



SOUTH AFRICAN HERITAGE RESOURCES AGENCY
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REVIEW COMMENT ON ARCHAEOLOGICAL AND PALAEOLOGICAL IMPACT ASSESSMENTS

**BY 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(S) OF REPORT: **Dr Lita Webley and Mr Jayson Orton**
- C. ARCHAEOLOGY CONTRACT GROUP: **ACO Associates**
- D. CONTACT DETAILS: **ACO Associates, 8 Jacobs Ladder, St James 7945**
- E. DATE OF REPORT: **March 2012**
- F. TITLE OF REPORT: **HERITAGE IMPACT ASSESSMENT: PROPOSED CONSTRUCTION OF THE GRASPAN PV POWER FACILITY , PIXLEY KA SEME DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE**
- G. AUTHOR(S) OF REPORT: **Dr Jennifer Botha-Brink**
- H. ARCHAEOLOGY CONTRACT GROUP: **National Museum Bloemfontein**
- I. CONTACT DETAILS: **National Museum PO Box 266, Bloemfontein, 9300**
email: jbotha@nasmus.co.za
- J. DATE OF REPORT: **March 2012**
- K. TITLE OF REPORT: **PALAEOLOGICAL IMPACT ASSESSMENT OF THE PROPOSED GRASPAN SOLAR FARM, PIXLEY KA SEME DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE**

- L. Please circle as relevant: Archaeological and Palaeontological components of EIA / EMP / HIA / CMP/ Other (Specify) **DRAFT BASIC ASSESSMENT REPORT**.....
 - M. REPORT COMMISSIONED BY (**CONSULTANT** OR DEVELOPER): **ERM Southern Africa (Pty) Ltd**
 - N. CONTACT DETAILS: **ERM Postnet Suite 90, Private Bag X12, Tokai 7966, email: dean.alborough@erm.com**
 - O. COMMENTS:
- Please see comments on following page*

REVIEW COMMENT ON HERITAGE AND PALAEOLOGICAL IMPACT ASSESSMENTS

Dr Lita Webley and Mr Jayson Orton

Dated: March 2012, Received: April 2012

HERITAGE IMPACT ASSESSMENT: PROPOSED CONSTRUCTION OF THE GRASSPAN PV POWER FACILITY, PIXLEY KA SEME DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE

Dr Jennifer Botha-Brink

Dated: March 2012, Received: April 2012

PALAEOLOGICAL IMPACT ASSESSMENT OF THE PROPOSED GRASSPAN SOLAR FARM, PIXLEY KA SEME DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE

INTRODUCTION

Solaire Direct Southern Africa (Pty) Ltd is proposing the creation of a 10 MW Photovoltaic (PV) facility on less than 20 ha of the Farm Graspan 172 in the Northern Cape Province. The proposed location is 75km south-west of Kimberley, east of the N12 and bisected by the De Aar-Kimberley railway. This development, together with a 90 MW development on the same property, is part of the larger Graspan Solar Park proposal. This facility is to link into the ESKOM grid via the existing Graspan Traction Substation.

The solar panels will be connected with underground cables and overhead power lines. Further infrastructure will include inverters and transformers; a new substation; onsite buildings to house a control centre, offices, toilets and a guard centre as well as access and internal roads. In addition, a 4800m² construction camp with a temporary laydown area is proposed. The site will be secured with a perimeter fence.

The study area is largely flat and grassy and is currently used for grazing. There are koppies to the south-east and north-west and several pans are located on the property. Two areas have been identified as layout alternatives in order to avoid the sensitive rocky outcrops and pans; Alternative 1 is the preferred option.

DISCUSSION AND RECOMMENDATIONS

The archaeologists point out that very little is known about the pre-colonial archaeology of the area, and that little prior work has been conducted close to the study area. The area is historically important as it is near the site of the South African War Battle of Graspan in 1899, which took place near the Graspan railway station to the north of the property. The casualties from this engagement were buried near the battlefield and apparently exhumed in 1963, although the possibility exists that not all remains were removed.

The site survey was conducted over a day by both archaeologists, who identified a range of heritage sites. Several stone artefact scatters were located around the two pans and on the southern koppie. These were predominantly Middle Stone Age scatters of heavily weathered artefacts on indurated shale, with some potential Later Stone Age quartzite artefacts identified. No rock engravings were encountered in the study area, although numerous grinding surfaces (Sites J53, J55-70, J72-73 and J77) were identified on dolerite boulders on the southern koppie, as well as a single instance of historic graffiti (Site 021). Late 19th/early 20th century material was found along the railway line which was built in 1885. Most material was concentrated within 50-100m of the tracks. Close to the rail line, in association with a scatter of historic tin and glass, was a stone feature consisting of two concentric rings of packed stone about 5m in diameter (Site 011); this was identified as a potential fortification structure. Two stone cairns (J52) were identified but discounted as possible graves. The archaeologists note that while the archaeological remains are of low to medium significance, the Cultural Landscape to the north-east of

the proposed facility, the site of the Battle of Graspan, is of high significance. The authors also note that the development might be visible from the koppies of the battlesite and that this aspect of the Visual Impact needs consideration.

The palaeontologist conducted a desktop survey of the study area and identified the underlying geology as the Early Permian Tierberg Formation of the Ecca Group. The mudrocks of this Formation predominantly contain trace fossils in the form of burrows, but rarely also contain fossils of parts of small vertebrates such as fish teeth and scales, as well as plant fragments and wood. These Ecca Group sediments are intruded within the study area by Early Jurassic Karoo dolerites, which are unfossiliferous themselves and metamorphose nearby sedimentary deposits. The Graspan Ecca Group sediments are largely mantled by Quaternary to Recent Age superficial deposits including calcretes. Fossils in these Quaternary deposits represent the Florisian Mammal Fauna, which includes the extinct giant mammal forms. These fossils are usually found in river gulleys which are absent from the study area.

SAHRA RECOMMENDATIONS


SAHRA supports the recommendations of the author and requires that:

- Development should avoid the koppies to the north and south of the study area to protect the concentrations of stone artefacts and dolerite grinding surfaces.
- No development should take place within 100m from each side of the railway line to protect the historical material and stone structure there.
- The battlefield should be not impacted by the development, therefore it is suggested that it is demarcated during construction and permanent signage be erected located close to the site to explain its significance
- SAHRA suggests that the visual impact of the solar facility on the battlefield is taken into consideration during the layout of the solar panels.
- The Environmental Control Officer must be alerted to the possibility of fossil remains being uncovered and should monitor all excavations into fresh, sedimentary bedrock. If any significant fossils are exposed, they must be protected *in situ* and SAHRA or a professional palaeontologist must be contacted.

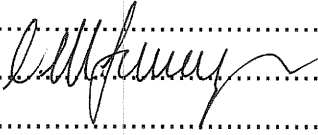
CONCLUSION

If the recommendations made in the specialist report and in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorites 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 is found during development or construction, SAHRA (Katie Smuts / Colette Scheermeyer, tel: 021 462 4502) and a professional archaeologist, or palaeontologist, depending on the nature of the finds, must be alerted immediately.

Decisions on Built Environment and associated Living Heritage 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 PALAEOANTHROPOLOGICAL PERMIT COMMITTEE (THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL/ PALAEOANTHROPOLOGICAL 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.