

**POST APPLICATION: PROPOSED DISSELFONTEIN SOLAR ENERGY FACILITY
(on the Remainder of Farm Disselfontein 77, Hope Town, Northern Cape
Province)**

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
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Date: Monday July 24, 2017
Page No: 1

CaseID: 11206

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 29°28'36.86''S, 23°54'47.44''E, on portion 8 of the remainder of Farm Disselfontein 77, within the Thembelihle Local Municipality, Hope Town, Pixley ka Seme District Municipality, 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 overhead powerline connection from the PV array to connect to Eskom's nearby Disselfontein substation.

Enviro Africa CC has been appointed by Keren Energy Disselfontein (Pty) Ltd to conduct a Basic Assessment Process in support of an Environmental Authorisation (EA) Application for the Proposed Solar PV Plant on the farm Disselfontein 77, within the Thembelihle Local Municipality, Hope Town, Pixley ka Seme District 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 0.9 km 22kV powerline connection to the Disselfontein 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.



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Kaplan, J. 2017. Archaeological Impact Assessment, the proposed Disselfontein Keren Energy Solar Plant near Hoepetown, Northern Cape Province.

A total of 33 archaeological occurrences which include over 180 artefacts were identified within the proposed development area. These artefacts include Early Stone Age (ESA) flakes, bifaces, cores and chunks, Middle Stone Age (MSA) and Later Stone Age (LSA) isolated surface lithics, retouched blade tools of the Fauresmith MSA, MSA points, scrapers and an LSA step-flaked adze were identified. All identified heritage resources were given a rated of Grade 3C and are of low heritage significance.

Recommendations provided in the report include the following:

- If any unmarked human remains, or ostrich eggshell caches, for example, are exposed or uncovered during excavation, these must be immediately be reported to SAHRA, or the contract archaeologist;
- The above recommendations must be incorporated into the Environmental Management Plan (EMP) for the proposed development.

Almond, J. E. 2017. Palaeontological Heritage: Combined Desktop Study and Phase 1 Field Assessment for Proposed Disselfontein Keren Solar Plant near Hopetown, Northern Cape.

The field survey suggested that lavas and quartzite gravel of the Allanridge Formation (Ventersdorp Group) are exposed in stream incisions to the north of the Disselfontein substation. They are not palaeontologically sensitive. The majority of the western portion of the proposed area is underlain at depth by sediments of the Dwyka Group, which may contain arthropod trackways, sporadic vascular plant remains (drifted wood and leaves of the *Glossopteris* Flora), palynomorphs (organic-walled microfossils) and occasionally fragmentary transported plant material and palynomorphs within the diamictites. Exposures of the Dwyka Group occur in the quarry at the southern edge of the study area. The Dwyka Group sediments are mostly mantled by superficial deposits of low to very low palaeontological sensitivity. The proposed development will not pose a significant threat to local fossil heritage.

Recommendations provided in the report include the following:

- 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;

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- These mitigation recommendations should be incorporated into the Environmental Management 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/402888>
(, 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.