



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

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SAHRA File No: **9/2/048/0001**
Date Received: **26 August 2011 (AIA)**
25 October 2011 (AIA + PIA)
Date of Comment: **28 November 2011**
Sent to Peer Review:
Date to Peer Review:
SAHRA Contact Person: **Dr Mariagrazia Galimberti**

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: **Halkett, D. and J. Orton**

C. ARCHAEOLOGY CONTRACT GROUP: **ACO Associates**

D. CONTACT DETAILS: **8 Jacobs Ladder, St James, 7945**

E. TITLE OF THE REPORT: **AIA: proposed Olyven Kolk Solar Power Plant,
Northern Cape Province**

F. DATE OF REPORT: **July 2011.**

B. AUTHOR(S) OF REPORT: **Halkett, D. and J. Orton**

C. ARCHAEOLOGY CONTRACT GROUP: **ACO Associates**

D. CONTACT DETAILS: **8 Jacobs Ladder, St James, 7945**

E. TITLE OF THE REPORT: **Archaeological, Heritage and Palaeontological
Specialist Report**

F. DATE OF REPORT: **Aug^Ust 2011.**

B. AUTHOR(S) OF REPORT: **Dr John Almond**

C. ARCHAEOLOGY CONTRACT GROUP: **Natura Viva**

- D. CONTACT DETAILS: **PO Box 12410, Mill St, Cape Town, 8010, email: naturaviva@universe.co.za**
- E. TITLE OF REPORT: **PIA Desktop Study. Proposed AES Solar Power Plant on the Farm Olyven Kolk 187 Near Kenhardt, Northern Cape Province**
- F. DATE OF REPORT: **August 2011**
- G. Please circle as relevant: Archaeological and Palaeontological components of EIA / EMP / HIA / CMP/ **Other** (Specify) **Basic Assessment Report**
- H. REPORT COMMISSIONED BY (**CONSULTANT** OR DEVELOPER): **ERM Southern Africa**
- I. CONTACT DETAILS: **Ms Linda Slabber, Silverwood House,Block A, Silverwood Close, Steenberg Office Park, Steenberg, 7945, Cape Town, Tel: +27 21 702 9100, Fax: 086 662 2228, Mobile: +27 84 409 9641**
- J. COMMENTS:
Please see comment on next page

REVIEW COMMENT ON ARCHAEOLOGICAL AND PALAEOLOGICAL IMPACT ASSESSMENTS

Mr D. Halkett and Mr J. Orton
Dated: unknown, Received: August 2011

AIA: proposed Olyven Kolk Solar Power Plant, Northern Cape Province

Mr D. Halkett and Mr J. Orton
Dated: August 2011, Received: October 2011

Heritage Impact Assessment (Archaeology And Palaeontology): Proposed Olyven Kolk Solar Power Plant, Northern Cape Province

Dr J. Almond,
Dated: August 2011, Received: October 2011

PIA Desktop Study. Proposed AES Solar Power Plant on the Farm Olyven Kolk 187 Near Kenhardt, Northern Cape Province

INTRODUCTION

An Archaeological Impact Assessment was commissioned by ERM for the Basic Assessment Phase of the Environmental Impact Assessment process undertaken for the establishment of a 190MW solar power farm near Kenhardt.

During the Environmental Impact Report Phase, the Archaeological Impact Assessment was revised with the addition of further information available and a palaeontological study was also included, as requested by the National Heritage Resources Act.

The Solar Energy Facility will extend on an area of about 10km² with only a third of it being used for the solar panels. There will be in total about 190 units of solar panels, each of which with a generating capacity of 1MW. The maximum height of the solar panels from ground will be 2.5m. The solar farm will be divided in two portions, one above and one below the Sishen-Saldanha railway line which cuts the sites in two.

Amongst the necessary infrastructure for the establishment of the solar farm there will be underground cables, an inverter connected to step-up transformers, which will elevate the voltage to transmit the current to the Eskom Aries Substation via a new interconnection line with a maximum voltage of 400kV and a maximum length of about 700m. Access roads of maximum 3m width will also be necessary between the solar panels along with meteorological stations, a small site office and storage facility, site fencing and car parking, temporary construction camp (to house 60-80 people), permanent accommodation (for 4-5 people); and lay-down area for the temporary storage of materials during the construction activities (From the Environmental Impact Assessment Report).

The layout of the solar panel was decided after considering all sensitivity studies undertaken for the project and it is presented as Layout Alternative 2 in the report. Layout Alternative 1, which was included in the Basic Assessment Report and which is the one which was supplied to the archaeologists during their field survey, is not considered viable anymore.

DISCUSSION

From an archaeological perspective surface visibility of the site was very good and no impediment to the field survey were encountered by the two archaeologists. Looking at the walk paths, it is visible that while areas 0, 2, 4 and 5, as indicated in Alternative Layout 2, were extensively surveyed, areas 1, 3 and 7 had a minimal survey with zone 6 being unsurveyed. However, given the nature of the landscape, it is safe to assume that the type of material identified on the survey area may also be encountered in the unsurveyed section.

The most prominent archaeological evidence is represented by stone artefacts, made mostly of grey quartzite and less frequently by fine grained chert, dating from Early to Later Stone Age, with most of them belonging to the Middle Stone Age. One lower grindstone was also recorded on site. A representative sample of the material was recorded with GPS coordinates, photographed and described.

No graves were identified, whereas two structures, one shed with iron roof and a small brick cottage were recorded on site. According to the authors they have no heritage value.

The palaeontologist did not undertake a field survey, but a desktop study instead. The area on which the solar farm is proposed to be established is underlain by the Mbizane Formation of the Dwyka Group, which is overall considered of low sensitivity. The Mbizane Formation is overlain by calcretes and by deposits of the Gordonia Formation of the Kalahari Group, which has widely but sporadically occurring subfossils.

Considering the nature of the development and the geological background, the specialist recommends that it is not necessary to undertake any further palaeontological studies since it is expected that no palaeontological resources of significance will be affected by the development.

RECOMMENDATIONS AND CONCLUSION

As there is apparently no evidence of any significant archaeological material in this area, 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) on condition that, if any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during development or construction, SAHRA (Mariagrazia Galimberti/Colette Scheermeyer, Tel: 021 462 4502) and an archaeologist or a palaeontologist, according to the findings, must be alerted immediately.

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. Joas Sinthumule, jsinthumule@ncpg.gov.za) to whom this Archaeological and Palaeontological Review Comment will be copied.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: 

EMAIL: mgalimberti@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.