

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
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Enquiries: Natasha Higgitt
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CaseID: 18362

Date: Thursday October 27, 2022
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Final Comment

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

Attention: Savannah Environmental (Pty) Ltd

PO Box 148
Sunninghill
2157

Carolus Solar PV1(Pty) Ltd is proposing the development of a Photovoltaic (PV) Solar Energy Facility and associated infrastructure on Portion 3 of the Farm Carolus Poort No.3, located approximately 10km east of De Aar within the Emthanjeni Local Municipality in the Northern Cape Province. The facility will have a contracted capacity of up to 100MW and will be known as Carolus Solar PV1. The project is planned as part of a cluster of renewable energy facilities known as Pixley Park, which includes three (3) additional 100MW Solar PV Facilities (Wagt Solar PV1, Rietfontein PV1, and Fontein Solar PV1), and grid connection infrastructure connecting the facilities to the existing Hydra Substation. The projects will all connect to the new Vetlaagte Main Transmission Substation (MTS) via the Wag 'n Bietjie MTS. Infrastructure associated with the Solar PV Facility will include the following: Solar PV array comprising bifacial PV modules and mounting structures, using single axis tracking technology Inverters and transformers Cabling between the panels Battery Energy Storage System (BESS) Laydown areas, construction camps, site offices 12m wide Access Road and entrance gate to the project site and switching station 6m wide internal distribution roads Operations and Maintenance Building, Site Offices, Ablutions with conservancy tanks, Storage Warehouse, workshop, Guard House Onsite 132kV IPP Substation, including the HV Step-up transformer, and MV Interconnection building 132kV Overhead Power Line (OHPL) – 30m height from the switching station to the Main Transmission Substation (MTS) located on farms Vetlaagte and Wagt, which is to be handed back to Eskom (a separate EA is being applied for in this regard) Extension of the 132kV Busbar at the MTS 132kV Feeder Bay at the MTS Extension of the 400kV Busbar at the MTS Installation of a new 400/132kV Transformer and bay at the MTS A development footprint of approximately 285ha has been identified within the broader project site (approximately 8 200ha in extent), by the developer for the development of the Carolus Solar PV1 Facility, which is proposed in response to the identified objectives of the national and provincial government and local and district municipalities to develop renewable energy facilities for power generation purposes. It is the developer's intention to bid the proposed project under the Department of Mineral Resources and Energy's (DMRE's) Renewable Energy Independent



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Power Producer Procurement (REIPPP) Programme (or similar programme), with the aim of evacuating the generated power into the national grid. This will aid in the diversification and stabilisation of the country's electricity supply, in line with the objectives of the Integrated Resource Plan (IRP), with Carolus Solar PV1 set to inject up to 100MW into the national grid.

Savannah Environmental (Pty) Ltd has been appointed by Carolus Solar PV 1 (Pty) Ltd to conduct an Environmental Authorisation (EA) Application for the proposed Carolus Solar PV 1 Facility on Portion 3 of the Farm Carolus Poort No.3, near De Aar, Northern Cape Province.

A draft Scoping Report (DSR) has been submitted in terms of the National Environmental Management Act, 1998 (NEMA) and the 2017 NEMA Environmental Impact Assessment (EIA) Regulations. The proposed development will include the construction of a solar array, inverters and transformers, cabling between panel, Battery Energy Storage System (BESS), laydown area, construction camps and site offices, access road and entrance gate, internal distribution roads, operations and maintenance building, ablutions, storage warehouse, workshop and guard house, and on-site IPP substation. It is noted that the proposed powerline will be assessed as part of a separate application.

CTS Heritage have been appointed to provide heritage specialist input as required by section 24(4)b(iii) of NEMA and section 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA).

Lavin, J. 2022. Desktop Heritage Screening Assessment for the proposed Development of the Carolus Solar PV1 Facility and associated Grid Connection Infrastructure near De Aar, Northern Cape Province.

The heritage screener found that the project area has not been previously surveyed and that heritage resources such as Stone Age lithics, rock engravings, historical structures and graves have been identified in the surrounding areas. The proposed development footprint is located in an area of very high palaeontological sensitivity. The report recommends that a full Heritage Impact Assessment (HIA) be undertaken for the proposed development.

In an Interim Comment issued on the 26/04/2022, SAHRA noted the pending HIA and requested that the HIA comply with section 38(3) of the NHRA as required by section 38(8) of the NHRA with a field-based PIA. The results of the Visual Impact Assessment must also be taken into account as part of the HIA. Since the issuing of the Interim Comment, an HIA has been submitted for review along with the draft EIA (15/08/2022).

Lavin, J. 2022. Heritage Impact Assessment in terms of Section 38(8) of the NHRA for the Development of the



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Carolus Solar PV1 Facility near De Aar, Northern Cape Province.

The HIA makes use of the results of an Archaeological Impact Assessment (AIA), Palaeontological Impact Assessment (PIA) and the Visual Impact Assessment (VIA).

Chapelle, K. 2022. Palaeontological Specialist Study in terms of Section 38(8) of the NHRA for a Proposed Development of the Pixley Park REF and associated infrastructure near De Aar

A desktop PIA was conducted as part of the HIA. The development area is underlain by Quaternary sands, Jurassic Dolerite, the Permian Adelaide Subgroup of the Beaufort Group and the Permian Tierberg Formation of the Ecca Group. The majority of the development area is underlain by the Adelaide Subgroup which is noted to be of very high palaeontological sensitivity and may contain fossils such as amphibian fossils, therapsids, fish, plant fossils, non-marine molluscs and trace fossils. Fossils in the Tierberg Formation may include trace fossils, micro-vertebrate remains and plant fossils. Based on fieldwork conducted in 2012 of adjacent properties, it is unlikely that any fossils would be preserved in the Tierberg Formation or Adelaide Subgroup.

Wiltshire, N and Lavin, J. 2022. Archaeological Specialist Study in terms of Section 38(8) of the NHRA for a Proposed Development of the Pixley Park REF and associated infrastructure near De Aar

A total of 11 archaeological heritage resources were identified within the proposed development area. These include isolated surface scatters of Stone Age lithics of low heritage significance. One heritage resource of Grade IIIB heritage significance includes a very dense scatter of Stone Age lithics (Site 042).

Du Plessis, 2022. Proposed Carolus Solar PV 1 Facility and associated Grid Connection Infrastructure, Northern Cape Province: Visual Impact Assessment – Input for EIR

The anticipated visual impact of the proposed development will be of low significance, while moderate as part of a cumulative visual impact, and no impacts to heritage resources are anticipated.

The recommendations contained in the HIA include the following:

- The rationalised layout is preferred from a heritage perspective;
- The mitigation measures included in the VIA (Du Plessis, 2022) are implemented;



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- A no go development buffer area of 50m is implemented around Sites 042;
- The site development plan of the PV laydown areas and roads should be set to avoid the sites identified above;
- The dolerite outcrops spanning west-east along portions of Wag 'n Bietjie 5 as well as the outcrops in the far northern end near Carolus Poort should ideally be avoided for the location of the solar PV laydown area and access roads carefully planned to minimise the impact on any other dolerite outcrops;
- The attached Chance Fossil Finds Procedure is implemented for the duration of construction activities;
- Should any buried archaeological resources or human remains or burials be uncovered during the course of development activities, work must cease in the vicinity of these finds. The South African Heritage Resources Agency (SAHRA) must be contacted immediately in order to determine an appropriate way forward.

In an Interim Comment issued on the 12/09/2022, SAHRA had requested that the previously requested field-based PIA be conducted for the proposed development. Since issuing the Interim Comment, a letter of response has been provided. This letter states that the role of HIA is not to identify heritage resources but to assess any likely impacts to resources that may result from the proposed development and that a field-based assessment is unlikely to provide any new information regarding the palaeontological sensitivity of the area. The letter references PIAs and surveys of adjacent properties noting that the findings of those reports state that the development application areas that were assessed do not contain significant fossils and no further assessments should be undertaken.

In an Interim Comment issued on the 04/10/2022, SAHRA reiterated the need for a field-based PIA to be conducted. Since the issuing of the Interim Comment, a field-based PIA has been submitted for review.

Butler, E. 2022. Palaeontological Impact Assessment Proposed Development of the Pixley Park Ref and Associated Infrastructure near De Aar, Northern Cape Province.

One weathered tetrapod skeleton was identified within the mudrocks of the Abrahamskraal Formation within the proposed Carolus Solar development footprint.

Recommendations provided in the report include the following:

- The Environmental Control Officer (ECO), responsible for the development, should be aware of the

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- possibility of finding fossils in the Adelaide Subgroup (Beaufort Group, Karoo Supergroup) and Quaternary deposits of the area; and
- A Chance Finds Procedure must be implemented.

Final Comment

The following comments are made as a requirement in terms of section 3(4) of the NEMA Regulations and section 38(8) of the NHRA in the format provided in section 38(4) of the NHRA and must be included in the Final EIA and EMPr:

- 38(4)a – The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit has no objections to the proposed development;
- 38(4)b – The recommendations of the specialists are supported and must be adhered to. Further additional specific conditions are provided for the development:
- Should it not be possible to avoid impact to Site 042, a permit in terms of section 35 of the NHRA must be applied for mitigation of this site;
- 38(4)c(i) – 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 as per section 35(3) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule;
- 38(4)c(ii) – If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Ngqabutho Madida 012 320 8490), must be alerted immediately as per section 36(6) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule;
- 38(4)d – See section 51 of the NHRA regarding offences;
- 38(4)e – The following conditions apply with regards to the appointment of specialists:
- With reference to the mitigation work noted above, a qualified archaeologist must be appointed to undertake the work in terms of the permit applied for as noted above;
- If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. 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

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- by SAHRA;
- The Final EIA and EMPr must be submitted to SAHRA for record purposes;
 - The decision regarding the EA Application must be communicated to SAHRA and uploaded to the SAHRIS Case application.

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

ADMIN:

Direct URL to case: <https://sahris.sahra.org.za/node/595507>

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.

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3. SAHRA reserves the right to request additional information as required.