



SOUTH AFRICAN HERITAGE RESOURCES AGENCY  
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FOR ATTENTION: **PHRA: Eastern Cape**

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SAHRA Contact Person: **Dr Mariagrazia Galimberti**  
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## **REVIEW COMMENT ON ARCHAEOLOGICAL AND PALAEONTOLOGICAL IMPACT ASSESSMENTS**

**BY ARCHAEOLOGY/ PALAEONTOLOGY UNIT OF THE HERITAGE RESOURCES AGENCY**

*South Africa has a unique and non-renewable archaeological and palaeontological heritage. Archaeological and palaeontological sites are protected in terms of the National Heritage Resources Act (Act No 25 of 1999) and may not be disturbed without a permit. Archaeological Impact Assessments (AIAs) and Palaeontological Impact Assessments (PIAs) identify and assess the significance of the sites, assess the potential impact of developments upon such sites, and make recommendations concerning mitigation and management of these sites. On the basis of satisfactory specialist reports SAHRA or the relevant heritage resources agency can assess whether or not it has objection to a development and indicate the conditions upon which such development might proceed and assess whether or not to issue permission to destroy such sites.*

*AIAs and PIAs often form part of the heritage component of an Environmental Impact Assessment or Environmental Management Plan. They may also form part of a Heritage Impact Assessment called for in terms of section 38 of the National Heritage Resources Act, Act No. 25, 1999. They may have other origins. In any event they should comply with basic minimum standards of reporting as indicated in SAHRA Regulations and Guidelines.*

*This form provides review comment from the Archaeologist of the relevant heritage resources authority for use by Heritage Managers, for example, when informing authorities that have applied to SAHRA for comment and for inclusion in documentation sent to environmental authorities. It may be used in conjunction with Form B, which provides relevant peer review comment.*

- A. PROVINCIAL HERITAGE RESOURCES AUTHORITY: Eastern Cape .....**
- B. AUTHOR(S) OF REPORT: Mr Dave Halkett, Dr Lita Webley, Mr Jayson Orton and Mr Hugo Pinto**
- C. ARCHAEOLOGY CONTRACT GROUP: ACO Associates CC**
- D. CONTACT DETAILS: 8 Jacobs Ladder, St James, Cape Town 7945, Cel: 073 141 8606**
- E. DATE OF REPORT: October 2010**
- F. TITLE OF REPORT: Heritage Impact Assessment of the Proposed Amakhala-Emoyeni Wind Energy Facility, Cookhouse District, Eastern Cape.**
- G. AUTHOR(S) OF REPORT: Dr Billy de Klerk**
- H. ARCHAEOLOGY CONTRACT GROUP: Albany Museum**
- I. CONTACT DETAILS: Somerset Street, Grahamstown, 6139, Tel: 084 582 6072, email: b.deklerk@ru.ac.za**
- J. DATE OF REPORT: September 2010**
- K. TITLE OF REPORT: Palaeontological Impact Assessment of a proposed wind energy facility to be situated on a site south-east of Cookhouse and south**

**of Bedford in the Eastern Cape province. The Amakhala-Emoyeni Wind Energy Facility**

- L.** Please circle as relevant: Heritage component of **EIA** / EMP / HIA / CMP/ Other (Specify) .....
- M.** REPORT COMMISSIONED BY (**CONSULTANT** OR DEVELOPER): **Savannah Environmental (Pty) Ltd**
- N.** CONTACT DETAILS: **Ms Karen Jodas, PO Box 148, Sunninghill, 2157, Gauteng, Tel: 011 234 6621**
- O.** COMMENTS: .....
- Please see comment on next page.....*

## REVIEW COMMENT ON HERITAGE SCOPING ASSESSMENT

**Mr Dave Halkett, Dr Lita Webley, Mr Jayson Orton and Mr Hugo Pinto on behalf of ACO Associates**

**Dated: October 2010, Received: October 2010**

**Heritage Impact Assessment of the Proposed Amakhala-Emoyeni Wind Energy Facility, Cookhouse District, Eastern Cape.**

**Dr W. De Klerk**

**Dated: September 2010, received: October 2010**

**Palaeontological Impact Assessment of a proposed wind energy facility to be situated on a site south-east of Cookhouse and south of Bedford in the Eastern Cape Province. The Amakhala-Emoyeni Wind Energy Facility**

### INTRODUCTION

Windlab Development South Africa has applied to the Department of Environmental Affairs for the possible construction of the Amakhala Emoyeni Wind Energy Facility between Bedford and Cookhouse, in the Eastern Cape Province. Savannah Environmental was commissioned its Environmental Impact Assessment Process.

The project will entail, in an area which is at present used mostly for stock and game farming, the construction of up to 350 turbines, three substations, internal access roads and overhead power lines in an area of 273 km<sup>2</sup> for a total energy output between 500 and 750 MW. The connection between the turbines will be underground.

After a foot survey, the archaeologists acknowledged that the area is very rich from a heritage perspective, and heritage resources from the Early Stone Age all the way through historical period and modern time were identified. Mitigation will be necessary for some of the sites and measures should be put in place to avoid damage to other heritage sites.

Palaeontologically the area is underlain by the lower Beaufort Group, belonging to the Karoo Supergroup. According to the specialist, three different fossil biozones will be impacted by this wind energy facility: the *Cistecephalus*, the *Tropidostoma* and the *Pristerognathus* one.

At the time of the surveys, the final position of turbines, access roads and substations had not been finalised yet.

### DISCUSSION and SAHRA RECOMMENDATIONS

Amongst the heritage resources identified, the archaeologists listed four single graves, twenty cemeteries with a number of burials between two and thirty, and five graveyards with more than thirty burials, with the most populated one counting about 76 burials.

About 90 sites ranging between Stone Age scatters and open-air sites were also recorded: most of them seem to be dating to the Early (32) and Middle Stone Age, with some Later Stone Age sites also identified.

In terms of structures, eighty-nine of them, were recorded in the entire project area. Most of these are older than 60 years and therefore protected by the NHRA. Amongst these, there are also a high number of stone features, such as historic boundary stones, stone walls and kraals.

During the field survey the palaeontologist identified possible areas where the likelihood of recording fossils was higher, such as for instance on the side of the valleys, along river beds and where rocky outcrops are exposed. Seven fossil sites were identified in total in the investigated area: one site of fossil bone on Farm Olive Wood Estate 169, two of fossil plants on Farm Brakfontein 220 and Brakke Fonteyn 218, two trace fossils and one fossil wood on Farm 260 and one concretion on Farm Vogel Fonteyn 219.

SAHRA Archaeology, Palaeontology and Meteorites Unit and Burial Grounds and Graves Unit support the recommendations of the authors and require that:

- The final position of turbines and related infrastructures, including access roads,

must be decided in consultation with an archaeologist and palaeontologist. If deemed necessary, a micro-siting survey of the footprint of turbines and related infrastructure must be undertaken. After this survey a report must be sent to SAHRA for comments.

- Site 457 (OWE/23-27A) should not be impacted upon, for this reason a well demarcated temporary fence should be built around it during construction and its presence should be made clear on maps for future reference. If the site cannot be avoided and it is deemed necessary for the development to impact on this site, a Phase 2 Archaeological Impact Assessment in the form of excavation is required by SAHRA. The specialist will require a mitigation permit from SAHRA. On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist, SAHRA will make further recommendations in terms of the site. Very often permission is given for the destruction of the remainder of the archaeological or palaeontological sites. If a site has high heritage significance, the authority may request that it be conserved and that mini-site management plans, interpretive material and possibly protective infrastructure be established.
- The developer must apply for a destruction permit for any archaeological site to be impacted. An exception is made for site identified as one or very few flakes and one historical artefact, such as a bottle (an exemption from a destruction permit is therefore given for sites 427, 428, B353, B367, B368, B369, B370, 414, 418, 419, 421, B354, B355, B356, B358, 508, B377, 492, B374, B372, 552, 407, 408, 409, B351, B352, B375, B376, B363, B364, 423, 424, 425, 353, 376, 378, 386, 387). The developer, or the archaeologist on his/her behalf, may apply for a combined destruction permit for all these sites.
- The graves should be restored where these are dilapidated, protected and conserved. For this purpose, a proper fence must be built around them (if not already existing) including entry gates to allow visits from relatives and family friends. The fence must be placed 2 meters away from the perimeter of the graves. No development or construction area is allowed within 30 meters from the fence line surrounding the graves.
- Alternatively, if the area where the burials are located fall within the development footprint, then provisions stipulated in section 36 of the National Heritage Resources Act (Act No. 25 of 1999) are applicable, and relocation of these might proceed provided that a public consultation process is followed (see Appendix 1 and SAHRA Regulations). Decisions in terms of section 36 of the NHRA are responsibility of the SAHRA's Burial Grounds and Graves (BGG) Unit (Ms Jennifer Kitto, email: jkitto@sat.sahra.org.za and Mr. T. Phili, email: tphili@sat.sahra.org.za).
- All stone structures, stone kraals and enclosures within 200m from the construction area must be protected through temporary fencing. If this is deemed impossible, and construction will have to impact on any stone structures of medium and high significance, a Phase 2 in the form of recording and/or excavation, is required. For sites of low significance a destruction permit must be applied for with SAHRA.
- Destruction of any of the seven palaeontological sites identified during the survey must be avoided, if this is not possible, a mitigation permit must be applied for.
- An ECO must be trained by a professional palaeontologist on identifying fossil material. The possibility of encountering fossils during deep excavations and trenching is defined as low by the palaeontologist, but a trained ECO should be on site in the event that palaeontological resources are identifying.
- It is important that the position of all sites is recorded on construction maps so that accidental destruction of a site is avoided as much as possible and kept at its minimum.
- Considering the high number of built environment structures identified on the properties, older than 60 and 100 years, it is requested that consultation with a conservation architect is undertaken in order to identify and specify conservation measures for these structures. This is required before micro-siting for turbine position may proceed.
- If any evidence of archaeological or palaeontological sites or remains (e.g.,

remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during development, SAHRA APM Unit (Mariagrazia Galimberti/Nonofho Ndobochani 021 462 4502) must be alerted immediately, and an accredited professional archaeologist or palaeontologist, according to the finding, must be contacted as soon as possible to inspect the newly discovered heritage resources. If these prove to be of archaeological or palaeontological significance a Phase 2 rescue operation might be necessary. SAHRA will require that, in terms of s. 38(4)(b&c) of the National Heritage Resources Act, the provisions of ss. 35 & 36 apply, as appropriate. The specialist will require a mitigation permit from the relevant Heritage Resources Authority. On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist, the heritage authority will make further recommendations in terms of the site. Very often permission is given for the destruction of the remainder of the archaeological or palaeontological sites. If a site has high heritage significance, the authority may request that it be conserved and that mini-site management plans, interpretive material and possibly protective infrastructure be established.

## CONCLUSION

- The area where the development of the Amakhala Emoyeni wind energy facility is proposed is characterised by a very high number of heritage resources. Some of these resources are of medium-high significance and require protection or mitigation.
- SAHRA requires that an alternative area be utilized for this project, otherwise a Heritage Management Plan be developed for all heritage resources in the project area. This should incorporate all issues raised above.
- In the Heritage Management Plan it is also critical that the finalization of the location of the turbines is done in consultation with an archaeologist and a palaeontologist.
- More than two hundred graves were recorded in the project area and it should be noted that this number could rise as it currently reflects marked graves only. Besides historical graves, archaeological graves may also be recovered during ground disturbing activities, therefore it is requested that a plan for accidental discovery of burials be put in place.
- After receiving the Heritage Management Plan, SAHRA will counsel on the way forward for the project in terms of heritage resources.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: .....  .....

EMAIL: mgalimberti@sahra.org.za .....

SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: .....  .....

EMAIL: nndobochani@sahra.org.za .....

NAME OF HERITAGE RESOURCES AGENCY: SAHRA .....

PLEASE NOTE THAT THE COMMENT (ABOVE OR APPENDED) CONSTITUTES THE COMMENT OF THE HERITAGE RESOURCES AGENCY ARCHAEOLOGIST AND THAT ANY DEVELOPMENT THAT INVOLVES DESTRUCTION OF ANY ARCHAEOLOGICAL/PALAEONTOLOGICAL SITE IS STILL SUBJECT TO A PERMIT/PERMISSION FOR DESTRUCTION OF SUCH SITE GIVEN TO THE DEVELOPER BY THE RELEVANT HERITAGE RESOURCES AGENCY ARCHAEOLOGICAL AND PALAEONTOLOGICAL PERMIT COMMITTEE (THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL/ PALAEONTOLOGICAL MITIGATION AS NECESSARY). THIS REPORT MAY BE TAKEN ONLY AS APPROVAL IN TERMS OF SECTION 35 OF THE NATIONAL HERITAGE RESOURCES ACT. THE PROVINCIAL MANAGER OF THE HERITAGE RESOURCES AUTHORITY MUST ADVISE AS TO APPROVAL IN TERMS OF HERITAGE ISSUES ENCOMPASSED BY OTHER ASPECTS OF THE LEGISLATION, SUCH AS ISSUES OF THE BUILT ENVIRONMENT (STRUCTURES (E.G. FARM HOUSES), OVER 60 YEARS), INDIGENOUS KNOWLEDGE SYSTEMS OR OF CULTURAL LANDSCAPES AS THIS IS NOT WITHIN THE SCOPE OF THE ARCHAEOLOGIST.

PLEASE NOTE THAT SAHRA IS NOW RESPONSIBLE FOR GRADE I HERITAGE RESOURCES (AND EXPORT) AND THE PROVINCIAL HERITAGE RESOURCES ARE RESPONSIBLE FOR GRADE II AND GRADE III HERITAGE RESOURCES, EXCEPT WHERE THERE IS AN AGENCY ARRANGEMENT WITH THE PROVINCIAL HERITAGE RESOURCES AUTHORITY.

## APPENDIX 1

### Protection of Graves

In terms of the National Heritage Resources Act (No. 25 of 1999) graves older than 60 years (not in a municipal graveyard) are protected. Human remains younger than 60 years should be handled only by a registered undertaker or an institution declared under the Human Tissues Act.

Anyone who wishes to develop an area where there are graves older than 60 years is required to follow the process described in the legislation (section 36 and associated regulations). The specialist will require a permit from the heritage resources authority:

1. Determine/ confirm the presence of the graves on the property. Normally the quickest way to proceed is to obtain the service of a professional archaeologist accredited to undertake burial relocations. The archaeologist will provide an estimate of the age of the graves. There may be a need for archival research and possibly test excavations (permit required).
2. The preferred decision is to move the development so that the graves may remain undisturbed. If this is done, the developer must satisfy SAHRA that adequate arrangements have been made to protect the graves on site from the impact of the development. This usually involves fencing the grave(yard) and setting up a small site management plan indicating who will be responsible for maintaining the graves and how this is legally tied into the development. It is recommended that a distance of at least 2 m is left undisturbed between the grave and the fence around the graves and another 30 m between the fence of the grave and the development.
3. If the developer wishes to relocate or disturb the graves:
  - a. A 60-day public participation (social consultation) process as required by section 36 (and regulations), must be undertaken to identify any direct descendants of those buried on the property. This allows for a period of consultation with any family members or community to ascertain what their wishes are for the burials. It involves notices to the public on site and through representative media. This may be done by the archaeologist, who can explain the process, but for large or sensitive sites a social consultant should be employed. Archaeologists often work with undertakers, who rebury the human remains.
  - b. If as a result of the public participation, the family (where descendants are identified) or the community agree to the relocation process then the graves may be relocated.
  - c. The archaeologist must submit a permit application to SAHRA for the disinterment of the burials. This must include written approval of the descendants or, if there has not been success in identifying direct descendants, written documentation of the social consultation process, which must indicate to SAHRA's satisfaction, the efforts that have been made to locate them. It must also include details of the exhumation process and the place to which the burials are to be relocated. (There are regulations regarding creating new cemeteries and so this usually means that relocation must be to an established communal rural or formal municipal cemetery.)
  - d. Permission must be obtained before exhumation takes place from the landowner where the graves are located, and from the owners/managers of the graveyard to which the remains will be relocated.
  - e.

Other relevant legislation must be complied with, including the Human Tissues Act (National Department of Health) and any ordinances of the Provincial Department of Health). The archaeologist can usually advise about this.