

Our Ref:



an agency of the
Department of Arts and Culture

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CaseID: 11248

Date: Monday March 18, 2019
Page No: 1

Final Comment

In terms of Section 38(4), 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Ms Jessica Le Roux
Eco Impact Legal Consulting Pty Ltd

The construction of the Wine Estate Capital Management (Pty) Ltd 400 MW Photovoltaic Electricity Generation and 132 kV power line on Portions 7 and 3 of Farm Olyvenkolk, located approximately 37km southwest of the town of Kenhardt in the Northern Cape Province. The infrastructure associated with this facility includes: • Solar panels arranged in units with a generating capacity of approximately 400 MW and a total footprint of approximately 800ha. • A 132 kV power line (mono pole structures) of approximately 7 km over Portions 7 and 3 of Farm 187 to feed the electricity generated into the existing Aries substation. • Expansion of the Aries substation to receive the generated electricity into the ESKOM grid; and • Ancillary infrastructure such as inverters and transformers, conductors (cables), a central bushbar, isolators, switch gear, protection infrastructure, measurement devices and maintenance facility and security and control room. The proposed development will be constructed closer than 32 meters from watercourses. The electricity cable connecting the panels to each other, the distribution network will be laid underground and access roads will be constructed through some of the drainage lines. The panels would be mounted on the ground using a ground screw. A concrete foot piece secured to a steel pen driven into the ground would be used where it is not feasible to use ground screws. The maximum height of the panels in operation would be approximately 5m and would allow some ground clearance for the free flow of surface water underneath the panels and for agricultural purposes where required. The solar panels may be equipped with sun-trackers. The facility and associated infrastructure will be accessed on a 6m wide road with direct access off the Kenhardt to Pofadder gravel road. A combination of paving and or treated gravel may be utilised for this road. A 5m management track will surround each block of photovoltaic arrays, totalling approximately 9km of gravel road. These single track management roads will be used as access roads to service and maintain structures and to serve as fire breaks. On full commissioning of the facility, any access points to the site which are not required during operational phase will be closed and rehabilitated. Water will be sourced from existing boreholes, which will be registered under the National Water Act water use.

Eco Impact Legal Consulting (Pty) Ltd has been appointed by Wine Estate Capital Management SA (Pty) Ltd to conduct an Environmental Authorisation (EA) Application process for the proposed 400MW PV Electrical Generation Facility on portions 3 and 7 of farm Olyvenkolk 187, Kenhardt District, Northern Cape Province.



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A draft Scoping report (2018) has been submitted in terms of the National Environmental Management Act, No 107 of 1998 (NEMA) and the NEMA 2017 Environmental Impact Assessment (EIA) Regulations. The proposed development includes the construction of solar panels covering 800 ha, 7 km 132kv powerline, expansion of the Aries Substation, ancillary infrastructure such as cables, switch gear, maintenance facility, and security and control room.

The Scoping report notes that an HIA inclusive of an archaeological and palaeontological specialist components will be conducted during the EIA phase.

In an Interim Comment issued on the 03/10/2018, SAHRA noted the pending HIA and awaits the submission of the report. Since the comment was issued, an assessment of heritage resources has been submitted along with the draft EIA and appendices.

ASHA Consulting (Pty) Ltd and Natura Viva CC have been appointed to provide heritage specialist input into the EA process as per section 24(4)b(iii) of NEMA and section 38(8) of the National Heritage Resources Act, No 25 of 1999 (NHRA).

Orton, J. 2018. Heritage Impact Assessment: Proposed 400 Mw Photovoltaic Facility and Power Line on Olyven Kolk 187/3 & 187/7, Kenhardt Magisterial District, Northern Cape.

The HIA noted that the entire study area was covered with background scatters of Stone Age lithics from the Early, Middle and Later Stone Age periods, and is the defining attribute of the cultural landscape. The specialist noted that the MSA lithics appear in higher numbers than those from the ESA and LSA.

A total of 42 occurrences of heritage resources were recorded. These include ESA, MSA and LSA artefact scatters, grinding patches on granite outcrops, a forest of 30 Kokerboom trees, quarried quartz outcrops, stone-packed kraal, historical midden, small stone cottages (one with hearth), stone foundations, cement floor and stone walling, and one vernacular historical cottage with external hearth. Sites 096, 097, 101, ESA5 x 2, ESA4 and 118 require mitigation measures to be implemented. Two sites are named as ESA5, however both sites require mitigation. Figure A3.4 and A3.8 of the report (page 37 and 41) notes several areas of archaeological sensitivity that are to be subjected to a follow-up survey.

Recommendations provided in the report include the following:



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- There are no fatal flaws, although a follow-up survey and some mitigation work will very likely be required;
- Because the survey was largely limited to specified target areas, there will need to be a follow up survey of any areas within the final development footprint that have not yet been covered. It is important that Large Cutting Tools (LCTs) are individually plotted in order to provide an accurate indication of where the densest ESA scatters lie. The results of this survey along with those reported here will be used to determine which areas should be subjected to archaeological mitigation. For archaeological sites the mitigation would entail excavation and sampling of the sites to recover archaeological materials. Radiocarbon dating might be required if suitable organic materials are present. For the ESA scatters a thorough examination of the relevant areas with collection of all LCTs and other diagnostic elements (e.g. cores, large blades) should be carried out. Artefact locations can be recorded by GPS. All materials would require analysis and reporting and the work would need to be carried out under a permit issued by SAHRA;
- An archaeological survey of any areas approved for development and not yet surveyed must take place at least six months prior to the start of construction;
- Any significant archaeological sites and dense clusters of ESA material within the final development footprint should be excavated, sampled and collected as appropriate; and
- If any archaeological material or human burials are uncovered during the course of development, then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

Orton, J. 2018. Letter: Final Layout of proposed Solar Energy Facilities on Olyven Kolk Farm 187/6 and 187/7, near Kenhardt.

Following the completed heritage specialist report summarized above, the final layout of the development had been altered. Some heritage sites had now been avoided, however there were still sites that would require mitigation. It is noted that Block 5 as shown in the letter has not been fully surveyed. Mitigation measures are provided in the letter in the form of a table. The specialist concludes by stating that the revised layout is acceptable and there are no fatal flaws.

Almond, J. E. 2018. Recommended Exemption from further Palaeontological Studies: Proposed 400 MW Photovoltaic Electricity Generation Facility & Associated 132 kV Power Line on Portions 7 and 3 of Farm 187



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Olyvenkolk, Kenhardt District, Northern Cape.

The proposed development footprint is underlain by the Mbizane Formation (Dwyka Group, Karoo Supergroup) that is of low palaeontological sensitivity. Fossil heritage such as interglacial trace fossils, petrified wood and other plant materials, palynomorphs and possibly stromatolites could be found in the formation. Quaternary alluvium along with aeolian sediments, alluvial gravels and calcretes of the Gordonia Formation (Kalahari Group) are of low palaeontological sensitivity while the Namaqua-Natal Province, which outcrop in small portions of the study area, do not contain fossils. Small pockets of highly sensitive areas may occur around drainage lines and pans that could contain mammalian bones, teeth and horn cores.

It is concluded that there will be a overall low impact significance for the proposed PV Facility and transmission line.

Recommendations provided in the report include the following:

- The ECO responsible for the development must remain aware that all sedimentary deposits have the potential to contain fossils and he/she should thus monitor all deeper (> 1 m) excavations into sedimentary bedrock for fossil remain son an on-going basis. If any substantial fossil remains (e.g. vertebrate bones, teeth, stromatolites, petrified wood, shells) are found during construction SAHRA should be notified immediately. This is in order that that appropriate mitigation (i.e. recording, sampling or collection) by a palaeontological specialist can be considered and implemented, at the developer's expense;
- A chance-find procedure should be implemented so that, in the event of fossils being uncovered, the ECO/Site Engineer will take the appropriate action (This has been appended to the report);
- During maintenance and servicing of infrastructure, if excavation is required, it shall be limited to the disturbed footprint as far as practicable. Should bulk works exceed the existing disturbed footprint, SAHRA shall be notified;
- The palaeontologist concerned with mitigation work will need a valid collection permit from SAHRA. All work would have to conform to international best practice for palaeontological fieldwork and the study (e.g. data recording fossil collection and curation, final report) should adhere to the minimum standards for Phase 2 palaeontological studies recently published by SAHRA (2013);
- The mitigation measures proposed here should be incorporated into the Environmental Management Plan (EMP) for the Olyvenkolk 187 (Portions 7& 3) PV solar facility project.

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Page No: 5

Mitigation and management measures for heritage resources are noted on page 89 – 93, 141 – 143 of the draft EIA and Objective C8 (page 28 – 31) of the EMPr are also noted.

Final Comment

The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit has no objections to the proposed development and supports the recommendations of the specialists and the conditions provided in the EIA and EMPr for the management of heritage resources. The recommendations of the specialists and the following conditions must be included in the Environmental Management Programme (EMPr) to be included in the conditions of the EA:

- A walk-down of the finalised layout of the development must be conducted by a qualified archaeologist. A report detailing the results of the walk-down including an assessment of the impact to any identified heritage resources with the corresponding mitigation measures must be submitted to SAHRA for comment prior to the construction phase occurring. No invasive activities may occur without comment from SAHRA in this regard;
- All archaeological resources that require mitigation (including surface collection) must be subjected to permit application in terms of section 35 of the NHRA and Chapter II and IV of the NHRA Regulations (R.548, 2000);
- Should any resources protected in terms of section 34 of the NHRA require mitigation, permit applications in this regard must be submitted to the Northern Cape Provincial Heritage Resources Authority (NCPHRA);
- The Final EIA and EMPr must be submitted to SAHRA for record purposes;
- 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 (Thingahangwi Tshivhase/Mimi Seetelo 012 320 8490), must be alerted immediately as per section 35(3) and 36(6) of the NHRA. 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;
- The decision regarding the EA Application must be communicated to SAHRA and uploaded to the SAHRIS Case application.

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Page No: 6

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

Phillip Hine
Acting Manager: Archaeology, Palaeontology and Meteorites Unit
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/405256>
(DEA, Ref: 14/12/16/3/3/2/1004)

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.