



SOUTH AFRICAN HERITAGE RESOURCES AGENCY
 111 HARRINGTON STREET, CAPE TOWN, 8001
 PO BOX 4637, CAPE TOWN, 8000
 TEL: 021 462 4502 FAX: 021 462 4509

**FOR ATTENTION: PHRA: Northern Cape AND
 Heritage Western Cape**

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

BY ARCHAEOLOGY/ PALAEOLOGY 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: Northern Cape and Western Cape**.....
- B. **AUTHOR(S) OF REPORT: Ms Celeste Booth and Ms Natasha Higgitt**
- C. **ARCHAEOLOGY CONTRACT GROUP: Department of Archaeology, Albany Museum**
- D. **CONTACT DETAILS: Somerset St, Grahamstown, 6139, Tel: 046 622 2313, Email: celeste.booth@ru.ac.za**
- E. **DATE OF REPORT: November 2010**
- F. **TITLE OF REPORT: An Archaeological Desktop Study for the proposed Karoo Renewable Energy Facility on a site south of Victoria West, Northern and Western Cape**
- B. **AUTHOR(S) OF REPORT: Dr Johann Binneman, Ms Celeste Booth and Ms Natasha Higgitt**
- C. **ARCHAEOLOGY CONTRACT GROUP: Department of Archaeology, Albany Museum**

- D. CONTACT DETAILS: **Somerset St, Grahamstown, 6139, Tel: 046 622 2313, Email: celeste.booth@ru.ac.za**
- E. DATE OF REPORT: **March 2011**
- F. TITLE OF REPORT: **A Phase 1 Archaeological Impact Assessment (AIA) for the proposed Karoo Renewable Energy Facility on a site south of Victoria West, Northern and Western Cape Province on the farms Phaisantkraal 1, Modderfontein 228, Nobelsfontein 227, Annex Nobelsfontein 234, Ezelsfontein 235, and Rietkloofplaaten 239.**

- G. AUTHOR(S) OF REPORT: **Dr Lloyd Rossouw**
- H. CONTACT DETAILS: **PO Box 38806, Langenhovenpark, 9330**
- I. DATE OF REPORT: **March 2011**
- J. TITLE OF REPORT: **Palaeontological desktop assessment of a commercial renewable energy facility site located approximately 34 km south of Victoria West in the Western Cape Province (and Northern Cape)**
- K. Please circle as relevant: archaeological and palaeontological component of **EIA / EMP / HIA / CMP/ Other (Specify).....**

- L. REPORT COMMISSIONED BY (**CONSULTANT** OR DEVELOPER): **Savannah Environmental (Pty) Ltd, Mr Gerhard Cronje**
- M. CONTACT DETAILS: **P.O. Box 148, Sunnighill, 2157, Gauteng, Tel: 011 234 6621, email: gerhard@savannahsa.com**
- N. COMMENTS:
Please see comment on next page.....

REVIEW COMMENT ON HERITAGE IMPACT ASSESSMENT

Ms Celeste Booth and Ms Natasha Higgitt

Dated: November 2010, Received: 17 November 2010

An Archaeological Desktop Study for the proposed Karoo Renewable Energy Facility on a site south of Victoria West, Northern and Western Cape

Dr Johan Binneman, Ms Celeste Booth and Ms Natasha Higgitt

Dated: March 2011, Received: April 2011

A Phase 1 Archaeological Impact Assessment (AIA) for the proposed Karoo Renewable Energy Facility on a site south of Victoria West, Northern and Western Cape Province on the farms Phaisantkraal 1, Modderfontein 228, Nobelsfontein 227, Annex Nobelsfontein 234, Ezelsfontein 235, and Rietkloofplaaten 239.

Dr Lloyd Rossouw

Dated: March 2011, Received: April 2011

Palaeontological desktop assessment of a commercial renewable energy facility site located approximately 34 km south of Victoria West in the Western Cape Province (and Northern Cape)

INTRODUCTION

South African Renewable Green Energy (SARGE) (Pty) Ltd is applying for the establishment of a renewable energy facility in the Karoo area across the Northern and Western Cape. This facility will cover approximately 200 km² and will include a wind and a photovoltaic solar facility and associated infrastructure, such as access roads, two substations 100x100m and two new 132 KW overhead power lines to connect the new substations to the existing grid. The preferred options for these two power lines are the shortest one of 1 and 2.5 km respectively.

About 88 km of 5m wide access roads will be built, 5.6 km of these 88 will only be temporary for the construction phase. All access roads will need to be in place before all components for the facilities are brought in.

The wind energy facility will see the establishment of maximum 150 turbines with a total energy output of 450 MW (3MW/turbine), whereas the solar arrays will have an electricity output capacity of 50 MW.

DISCUSSION

A scoping report was compiled by the Albany Museum in November 2010 listing which archaeological resources were reasonably expected to be identified on the properties impacted by the development. In the Scoping report the archaeologists advised for a Phase 1 Archaeological Impact Assessment to be undertaken for the Environmental Impact Report Phase. Savannah SA commissioned this study, along with a palaeontological desktop study, for the final phase of the process.

Archaeological visibility was generally good, except for few areas where shrub vegetation and grass were too dense. Of all farms investigated, Phaisantkraal 1 is located in the Western Cape, whereas Modderfontein 228, Nobelsfontein 227 (including the Farms Annex Nobelsfontein 234, Ezelsfontein 235 and Rietkloofplaaten 239) are located in the Northern Cape. The SAHRA Archaeology, Palaeontology and Meteorites Unit will only comment on the archaeology and palaeontology of the Northern Cape session of the project, Ngwao Boshwa Kapa Bokoni is the responsible commenting authority for Built Environment, Cultural Landscape and Viewscape for the Northern Cape.

Heritage Western Cape is the commenting authority for all heritage issues related to the Western Cape Province, so they will not be covered within this review comment.

The archaeologists identified a series of archaeological sites on all farms. Most specifically, in Modderfontein 228 Middle and Later Stone Age scatters were identified along with a rock engravings, rock paintings, a gong rock, stone kraals and wall

structures.

The farm Nobelsfontein 227, with the rest of the adjacent farms, has already been disturbed by a series of isolated developments such as farm roads, power and telephone lines, dams and wind mills. As in Phaisantkraal 1, stone tools from both Middle and Later Stone Age were identified, along with Khoekhoe pottery sherds, possibly all belonging to the same pot/vessel, two rock shelters with rock paintings, many rock engravings and three stone wall structures. A possible burial ground for railway workers was recorded in a donga close to the railway line. Some of the human remains were already exposed and some of the bones might have already been washed out by the river. Judging by the clothes identified on the skeleton, at least some of the human remains are younger than 60 years.

Geologically, the formations which underlain this area are the Abrahamskraal and the Teekloof Formations, belonging to the Adelaide Subgroup of the Lower Beaufort Group from the Karoo Supergroup. Of these two formations, the Teekloof, of fluvial sedimentary formation, is the most fossiliferous. More specifically, its lowermost stratum, the Poortjie Member, is assigned to the *Pristerognathus* Assemblage Zone, whereas the stratum above it, Hoedemaker Member, is assigned to the *Tropidostoma* Assemblage Zone. This fresh bedrock it is likely to be exposed during the excavations that will be undertaken for this project.

SAHRA RECOMMENDATIONS

SAHRA supports the recommendations of the author and requires that:

- The Later Stone Age sites S31, S32 and S39 must be mitigated with a Phase 2 Archaeological Impact Assessment. Mitigation in the form of recording, sampling and a photographic record must be undertaken before trenching and any other earth-moving activity resulting from this proposed project commences. The archaeologist will require a mitigation permit from SAHRA in terms of s. 35 of the National Heritage Resources Act (Act 25 of 1999). On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist, SAHRA will make further recommendations in terms of the site such as its final destruction or additional sampling.
- The proposed final position of wind turbines and solar panels must be investigated for the presence of possible rock engravings and rock paintings.
- No construction activity is allowed within 100m of rock paintings, rock engravings, rock shelters where rock art material is preserved and sites with stone walls and kraals. If this distance cannot be avoided and the development has to occur within 100m from any of these sites, a temporary fence must be erected around the site (in consultation with the archaeologist) and foremen and workmen educated about its significance.
- In no circumstances will development be allowed within 50m from stone walls and kraals and from rock art sites.
- All newly identified rock paintings and rock engravings in the area should be recorded, if this has not been done yet, through photographic record and GPS position. These recordings (which may require involvement of a rock art specialist) should be included in the report to be submitted to SAHRA after the micro-siting survey is undertaken.
- A Heritage Management Plan for rock engravings, rock painting and gong rocks must be compiled and submitted to SAHRA for revision.
- The Khoekhoen pottery at site S40 should be collected and recorded. The archaeologist will apply for a collection permit from SAHRA.
- Destruction of the sites S46, GPS 48 must be permitted by SAHRA through a destruction permit. The developer, or their archaeologist, must apply to SAHRA for the permit. A single application (destruction permit) might be used for all sites.
- A Phase II HIA is required for the area of the remains. This should define the area of the burial ground and include archival research to investigate if there is a possible link between the burials and the construction of the railway line. When a Phase II report is received by the SAHRA Burial Grounds and Graves Unit, further

recommendations will be made in relation to a possible relocation or preservation of the graves. Provisions stipulated in section 36 of the National Heritage Resources Act (Act No. 25 of 1999) are applicable (see Appendix 1 and SAHRA Regulations).

- A Phase 1 Palaeontological Impact Assessment in the form of field survey of the area is requested, the assessment must be then submitted to SAHRA for comments. If deemed necessary after the survey, a Phase 2 rescue operation might also be requested.
- A palaeontologist must inspect fresh excavations undertaken in the fossil-bearing Teekloof Formation.
- As stated also in the Archaeological Impact Assessment, Substation 1 option 1 and substation 2 option 1 are the preferred options for two substations.

CONCLUSION

If the recommendations made in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorite Unit has no objection to the development (in terms of the archaeological) component 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 and a professional archaeologist must be alerted immediately.

A final decision on the palaeontological component will be issued once the Phase 1 Palaeontological Impact Assessment is undertaken.

Decisions on Built Environment (e.g. structures over 60 years) and Cultural Landscapes and associated Living Heritage (e.g. Sacred Sites) must be made Northern Cape Heritage Resources Authority (Mr. Joas Sinthumule, jsinthumule@ncpg.gov.za), to whom this Archaeological Review Comment will be copied.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: *Mgalimberti*

EMAIL: mgalimberti@sahra.org.za

SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: *M. A. P.*

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 15 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.