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HERITAGE CONSULTANTS

SPECIALISTS IN HERITAGE IMPACT ASSESSMENTS AND RELATED  
APPLICATIONS AND REPORTS IN TERMS OF THE NATIONAL HERITAGE  
RESOURCES ACT

14<sup>th</sup> January 2018

APPLICATION FOR AMENDMENT OF THE DEA ENVIRONMENTAL AUTHORISATION (DEA REFERENCE NUMBER: 12/12/20/1651) ISSUED ON 15 AUGUST 2011, AS AMENDED, AND AMENDMENT OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) & FINAL LAYOUT PLAN FOR THE AUTHORISED MAANHAARBERG WIND ENERGY FACILITY NEAR DE AAR, NORTHERN CAPE PROVINCE.

FARMS: REMAINDER FARM NO 130, SMOUSPOORT; REMAINDER PORTION 2 FARM NO 131, ZWARTKOPPIES. DISTRICT DE AAR, NORTHERN CAPE PROVINCE.

ADDENDUM TO THE HERITAGE ASSESSMENT (MELANIE ATTWELL & ASSOCIATES) DATED SEPTEMBER 2010.

**1. Original Assessment:**

1.1. Introduction

A Heritage Impact Assessment for the Maanhaarberg Wind Energy Facility (WEF) (De Aar 1 WEF) near De Aar in the Northern Cape Province, prepared for DJ Environmental Consultants in 2010 on behalf of Mulilo Renewable Energy (Pty) Ltd (now Longyuan) Mulilo De Aar Wind Power (RF) (Pty) Ltd, refers.

A Notification of Intent to Develop and heritage impact report was submitted to the Heritage Department (ref M J Sinthemule H.2.8.22) of the Municipality Ngwao Boswa Kapa Bokone and comment received 12<sup>th</sup> October 2010. The heritage authority noted while some local heritage resources may be affected, that no further work on the impact of the proposal on the site as a significant cultural landscape were considered necessary. They also noted archaeological impacts as analysed by The Agency for Cultural Resource Management (2010) were to be handled by the South African Heritage Resources Agency.

Environmental Authorisation was granted by the Department of Environmental Affairs (DEA) on 15 August 2011 for 67 Wind Turbine Generators (WTGs) with a potential generation capacity of 100MW. Construction of the WEF commenced in August 2015 and is currently nearing completion. Earlier amendments were introduced during the process of planning and environmental assessment amendments were made.

There have been subsequent applications for amendments to the Environmental Assessments which have been granted. The applicant now wishes to apply for a further amendment to the DEA EA. These further amendments were outlined by Holland and Associates for heritage assessment and

review. Heritage Impacts were also required by Holland and Associates to be consolidated (where applicable) to both archaeological and visual impacts as such impacts may contribute to the heritage value of the affected sites and as defined in terms of the NHRA.<sup>1</sup>

## 1.2. Identification and assessment of heritage resources on affected sites.

### *Heritage Resources identified and assessed.*

It was found that the heritage resources (as defined in the NHRA) were scattered over a wide area and of generally low to low-moderate local cultural significance. All historic elements have undergone changes; and the identified barn site at Zwartkoppies has been extensively upgraded. Heritage sites have been identified as the following and graded according to local and provincial significance:

- The barn at Zwartkoppies Grade 3c (of some local significance)
- The werf at Smouspoort including farmhouse – ungraded
- The farm and werf at Zwartkoppies - ungraded
- The Boer meeting place – Identified in the AIA (Kaplan 2010) but currently unsupported by documentary research 3b (of considerable local significance)
- Stone walling Smouspoort 3c (of some local significance)

## 1.3. Findings of the HIA (September 2010).

- The heritage report found that there were no highly significant heritage buildings or structures on the affected site, or objects of outstanding significance in the immediate vicinity affected by the proposed wind turbines and related infrastructure. However, it noted that there were structures older than 60 years in the vicinity.<sup>2</sup> These are identified in the original Report (see 1.2 above).
- It noted that issues around archaeology, pre-colonial settlement and paleontology formed the subject of separate archaeological reports by J Kaplan and J Almond. A Visual Impact Assessment as undertaken by Viridian Consulting informed the heritage study and was reflected in the assessment.
- In terms of applicable heritage legislation, the report found that Section 27 of the National Heritage Resources Act did not in this instance apply. Section 34 of the Act did apply as there were farm structures on the farms that contained structures or historical elements older than 60 years. They were not considered gradable in terms of heritage significance other than the stone wall at Smouspoort and the barn at Zwartkoppies.
- The issue of war graves and a Boer War meeting site (as identified by the Archaeological Assessment) was regarded as significant from a heritage perspective. No tangible evidence of the presence of graves was noted but should, during the course of any excavation, historic graves be uncovered they would be subject to the relevant clauses of Section 36 of the National Heritage Resources Act.

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<sup>1</sup> National Heritage Resources Act. Act 25 of 1999.

<sup>2</sup> Amendments to such structures would be subject to S 34 of the NHRA) or in the case of an EIA/HIA S 38(8).

- The issue of the cultural landscape when applied to generally accepted definitions and criteria did not apply; as the landscape, although wild and scenic, did not fulfill the criteria of a significant cultural landscape. There were small pockets of domesticated farmland situated along the Elandsfontein River at Zwartkoppies and at Smouspoort. The farms were situated close to passes through the mountainous areas of the Maanhaarberg.
- The report fulfilled the requirements of Section 38(8) and 38(4) of the National Heritage Resources Act (Act 25 of 1999) and is compliant with the HIA/EIA guidelines as set out by DEADP.
- In heritage terms there were no significant constraints identified in terms of the proposals. Issues affecting visual impact on landscape and farm landscapes, were identified as potentially negative in terms of scope and assessed in terms of the VIA, which found no heritage relevant impact constraints.

## 2. 2017 Amendments to the DEA EA.

### 2.1. The further amendments to the EA to be assessed in terms of heritage impact (where applicable) were as follows:

Ref	Ref to the DEA EA	Condition attached	Amendment
1	1.1	“Layout Alternative 1 as described in the EIR dated November 2010 is hereby authorised.	Hard-standing areas to increase from 40 x 20m (or 40m x 40m as originally assessed by some specialists) to 50 x 50m. Internal electrical reticulation lines to change from 22kV to 33kV.
2	1.5.		The recommendations and mitigation measures recorded in the EIR dated November 2010 or approved amendments to be adhered to.
3	10.12.11	All electrical collector lines must be buried in a manner that minimises additional surface disturbance.	Amendment for all internal reticulation lines “must be overhead in a manner that minimises additional surface disturbance”.
4	10.5.4.	Commercial messages and graffiti on turbines must be avoided.	Condition to be removed. Longyuan would like to have a company logo on the nacelle.
5	10.8.1	Underground cables and internal access roads must be aligned as much as possible along existing infrastructure to limit	Above ground internal reticulation lines and access roads aligned as much as possible along existing infrastructure to limit damage to vegetation heritage and watercourses.

		damage to vegetation and watercourses.	
6	10.13.1-3.	Conditions relating to the 132V overhead powerline.	Condition removed. No impacts.

**2.2. Nature of additional amendments as listed in above table and relationship to heritage impacts:**

Amendment 1: WTG to be connected to a 33kV transmission line instead of a 22kV transmission line, and the area of adjacent hard-standings to increase: No altered heritage impacts.

Amendment 2: Recommendations, mitigation measures and amendments must be adhered to: Mitigation measures remain.

Amendment.3: Change from underground to aboveground internal reticulation lines while ensuring minimum surface disturbance. Potential for archaeological impacts reduced.

Amendment.4: removal of condition relating to the commercial messages, etc, on WTGs. Heritage impact is unchanged.

Amendment nr.5: Change in installation of internal reticulation lines from underground to aboveground, and internal access roads, to limit damage to vegetation and watercourses. Physical impact on local heritage resources unchanged.

Access Road (RH1) Heritage Buffer area infringement by storm water trench. No potential heritage impacts.

Amendment nr.6: Condition relating to the 132kV powerline is omitted; no heritage impact.

**2.3. Implications of Amendments to the revised Layout Plan (2017)**

These are the amendments to the final layout plan:

- Micro-siting of wind turbine 21.
- The realignment of the approved access road onto the Zwartkoppies farm.
- Adjustment to construction camp location.
- The updating of the EMPr to reflect the presence of logos. Decals and logos have been found to be visually acceptable on the masts (Hanson 2017).
- Change from underground to above ground reticulation lines and cabling. No heritage impacts although noted it will contribute to visual clutter (Hanson 2017).
- Infringement on a 15-m heritage buffer. (Extent of infringement unclear but does not affect heritage resources and impact not problematic).

2..3.1. The following carried potential for heritage impacts:

- Replacement of extended hard standings Amendment 1.

- The realignment of the approved access road. (Amendment 3)
- Changes to heritage buffers. Amendment 5 (layout)
- Minor repositioning of construction camp. Layout amendment
- The presence of commercial logos Amendment 4.
- Change from below to above ground reticulation lines and cabling. Amendment 5.

#### 2.4. The definition of heritage and related impact review

Heritage Resource is defined as “any place or object of cultural significance”. (S 2(xvi)) NHRA. Cultural significance is defined as “aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance”. (S 2(vi) NHRA).

Consequently, as the nature of heritage is inclusive rather than exclusive, as visual, archaeological and paleontological issues affect the value and nature of the resource. As a result, the VIA (2017), PIA (2017) and AIA (2017) addendums have been consulted in terms of the assessment of any potential and further heritage impacts.

### 3. Impact Table: The following table combines heritage, paleontological, archaeological and; where appropriate; visual impact considerations.

#### 3.1. Amendment 1: Amendment from a 22kV transmission line to a 33kV transmission line; hard standings.

Summary: No changes in heritage impact, visual impact or archaeological impact.

Measurement	Without mitigation	Mitigation
Extent	local	local
Duration	Long term	Long term
Magnitude	low	low
Probability	definite	definite
consequence	low	low
significance	low n/a	low n/a
nature	neutral	neutral
reversibility	low	low
Loss of irreplaceable heritage resources	Not affected	Not affected.
Management of impacts	no	
Mitigation	No mitigation as no change to heritage impact, archaeological or visual impact	No mitigation as no change to heritage impact, archaeological or visual impact
Cumulative impacts	None affecting heritage	None affecting heritage
Residual impacts	none	none

### 3.2. Amendment 5.

Amendment from a buried internal reticulation lines to above ground internal reticulation lines.

Summary: No Heritage archaeological resources affected. Over grounding is more visible but visual clutter non-problematic (Hansen 2017).

Measurement	With mitigation	No mitigation
Extent	local	local
Duration		Long term
Magnitude	low	low
Probability	high	high
Consequence	low	low
significance	low	low
nature	neutral	neutral
reversibility	low	low
Loss of irreplaceable heritage resources	none	None. Over grounding will reduce potential archaeological paleontological heritage resource risks.
Management of impacts		Not possible
Mitigation		None necessary.
Cumulative impacts	None affecting heritage	None affecting heritage
Residual impacts	none	

### 3.3. Amendment 4. Amended to include presence of logos.

Summary: No heritage, archaeological or visual impacts provided assessment of VIA are met i.e. visually sensitive receptors would be at a distance and impact reduced as a result.

Measurement	Without mitigation	With mitigation
Extent	local	local
Duration	Long term	Long term
Magnitude	low	low
Probability	high	high
consequence	low	low
significance	low	low
nature	neutral	neutral
reversibility	low	low
Loss of irreplaceable heritage resources	none	None.
Management of impacts	unlikely	

Mitigation		Decals no longer defined as visual clutter. Distances involved mean that logos or decals will not be seen.
Cumulative impacts	Not on heritage	Not on heritage
Residual impacts	none	none

3.4. Amendments to changes in internal reticulation lines and internal access roads affecting heritage buffer areas and heritage resources. Amendment 5.

Summary: Heritage Resource as identified by J Kaplan (Boer meeting place) and reference to potential graves not affected by amendments.

Measurement	Without mitigation	With mitigation
Extent	local	local
Duration	Short term	medium term
Magnitude	low	low
Probability	probable	probable
consequence	low	low
significance	low	low
nature	neutral	neutral
reversibility	low	Low with mitigation
Loss of irreplaceable heritage resources	unlikely	unlikely
Management of impacts	no	Yes. If graves uncovered, S 36 of NHRA applies.
Mitigation		Management of potential archaeological paleontological and grave finds (S 35,36).
Cumulative impacts	None on heritage	None on heritage
Residual impacts	none	none

#### 4. Conclusions

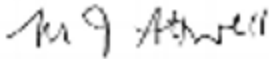
Impact of the amendments on heritage including archaeological and character landscape areas are not expected to change. There is no physical impact on the heritage resources which have been identified as of local significance; and there is no level of change in terms of any further nature of the impact. No further mitigation is therefore required in terms of heritage (S 38(4)) of the NHRA.

Insofar that Visual Assessments form part of the assessment of the landscape character of the area and the impacts of the proposal thereof, they have been viewed for the purposes of this addendum. Visual impacts have been assessed (Hansen) and it has been concluded that there would be no increased level of impact on the landscape because of the proposed amendments.

Kaplan (2017) assess that the proposed amendments will not result in an increased level or change in terms of the nature of the impacts nor are further mitigation measures required in terms of the amendments or the Environmental Management Programme Report (EMPr).

Consequently, impact on heritage is regarded as unchanged and no further mitigation measures are identified other than those existing in terms of the NHRA.

I therefore conclude that from a heritage perspective, proposed amendments do not alter the original heritage impact assessment in any significant way.



Melanie Attwell

Melanie Attwell and Consultants

14<sup>th</sup> January 2018.