



SOUTH AFRICAN HERITAGE RESOURCES AGENCY  
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FOR ATTENTION: **PHRA Northern Cape**  
**Dept of Environmental Affairs**

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SAHRA Contact Person: **Ms Katie Smuts**  
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## REVIEW COMMENT ON ARCHAEOLOGICAL AND PALAEOLOGICAL IMPACT ASSESSMENTS

**BY THE ARCHAEOLOGY, PALAEOLOGY AND METEORITES UNIT OF THE SOUTH AFRICAN 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: **Northern Cape**
- B. AUTHOR OF REPORT: **Dr J. van Schalkwyk**
- C. ARCHAEOLOGY CONTRACT GROUP:
- D. CONTACT DETAILS: **62 Coetzer Avenue, Monument Park 0181, tel: 076 790 6777 email: jvschalkwyk@mweb.co.za**
- E. DATE OF REPORT: **February 2011**
- F. TITLE OF REPORT: **HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A WIND FARM AND PV FACILITY BY MAINSTREAM RENEWABLE POWER IN THE LOERIESFONTEIN REGION, NORTHERN CAPE PROVINCE**
- G. AUTHOR OF REPORT: **Dr J. van Schalkwyk**
- H. ARCHAEOLOGY CONTRACT GROUP:
- I. CONTACT DETAILS: **62 Coetzer Avenue, Monument Park 0181, tel: 076 790 6777 email: jvschalkwyk@mweb.co.za**
- J. DATE OF REPORT: **March 2011**
- K. TITLE OF REPORT: **HERITAGE SCOPING ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF FOUR WIND FARMS BY MAINSTREAM RENEWABLE POWER IN THE LOERIESFONTEIN REGION, NORTHERN CAPE PROVINCE**

- L. AUTHOR OF REPORT: **Dr J.E. Almond**
- M. ARCHAEOLOGY CONTRACT GROUP: **Natura Viva cc.**
- N. CONTACT DETAILS: **P.O. Box 12410 Mill Street Cape Town 8010, email: naturaviva@universe.co.za**
- O. DATE OF REPORT: **June 2011**
- P. TITLE OF REPORT: **PALAEONTOLOGICAL DESKTOP STUDY – PROPOSED MAINSTREAM WIND FARM NEAR LOERIESFONTEIN, NAMAQUA DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE**
- Q. PLEASE CIRCLE AS RELEVANT: Archaeological and Palaeontological components of **EIA / EMP / HIA / CMP/ Other (Specify)**
- B. REPORT COMMISSIONED BY (**CONSULTANT OR DEVELOPERS**): **SIVEST**
- C. CONTACTDETAILS: P.O. Box 2921 Rivonia 2128, tel: 011 798 0600, email: nicolenev@sivest.co.za
- R. COMMENTS:

**REVIEW COMMENT ON ARCHAEOLOGICAL AND PALAEONTOLOGICAL IMPACT ASSESSMENTS**

**Dr J. van Schalkwyk**

**Dated: February 2011, Received: March 2012**

**HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A WIND FARM AND PV FACILITY BY MAINSTREAM RENEWABLE POWER IN THE LOERIESFONTEIN REGION, NORTHERN CAPE PROVINCE**

**Dr J. van Schalkwyk**

**Dated: March 2011, Received: October 2011**

**HERITAGE SCOPING ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF FOUR WIND FARMS BY MAINSTREAM RENEWABLE POWER IN THE LOERIESFONTEIN REGION, NORTHERN CAPE PROVINCE**

**Dr J. Almond**

**Dated: June 2011, Received: October 2011**

**PALAEONTOLOGICAL DESKTOP STUDY – PROPOSED MAINSTREAM WIND FARM NEAR LOERIESFONTEIN, NAMAQUA DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE**

**INTRODUCTION**

Mainstream Renewable Power South Africa is proposing the establishment of two wind farms and a solar energy facility 49km north of Loeriesfontein in the Northern Cape Province. The project will entail the construction of 180-190 turbines over 10 400 ha, that will be constructed in two phases. The turbines will stand on 20m x 20m foundations dug up to 2.5m deep. They will be between 80-120m high, with a rotor diameter of 87-120m; a small transformer will stand next to each turbine. A 50 MW Photovoltaic (PV) facility might be included in the second phase of the project and the ultimate capacity of the development will be 480 MW.

The turbines will be connected by underground cables and a 90m x 120m substation and overhead powerlines will link the facility to the ESKOM grid. Internal access roads will be constructed and existing farm roads will be used where possible. The plant will also require offices, a workshop and a laydown area. The site will be secured by fencing.

## **DISCUSSION**

Dr van Schalkwyk's Heritage Impact Assessment identified the study area as largely unresearched; very limited literature exists on the presence of Stone Age remains, with no records of Early Stone Age material and few Middle Stone Age objects. There is evidence for a greater presence of people in the area in the Later Stone Age, evidenced by finds particularly along water courses and pans, in the dunes and at the bases of hills. Historically, trekboers moved into the area from the early 19<sup>th</sup> century and they too stayed close to water sources. An industry that probably pre-dates trekboer arrival is the harvesting of salt from pans in the area, which required little technology to achieve and therefore has left no evidence; this activity continues today.

Three archaeological sites were located by the archaeologist. Two of these were located at the foot of low hills and consisted of low density – between 1 and 2 tools/flakes per m<sup>2</sup> – MSA scatters. The third site was located on a small hill and contained a relatively high concentration – 5 tools/flakes per m<sup>2</sup> – of LSA material. All of these sites were graded as having low significance due to their likely frequency in the area. However, the archaeologist notes that as there has been little work done in the area, these sites should be avoided if possible or mitigated if necessary.

A Colonial Period farmstead was also located within the study area. The farmstead consisted of a farmhouse with a garage, old "kookskerm" and a stone walled kraal. The archaeologist identified the farm as Aan de Karree Doorn Pad and the buildings are dated to 1920. Dr van Schalkwyk points out the relative scarcity of farm buildings in this area. An informal cemetery, with a gated fence, is located near to the farmstead. One grave has a headstone which reads 1913 and is possibly linked to the farmstead. The archaeologist also points to the presence of farm roads and tracks, animal pens and wind pumps which contribute to the holistic sense of place of the farmstead.

Dr Almond conducted a desktop study which identified that the study area is underlain by marine to freshwater Ecca Group (Karoo Supergroup) sediments of Early to Mid Permian Age. These sediments are assigned to the Prince Albert Formation, Whitehill Formation and Tierberg Formation and contain important aquatic vertebrate and invertebrate fossils as well as petrified wood. Nevertheless, the Ecca sediments are of low overall sensitivity as only trace fossils are usually encountered, possibly due to chemical weathering and dolerite intrusions. Furthermore, much of the Ecca group is overlain by Late Caenozoic (Quaternary to Recent) downwasted gravels and alluvium which are of low palaeontological sensitivity.

## **SAHRA RECOMMENDATIONS AND CONCLUSIONS**

- The SAHRA Archaeology, Palaeontology and Meteorite Unit has no objection to the development (in terms of the archaeological and palaeontological components of the heritage resources). If any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during development, construction or mining, SAHRA (Katie Smuts/Colette Scheermeyer, Tel: 021 462 4502) and a professional archaeologist must be alerted immediately.
- The archaeological sites recorded should be protected. These should be fenced off before and during construction and clearly marked on all construction maps. The fencing – temporary fencing will suffice – should be 5m from the outer limit of the site and a buffer of at least 20m from the edge of the sites needs to be maintained.
- The graves should be restored where these are dilapidated, protected and conserved in perpetuity. For this purpose, a proper fence must be build around them including entry gates to allow visits from relatives and family friends. The fence must be placed 5 meters away from the perimeter of the graves. No development is allowed

within 15 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 on Built Environment (e.g. structures over 60 years) and Cultural Landscapes and associated Living Heritage (e.g. sacred sites) must be made by the Provincial Heritage Resources Authority of the Northern Cape (**Mr. Andrew Timothy, ratha.timothy@gmail.com**) to whom this Archaeological Review Comment will be copied.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT:.....

EMAIL: ksmuts@sahra.org.za .....

SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: .....

EMAIL: cscheermeyer@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 5 m is left undisturbed between the grave and the fence around the graves and another 20 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.

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.