Springbok Wind Power (Pty) Ltd now wishes to increase the generating size of the wind turbine generators (WTG) in order to align to current international models, while reducing the number of the WTGs at the wind energy farm.

The following changes are now proposed (Table 1)

Component	Approved	Proposed amendment
No. of turbines	37	Maximum of 25
Generation capacity per turbine	1.5MW	2.0 - 4.5MW depending on the number of turbines
Generation capacity of the WEF	55.5MW	55MW
Rotor/blade diameters	88m	Maximum of 160m
Hub height	80m	Maximum of 140m
Temporary construction pad	40 x 20 m	40 x 40m
Permanent affected area (foundation size)	16 x 16m & 2m deep	16 x 16m and 3m deep

Table 1. Proposed changes to the wind turbine parameters

A topographical layout of the proposed (new) amended Springbok WEF is illustrated in Figure 2.

The proposed amendments require re-assessment of the potential impacts associated with the proposed project, and therefore require an update to the specialist studies that have already been undertaken.

Holland & Associates Environmental Consultants has been appointed by Mulilo Springbok Wind Power (Pty) Ltd to undertake the requisite application for amendment of the Environmental Authorisation (EA) for the proposed project, in accordance with the National Environmental Management Act (NEMA) (No. 107 of 1998) EIA Regulations (2014).

The application for amendment of the EA requires a re-assessment of potential archaeological impacts associated with the proposed changes to the project description.

2. TERMS OF REFERENCE

ACRM has been appointed to compile an addendum to the AIA, addressing the following:

- The implications of the proposed amendments in terms of the potential impact(s);
- A re-assessment of the significance (before & after mitigation) of the identified impacts in light of the proposed amendments, for the construction and operational phases, including consideration of the following:
 - Cumulative impacts;
 - The nature, significance and consequence of the impact;
 - The extent and duration of the impact;
 - The probability of the impact occurring;
 - The degree to which the impact can be reversed;
 - The degree to which the impact may cause irreplaceable loss of resources;
 - The degree to which the impact can be avoided, managed or mitigated;

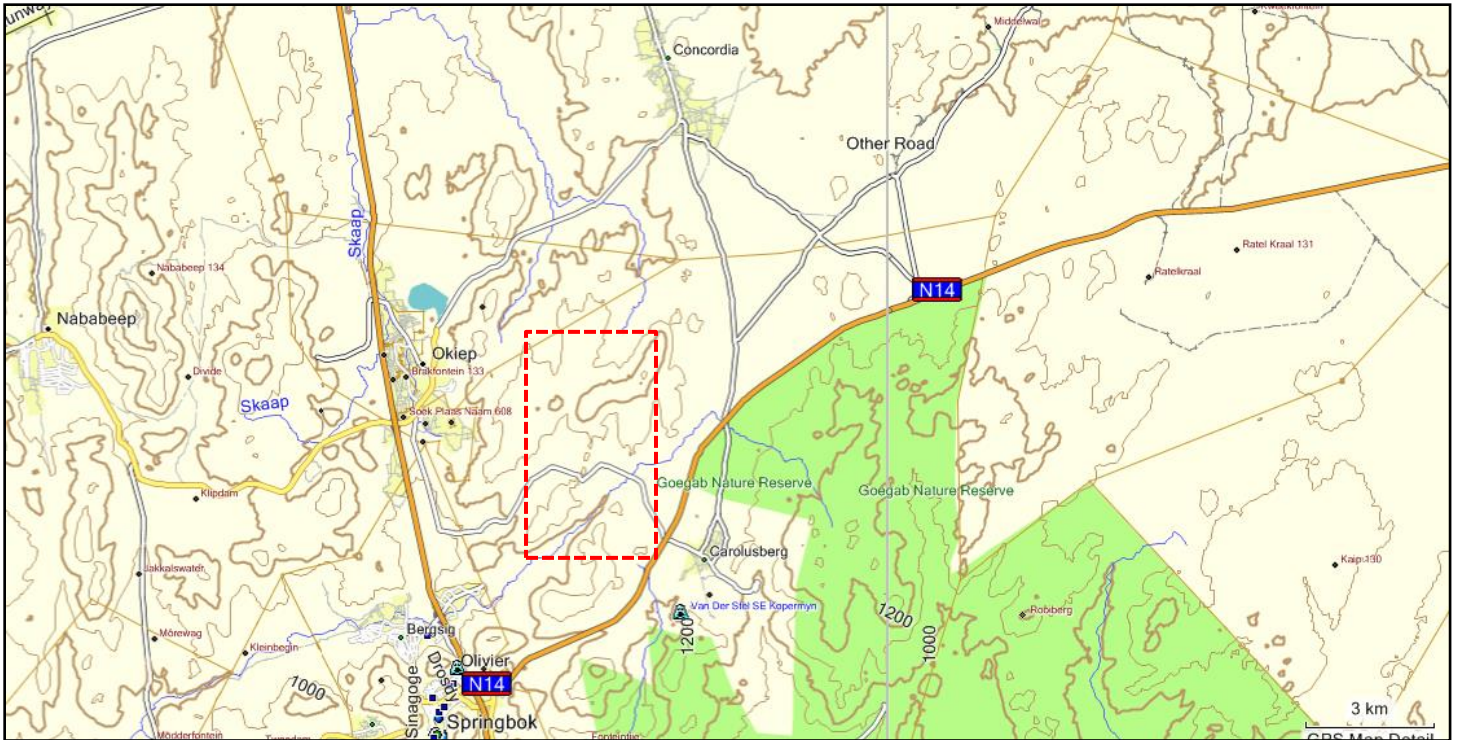


Figure 1. Locality Map. The proposed Springbok WEF (red polygon) is located near Okiep, a few kms north of Springbok in the Namaqualand region of the Northern Cape.

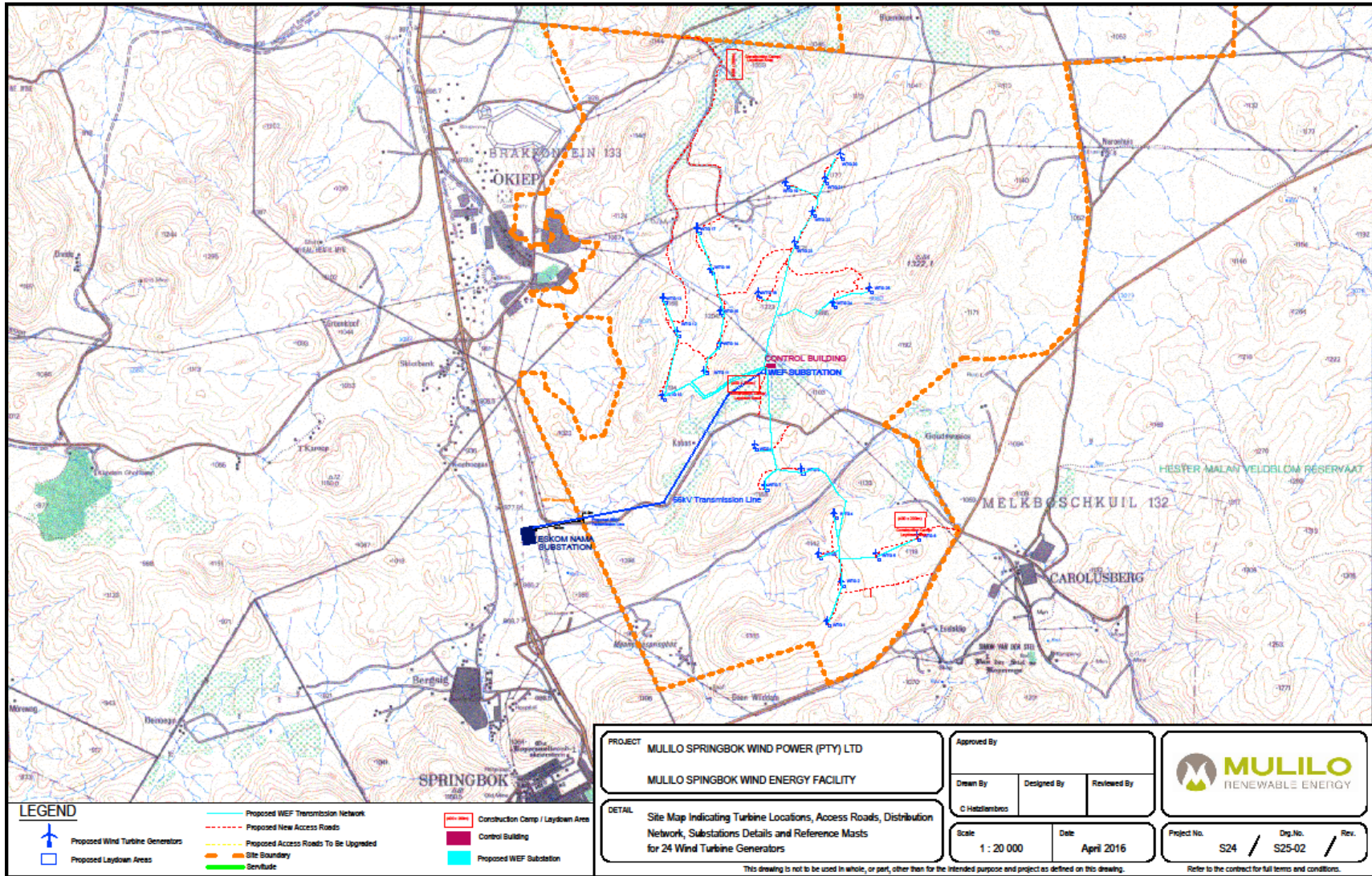


Figure 2.Springbok Wind Energy Facility: Topographic Map of the Proposed Updated Layout (2017).

3. SUMMARY OF ANTICIPATED ARCHAEOLOGICAL IMPACTS

A summary of the anticipated archaeological impacts associated with the proposed amended WEF² is indicated below.

Nature of impact: The potential impact of the construction of the proposed Springbok Wind Energy Farm on archaeological resources		
	Without Mitigation	With Mitigation
Extent of impact	Local	Local
Duration of impact	Permanent	Permanent
Cumulative impact	Medium-Low	Low
Probability	Probable	Improbable
Significance	High (burials) & Low	Low
Consequence	High-Low	Low
Degree to which impact can be reversed	High-Low	Low
Degree to which impact may cause irreplaceable loss of resources	High-Low	Low
Degree to which the impact can be avoided, managed or mitigated	Medium-Low	Low

Table 1. Impact Assessment rating of proposed amended layout of the Springbok WEF: Construction Phase

Nature of impact: The potential impact of the operation of the proposed Springbok Wind Energy Farm on pre-colonial archaeological resources		
	Without Mitigation	With Mitigation
Extent of impact	Local	Local
Duration of impact	Permanent	Permanent
Cumulative impact	High	Low
Probability	Improbable	Improbable
Significance	High (burials) & Low	Low
Consequence	High	Low
Degree to which impact can be reversed	High	Low
Degree to which impact may cause irreplaceable loss of resources	High	Low
Degree to which the impact can be avoided, managed or mitigated	Low	Low

Table 2. Impact Assessment rating of proposed amended layout of the Springbok WEF: Operational Phase

² Amended Alternative 1 (refer to Figure 2)

4. STATEMENT OF SIGNIFICANCE

From an archaeological perspective there are no fatal flaws and provided that the recommendations (for mitigation & management) are implemented (Kaplan 2010), there are no objections to the proposed development proceeding.

It is maintained that the proposed Amended Option (i. e. amended Alternative 1 layout) will not result in any changes to the significance of the impacts assessed in the original AIA for the proposed project.

5. MITIGATION AND MANAGEMENT ACTIONS

1. A walk through survey of the final power line corridor must be undertaken by a heritage specialist to identify areas where mitigation may be required.
2. If stipulated by SAHRA, the position of the turbines in the final layout must be inspected by an archaeologist before construction. However, indications are that this is no longer required.
3. During the construction phase, the rock art shelter and the identified graves should be cordoned off to ensure that no accidental damage to the heritage sites occurs.
4. A report from the survey must be submitted to SAHRA APM unit for further comments.

6. REFERENCES

Kaplan, J. 2010. Archaeological Impact Assessment of a proposed Wind Energy Facility near Springbok, Northern Cape. Report prepared for DJ Environmental Consultants. ACRM Cape Town