

Our Ref:



an agency of the
Department of Arts and Culture

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South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
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CaseID: 11226

Date: Monday July 24, 2017
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Final Comment

In terms of Section 38(4) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Enviroafrica CC

PO Box 5367
Heilderberg
7135

Project Location and Description The proposed development site is located at 28°41'19.41''S, 20°58'52.28''E, on Erf. 666 Keimoes, within the Kai! Garib Local Municipality, District Siyanda, Northern Cape Province. The proposed development is an array of 18540 crystalline solar photovoltaic (PV) modules grouped into tables or panels of 20 modules each. It is proposed that the PV tables would form an array covering an area of 20ha, circumscribed with a perimeter fire access road and fence. The PV tables will be raised approximately 500mm above ground level and will have single axis tracking systems allowing the generation of approximately 5MW of alternating current. Proposed associated infrastructure includes a fenced construction staging area, a maintenance shed, six central inverters and three transformers on concrete pads, one to two office buildings on the 20ha site and a switch panel for connection to the power grid, as well as a 22kV powerline connection from the PV array to feed in to Eskom's nearby Oasis substation.

Enviro Africa has been appointed by Keren Energy Keimoes (Pty) Ltd to conduct a Basic Assessment Process in support of an Environmental Authorisation (EA) Application for the Proposed Solar PV Plant on Erf. 666, Keimoes, Kai! Garib Local Municipality, Northern Cape Province. A Basic Assessment Report (BAR) has been completed in term of the National Environmental Management Act, 1998 (NEMA) and the NEMA 2017 Environmental Impact Assessment (EIA) Regulations. The proposed development will comprise the construction of 20 ha of solar photovoltaic modules grouped into tables or panels. Associated infrastructure will include fenced construction staging area, a maintenance shed, six central inverters and three transformers on concrete pads, one to two office buildings, a switch panel for connection to the power grid, and a 22kV powerline connection to the Oasis Substation.

The Agency for Cultural Resources Management has been appointed to conduct the Archaeological Impact Assessment (AIA) and Natura Viva CC has been appointed to conduct the Palaeontological Component.

Kaplan, J. 2017. Archaeological Impact Assessment, Keren Energy Keimoes Solar Energy Farm on Erf 666 Keimoes, Northern Cape Province.



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An assessment of the project area was conducted in 2012 where more than 100 isolated, mostly Later Stone Age (LSA) stone artefacts were identified. Some of the artefacts were found to be Middle Stone Age (MSA) and an Early Stone Age (ESA) biface and handaxe were identified. The heritage resources were graded as having a low (Grade 3C) significance rating.

The project area was resurveyed in 2017, and 51 occurrences of stone age artefacts were identified. All of these occurrences were graded as having low (Grade 3C) significance rating. As the solar panels will be mounted on small footings and the excavations for the footings will be 1.5 m in diameter, the ground disturbance will be limited.

Recommendations provided in the 2012 report were re-emphasised in the 2017 report:

- No mitigation is required;
- Should any unmarked human burial/remains or ostrich eggshell water flask caches are uncovered, or exposed during construction activities, these must immediately be reported to the contracted archaeologist or SAHRA.

Almond, J. E. 2017. Recommendation Exemption from Further Palaeontological Studies and Mitigation: Proposed Keren Energy Keimoes Solar Plant on Erf 666, Keimoes, Kai Garib Municipality, Northern Cape.

The proposed development area is underlain by Precambrian basement rocks of the Namaqua-Natal Province which are entirely unfossiliferous. These rocks are overlain by Late Caenozoic sandy soils, surface gravels and possible calcretes of low palaeontological sensitivity. The impact of the development is considered to be low.

Recommendations provided in the report include the following:

- It is therefore recommended that, pending the exposure of significant new fossils during development, exemption from further specialist palaeontological studies and mitigation be granted for this solar development;
- During the construction phase, all major clearance operations and deeper (>1 m) excavation should be monitored for fossil remains on an on-going basis by the Environmental Control Officer (ECO); and
- Should any substantial fossil remains (e.g. vertebrate bones and teeth, shells, petrified wood, calcretised burrows) be encountered during excavation, these should be reported to SAHRA for possible mitigation by a professional palaeontologist;
- These mitigation recommendations should be incorporated into the Environmental Management

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Programme (EMPr) for the solar project.

Final Comment

The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit has no objections to the proposed development. The recommendations of the heritage specialist and the following conditions must be included in the EMPr for the project:

- If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/John Gribble 021 462 5402) must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Mimi Seetelo 012 320 8490), must be alerted immediately. A professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA; and
- If the development receives an Environmental Authorisation (EA), SAHRA must be informed and all documents pertaining to the EA must be uploaded to the SAHRIS Case file.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Natasha Higgitt
Heritage Officer
South African Heritage Resources Agency

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John Gribble
Manager: Maritime and Underwater Cultural Heritage Unit / Acting Manager: Archaeology, Palaeontology and
Meteorites Unit
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/404623>
(DEA, Ref:)

Terms & Conditions:

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.