

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
www.sahra.org.za

Enquiries: Natasha Higgitt

Date: Tuesday April 05, 2016

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Email: nhiggitt@sahra.org.za

CaseID: 8681

Interim Comment

In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Kotulo Tsatsi Energy Pty Ltd
2 Michelen Street
Vanderbilkpark, 1900

The development, construction and operation of a concentrated solar plant and associated infrastructure with a generating capacity of up to 200MW. CSP 1 is proposed to be located on Portion 3 of the farm Styns Vley 280.

Kotulo Tsatsi Energy (Pty) Ltd appointed Savannah Environmental (Pty) Ltd (Savannah) to undertake an Environmental Impact Assessment (EIA) process for the proposed Solar Reserve Kotulo Tsatsi Concentrated Solar Plant 1, on portion 3 of the farm Styns Vley 280, 70 km west of Kenhardt, Northern Cape Province. A draft Environmental Impact Assessment (EIA) was completed for the development in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and the EIA Regulations 2014. The proposed project includes the construction of a central receiver tower, heliostat field, steam turbine generator, auxiliary boilers, molten salt storage vessels/tanks and reticulations system, raw water pipeline (95 km) plant substation, powerline (1 km & 40 km), lined evaporation pond, workshop, plant assembly facility and laydown yard, access roads (2.5 km), mancamp and office building. The total development footprint is approximately 1 000 ha. SolarReserve Kotulo Tsatsi Energy is in the process of applying for Environmental Authorisation for several projects in the area including three CSP Central Receiver Tower Projects, two Photovoltaic (PV) Solar Energy facilities and two CSP Trough Projects. This comment will only discuss information pertaining to the CSP Central Receiver Tower Project CSP 1, associated water pipeline and powerline.

Savannah contracted Jaco Van der Walt and John Almond to conduct the Archaeological Impact Assessment (AIA) and the Palaeontological Desktop Assessment for the project respectively.

Van der Walt, 2015. Archaeological Impact Assessment for the proposed SolarReserve Kotulo Tsatsi Energy CSP 1, located close to Kenhardt in the Northern Cape.

After the author surveyed the footprint provided, the layout and position of the footprint for the CSP project was moved due to ecological reasons. As such, the specific footprint as described in the EIA has not been surveyed as part of the AIA. Widely dispersed surface scatters of Stone Age tools are present within the area surveyed. These scatters were not considered to be of high significance and the impact is expected to be low. It is anticipated by the author that the same pattern will persist within the newly defined project boundary.



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The water pipeline routes were examined at a desktop level only, and two cemeteries were located along the R 27 route alternative, one is historical dating to 1876 while the other is more recent dating to 1965. A direct impact is expected on the historical cemetery as it is located directly adjacent to the proposed pipeline alternative. The pipeline alternative along the rail reserve was identified as the preferred option in terms of heritage as no heritage resources would be impacted. The report did not indicate whether the powerline had been subjected to a survey as part of this study.

Recommendations provided in the report are as follows:

- The possible realignment of the R27 pipeline route to ensure cemeteries are not impacted;
- The final option for the water pipeline must be subjected to a heritage walk-through;
- A walk-down of the final layout of the CSP facility prior to construction is recommended; and
- A Conservation Management Plan (CMP) should be drawn up for the entire SolarReserve Kotulo Tsatsi Energy development if deemed necessary. It is recommended that construction crews be informed of the identified heritage sites and that these areas should be avoided to prevent to the sites.

Almond, J. 2014 & 2015. Palaeontological Heritage Assessment: Combined Desktop and Field-Based Study for the Proposed SolarReserve Kotulo Tsatsi Energy CSP and PV Facilities near Kenhardt, Northern Cape Province.

The author combined the seven applications into one report. Only results pertaining to the CSP 1 project will be discussed here. The author found that the project area is underlain by potential fossiliferous Karoo Supergroup bedrocks (Dwyka and Ecca Groups), however they are deeply weathered and extensively calcretised near the surface. Due to the generally sparse occurrence of fossils within the study area, the impact on the palaeontological heritage is rated as low. Unfossiliferous rocks of the Karoo Dolerite Suite and Precambrian basement rocks of the Namaqua-Natal Province occur in the in the east and northeast of the study area. Late Caenozoic superficial deposits of low palaeontological sensitivity mantle the majority of the study area. It must be noted that there is no map depicting the location of the identified palaeontological resources in relation to the project area.

Recommendations provided in the report include:

- Monitoring of all substantial bedrock excavation for fossil remains by the Environmental Control Officer (ECO), with reporting of substantial palaeontological finds to SAHRA for mitigation;
- The above recommendations must be incorporated into the Environmental Management Plans (EMPs) for each of the applications.

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The EIA and EMPr mentions that five Stone Age find spots and a rectangular stone walled kraal were recorded along the powerline corridor; however there is no mention of these sites within the AIA or a survey of the powerline. Recommendations provided in the EIA include micro siting of the pylon positions to ensure in-situ preservation of sites. The EMPr notes that the identified heritage sites must be avoided during the construction of the pylons within the powerline corridor.

Interim Comment

Regarding archaeological and palaeontological heritage resources, the SAHRA Archaeology, Palaeontology and Meteorites Unit accepts the submitted AIA and PIA and their respective recommendations. The following additional conditions must be adhered to and must form part of the final EMPr of the project should Environmental Authorisation be granted for the project:

- A field-based heritage survey of the final layout of the proposed development (CSP 1, pipeline route and powerline) must be completed prior to construction taking place. Should the survey identify any heritage resources, an impact assessment must be completed. The results of this field-based survey and impact assessment must be submitted to SAHRA prior to construction for comment. Construction may only take place once SAHRA has issued comment on the survey report;
- A Conservation Management Plan must be developed for the project that details the on-going in-situ conservation of identified heritage resources; and
- A palaeontologist must be on site at regular intervals during any excavations into bedrock and a Monitoring Report must be submitted to SAHRA upon completion.

Decisions regarding Built Environment will be provided by Ngwao-Boswa Jwa Kapa Bokone (NBKB), the Northern Cape Provincial Heritage Resource Authority (Ratha Timothy - rtimothy@nbkb.org.za / 053 831 2537).

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/Phillip Hine 021 462 5402) must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Itumeleng Masiteng/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.

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

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above in the case header.

Yours faithfully

Natasha Higgitt
Heritage Officer
South African Heritage Resources Agency

Phillip Hine
SAHRA Head Archaeologist (Acting)
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/341744>
(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.