HERITAGE CONSERVATION MANAGEMENT PLAN

for the approved Sannaspos Photovoltaic Facility near Bloemfontein in the Free State Province

CTS HERITAGE

Prepared by CTS Heritage

For

Savannah Environmental

August 2021

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APPENDICES

1. INTRODUCTION

SolaireDirect South Africa (Pty) Ltd proposed to establish a commercial photovoltaic solar energy facility on a site located some 45km east of Bloemfontein, the Capital of the Free State Province, South Africa. The proposed solar power park, to be known as Sannaspos Solar Park, will include photovoltaic (PV) solar panels and associated infrastructure.

The Sannaspos Solar Energy Facility-phase 1 is proposed to accommodate several arrays of photovoltaic (PV) panels with associated infrastructure in order to generate up to 75 MW (90MW installed capacity) of electricity. An area of approximately 600 ha in extent was investigated within the EIA process within which the facility is proposed. The facility will comprise of PV panels and associated infrastructural requirements which will include:

- An on-site substation and 132kV overhead power line to facilitate the connection between the solar energy facility and the Eskom electricity grid.
- Internal access roads.
- Guard house and security.
- Laydown, campsite and assembly area.
- Office and Control centre.

The Background Information Document for this project was submitted to the South African Heritage Resources Agency (SAHRA), the relevant heritage authority for this project via SAHRIS on 26 June 2012 (SAHRIS Case 424). On 17 August 2012, SAHRA responded, indicating that a Heritage Impact Assessment must be completed.

Although the Final EIR and associated Heritage Impact Assessment documents and Desktop Palaeontological Assessment were submitted to SAHRA via SAHRIS in February 2013, no further comments from SAHRA on this proposed development were forthcoming.

The Environmental Authorisation for this project was granted on 26 June 2013. The following requirements were included as conditions of the Environmental Authorisation:

26. A Site Management Plan must be development (sic) for Site Sannas-1 (an informal cemetery of approximately 13 graves oriented east to west, with stone dressing) and SIte Sannas-5 (a formal cemetery of approximately 08 graves oriented east to west, with granite dressing and headstones). Both these sites must be fenced and provided with a secure access gate. The fencing must be placed

2m away from the perimeter of the graves. No development is allowed within 15m from the fenceline surrounding the graves.

27. Site Sannas-3 must be documented and a permit must be obtained from the relevant authority for the demolition of this stone shed.

28. A qualified palaeontologist must be commissioned to undertake a ground reconnaissance before commencement of any construction activities and the construction manager and ECO must report any fossil finds encountered during construction activities.

This report is submitted in fulfillment of the requirement for a Site Management Plan for Site Sannas-1 and Site Sannas-5.

It is important to note that no additional site inspection has been conducted as part of the development of this management plan, and as such this management plan relies heavily on the information included in the Heritage Impact Assessment completed for the Sannaspos PV project (Tomose, 2013, SAHRIS ID 114445).

1.1 Location of Site

The Sannaspos PV Facility is located on Portion 0 of Farm 1808 Besemkop and Portion 0 of Farm 2962 Lejwe.

The site lies approximately 10 kilometres south of the N8 to Bloemfontein (in the north-west) and Thaba Nchu (in the south-east). Its northern and western boundary is located in a portion of Farm Lejwe 2962.

1.2 Ownership and responsibility for site

Landowners

The land on which the Sannaspos PV is located is privately owned:

Name of landowner	Contact person for landowner	Name of person in control of the land	Name of contact person for person in control of the land	Contact details
Alletta Trust	Tshiliso Tsoeunyane	Tshiliso Tsoeunyane	Tshiliso Tsoeunyane	Address: 1883 Botshabelo, D-Section, Botshabelo, 9781 Cell: 067 144 0320
Generous Trust	Makgupe Abram Masiu	Makgupe Abram Masiu	Makgupe Abram Masiu	Address: PO Box 4412, Heidedal, 9334 Cell: 082 465 9424 Email: makgube@gmail.com

Environmental Authorisation (EA) Holder

The EA Holder would be the Project Company, ENGIE Sannaspos Solar Project (Pty) Ltd, who, through the EA acquires the right to develop the project (considering all other permits and consents have been acquired from all other relevant competent authorities). The Project Company does not, however, own the land on which it intends to develop.

Contact Person: Reginald Niemand
Company Registration Number: 2009/010518/07
Address: 1st Floor Birkdale 1, River Park Gloucester Road, Mowbray
Telephone: 021 680 5120 or 082 551 3552
Email: reginald.niemand@engie.com

Implementation of EA

The person responsible for the implementation of the conditions in the EA would be the contractors during the construction phase. However, any non-compliance would fall onto ENGIE Sannaspos Solar Project (Pty) Ltd as the holder of the EA. All non-compliance would be audited by an independent ECO which would be appointed by ENGIE Sannaspos Solar Project (Pty) Ltd. ENGIE Sannaspos Solar Project (Pty) Ltd would operate the facility. For decommissioning, the responsible parties would again be the contractors and audited by ECO but overall compliance would fall on ENGIE Sannaspos Solar Project (Pty) Ltd.

Heritage Authorities

The area proposed for development is located in the Free State Province. As such, the area is subject to two different heritage management authorities. All impacts to archaeological and palaeontological heritage in the Free State Province are managed by SAHRA. Any impacts to these resources are subject to the recommendations and best practice processes established by SAHRA for archaeology and palaeontology.

All impacts to structures that are older than 60 years in the Free State Province are managed by the Free State Provincial Heritage Resources Authority (FSH). Any impacts to these resources are subject to the recommendations and best practice processes established by FSH.

1.3 Site Description

The study area is located in a landscape that is generally dry and flat with few ridges and hills that characterise the south-eastern and north-eastern portions of the development area. The development area is located west of the Modder River, and its eastern boundaries are marked by the banks of the river itself.

This area is characterised by existing Eskom 250kV Lines (and approximately 4x125kV Lines feeding into and from the Substation). The existing Eskom distribution Substation is located in the west and east of the secondary road that crosses the development area on the western boundary joining the N8 north-east.

Various agricultural activities were observed in the HIA (Tomose, 2013), ranging from: cattle ranching to sheep herding, with small fields used for crops and most probable Maize. Near the south-western end of the development area, a number of natural and man-made/altered perennial water features were noted. The development area is generally highly disturbed with human activities ongoing including technological, settlement, cultural such as burials and agricultural.

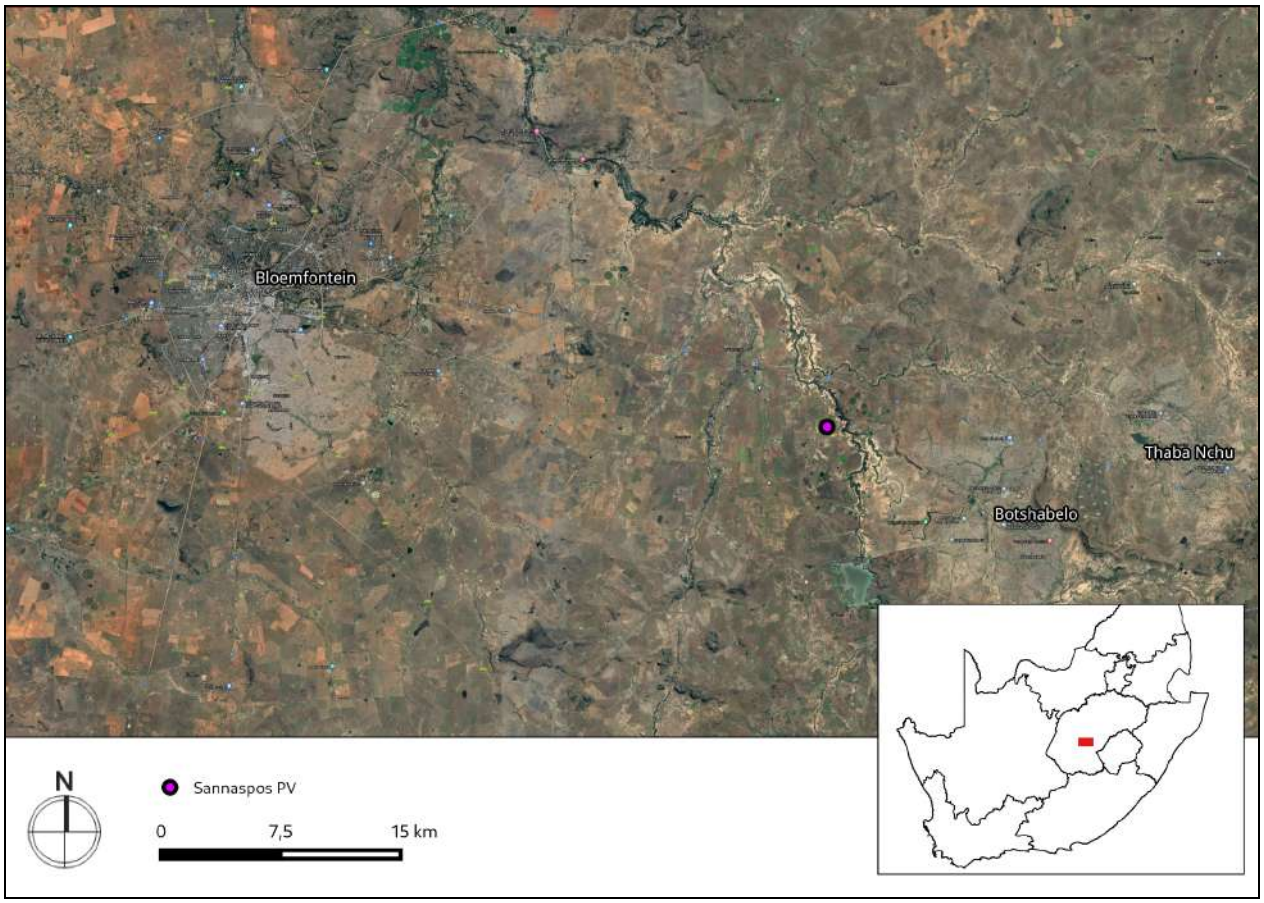

Figure 1: Location of Site

1.4 Statement of Site significance

General points on significance

The cultural significance of a site determines the appropriateness and extent to which protection measures are required. The value or importance of the site to society in general, to specific past and present groups, and to posterity, includes:

- Spiritual/social value - the traditional and consistent use of a site for religious, spiritual or social purposes, even if the religious use no longer continues
- Aesthetic/artistic value - the recognition by scholars and the general public that a cultural site represents a high point of creative achievement
- Historic value - the achievements and knowledge of the past as vehicles for enlightening the present and future
- Scientific/research value - the site, or feature within the site, providing a source of knowledge that is unobtainable elsewhere

Since cultural significance can be interpreted differently by different people, and evaluations can change with time and circumstances, it is important to assess the significance of a site in terms of:

- The importance of a particular site in relation to other sites so as to decide on the appropriate level of management
- Ascertaining what all these values are so as not to inadvertently damage one value that a site has, while preserving another.

Details of the grading system used are provided in section 3 of the NHRA. In addition, the system outlined in Heritage Western Cape's Guideline for Grading: Implications and Management was used. As per this system, heritage significance is indicated on a sliding scale:

- Grade I - National Significance
- Grade II - Regional/Provincial Significance
- Grade IIIA - High Local Significance
- Grade IIIB - Moderate Local Significance
- Grade IIIC - Low Local Significance
- NCW - Not Conservation-Worthy

Significance of Heritage Resources

A number of heritage resources located within the Sannaspos PV development area were identified through the initial Heritage Impact Assessment process (Tomose, July 2013). All of the identified heritage resources have been graded in terms of the provisions of section 3 of the National Heritage Resources Act and the HWC Guide on the Implications of Grading (2016). As such, the grading methodology is not repeated here.

While not exhaustive, the list of known heritage resources located within the Sannaspos PV development area provides insight into the nature and significance of the heritage resources common in the broader area.

As per the intentions of the NHRA, the grading of a heritage resource is indicative of its cultural significance and therefore informs its management and conservation strategies.

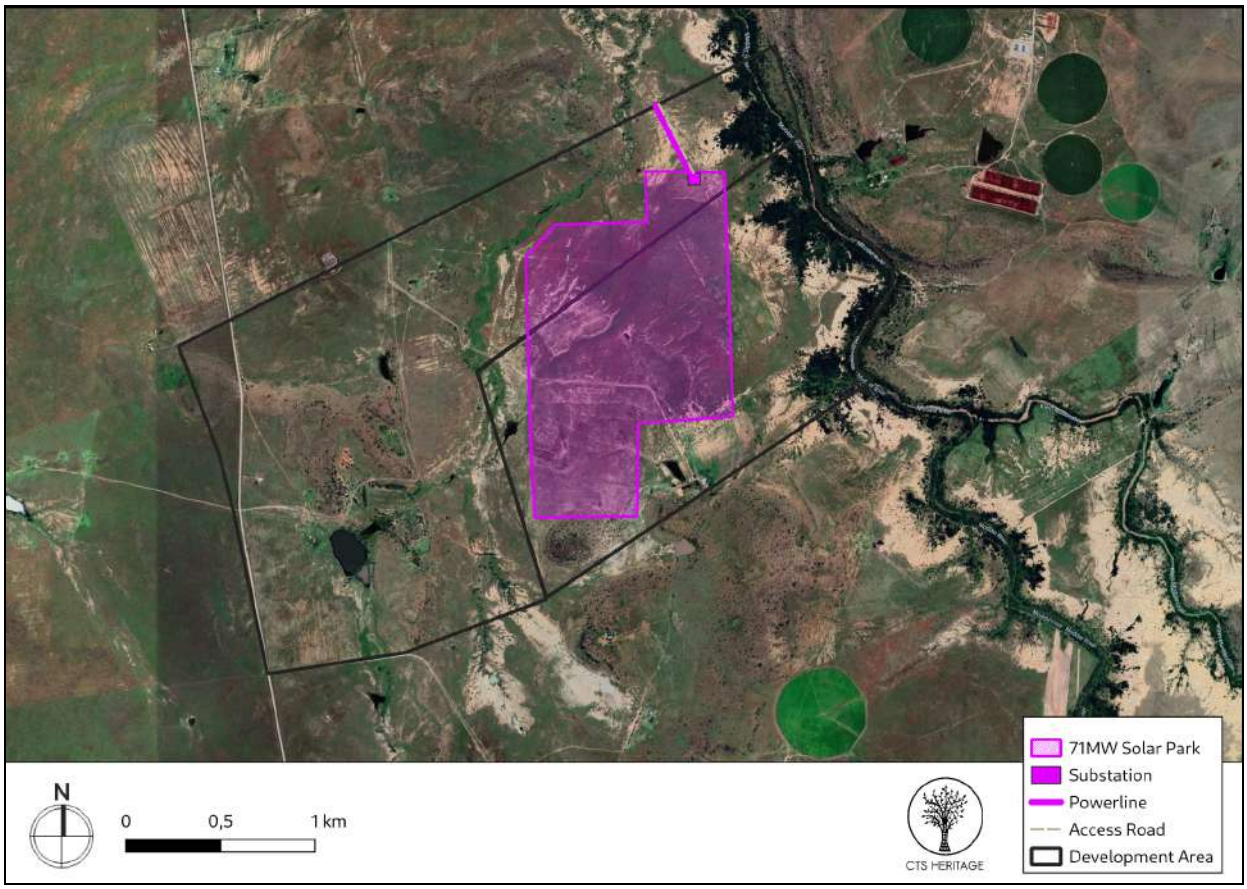

Figure 2: Sannaspos PV Layout

1.5 Objectives of Management Plan

The purpose of this management plan is to guide the activities affecting the heritage resources to retain their significance by conserving it for future generations. A management plan is a living document in the sense that it can be updated as the situation changes and should therefore be reviewed regularly.

This management plan identifies:

- **what needs to be managed** - by surveying and recording the archaeological site in detail and summarising information on the location of sites and what they comprise;
- **who will manage the heritage resources** - by listing the people who have interests in the place and might be involved in its management;
- **the significance of the heritage** in relation to other local, provincial and national sites because the plan is designed to retain this significance;
- **key issues that must be addressed** to retain the significance through consultation with stakeholders;
- **the goals, objectives and strategies** for management and how they will be implemented; and
- **a documentation and monitoring plan** for the ruins so that any changes can be detected and the steps that have been taken can be documented.

1.6 Revision of Plan

The management plan should be reviewed every 5 years and revised as required, or as necessary when circumstances require it. Any revisions must be submitted to SAHRA for approval.

2. RECORDING AND RESEARCH

2.1 Objectives of Recording and Research

Thorough recording of archaeological and heritage sites allows site managers and heritage authorities to manage and identify the changes taking place at a site over time. The heritage resources located within this development have been previously recorded through the Heritage Impact Assessment conducted for the Sannaspos PV facility (Tomose, 2013).

It is anticipated that proposed clearance of vegetation and excavation associated with the construction of the PV facility and its associated infrastructure may reveal additional heritage resources that are currently hidden by the vegetation and surface soil.

The heritage resources identified within this site, and that are the subject of this management plan, are the burials and burial grounds identified in the HIA (Tomose, 2013). These resources have high levels of local cultural significance and require proactive management interventions to ensure their conservation.

2.2 Background context

Tomose (2013) drafted a concise background of the broader context of this area in his HIA originally drafted for the Sannaspos PV development. His background to the site is summarised here along with the subsequent work completed by Bamford (2021).

2.2.1 Palaeontological Background

Bamford (2021) notes that the area proposed for development is underlain by geological sediments of the Adelaide Subgroup of the Beaufort Group (of very high paleontological sensitivity), and Jurassic Dolerite that has zero palaeontological sensitivity. According to the updated biostratigraphy (Smith et al., 2020), the whole of the Adelaide Subgroup has been divided into five Assemblage Zones based on the dominant or temporally exclusive vertebrate fossils.

If vertebrate fossils were common in this region and had been well mapped then the specific Assemblage Zone would have been indicated in the literature. Common names for the fossils that could occur here are fish, amphibians, reptiles, therapsids, terrestrial and freshwater tetrapods, as well as freshwater bivalves, trace fossils including tetrapod trackways and burrows. Where the vertebrates do not occur it is possible to find sparse to rich assemblages of vascular plants of the late Glossopteris Flora, including some petrified logs), and insects are also prevalent at some sites.

From the updated Karoo Biozone map in Smith et al. (2020) the Sannaspos site is in the Daptocephalus Assemblage Zone and on the margin of the two subzones, the lower Dicynodon-Therignathus subzone and upper Lystrosaurus maccaigi—Moschinus subzone. Fossil plants also occur in the Adelaide Subgroup and they are from the Glossopteris flora and include leaf impressions of Glossopteris, early gymnosperms, lycopods, sphenophytes, ferns and silicified wood. They are not common however.

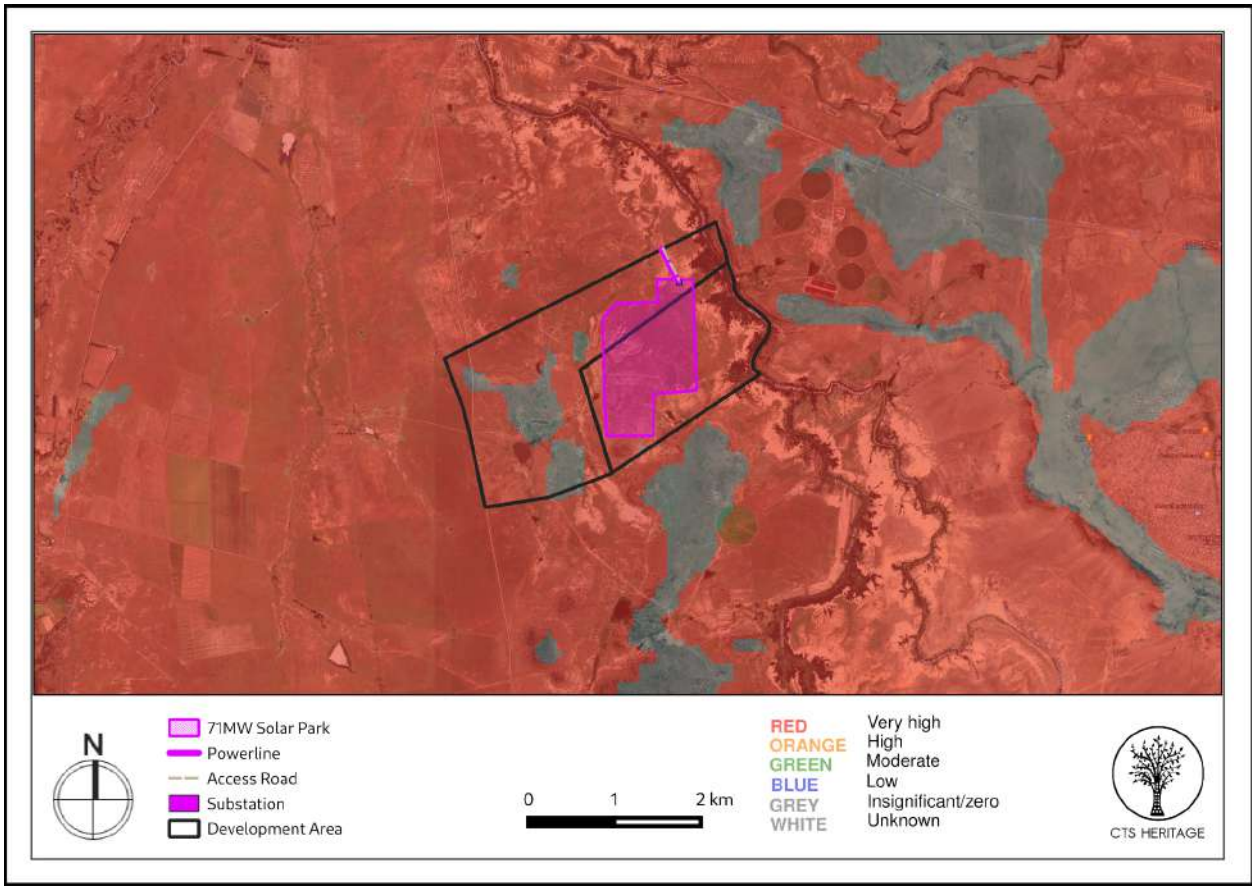

Figure 3.1: Palaeosensitivity Map. Indicating Zero to Very High fossil sensitivity underlying the study area for the Sannaspos PV facility

The Sannaspos PV facility area was walked by a palaeontologist and no fossil material or significance palaoentological resources were identified (Bamford, 2021). Bamford (2021) notes that "Based on the nature of the project, surface activities may impact upon the fossil heritage if preserved in the development footprint. The geological structures suggest that the rocks are the right age and type to contain fossils. No fossils were seen during the site visit. Furthermore, the material to be disturbed are the loose surface soils and sands and they do not preserve fossils."

Since there is a very small chance that fossils from the Adelaide Subgroup below the ground surface may be disturbed, Bamford (2021) recommended that a Fossil Chance Find Protocol be implemented during development. This recommendation has been included in this management plan.

Figure 3.2. Geology Map. Extract from the CGS 2926 Bloemfontein Map indicating that the development area for the Sannaspos PV is underlain by sediments of the Adelaide Subgroup (K3m) and Jurassic Dolerite (Jd)

2.2.2 Archaeological Background

A broad summary of the archaeology of the Free State is included in Tomose (2013) and is not included here. It is sufficient to note that, scattered throughout the Karoo is evidence of historic and prehistoric occupation in the form of Early, Middle and Later Stone Age lithics and other material remains. The descendents of the historic and prehistoric occupants of the region are found in the indigeous Khoe and San, as well as modern inhabitants of the area.

Tmose (2013) notes that the earliest evidence of Iron Age communities is documented in the south-eastern region of the Free State where they came into contact with the San people. Most of the

existing evidence about the Iron Age communities in the Free State dates to the 16th and 18th when they moved across the Vaal River coming to contact with the San hunter-gather people (Klatzow 1994). Numerous stone wall structures and pottery dating to this period have been recorded and lie on the frontier zone where the San people come into contact with agro-pastoralist (Thorp 1996). Stonewalls are one major characteristic of the Iron Age people. However, they are not the only characteristic of features of the Iron Age. Huffman (1982) described cattle dug, both vitrified and unverified, as one of the Iron Age traits. He also included pits and burials, with some located inside the cattle kraals (ibid).

By the end of the 17th Century, the Trekboer movement had begun to cross this landscape with land claimed by Dutch farmers. One such farm was purchased for the establishment of Bloemfontein. Though historically a !Orana settlement, and then a Boer settlement, Bloemfontein was officially founded in 1846 as a British army fort within the broader area which was occupied by various groups of peoples including the !Orana (so-called "Korana" of the lHõall'aes, lHũdill'aes, Einill'aes and others), Cape Colony Trek Boers, Griqua (at that time known as *Baasters*), and Barolong.

The development area of Sannaspos takes its name from an engagement fought during the Second Boer War (1899-1902). According to Tomose (2013), "Using the new Commandos tactic, Chief Commandant De Wet defeated British forces under Brigadier General RG Broadwood in Sannaspos, some 28km east of Bloemfontein. This is in close proximity to the proposed development area. In this battle the British lost 159 men with the Boer Commandos only losing 13 – a huge and significant blow to the British. The defeated British garrison in Sannaspos had been protecting the Sannaspos water works, the main water supply to the newly captured Bloemfontein by the British forces."

A monument commemorating this event has been established and it is currently used as one of the tour attractions of the Free State province battlefields tours and is located some 5km from the Sannaspos PV facility.

2.3 Heritage Resources Identified

The Sannaspos PV facility development area has been thoroughly assessed by Tomose in his report dated July 2013. In his assessment, he identified 5 sites of heritage significance which needed to be considered for the development of the Sannaspos PV facility.

Sannas-1 (Grade IIIA)

SAHRIS ID 46720

On the foot hill of one of the Koppies, an un-formalised and/or none municipal cemetery i.e. not formalised in terms of bylaws regulating parks and cemeteries or being declared formal in terms of a traditional council, was located with approximately 13 graves. The graves are characterised by stone cairns or stone mound dressing. One grave out of the 13 has a cross to mark the headstone. The graves are all facing east-west in a typical burial orientation. The archaeologist was led to the site by farm workers after he asked about possible graves in the area.

Sannas-2 (Grade IIIC)

SAHRIS ID 46721

Two MSA stone scatters were found at the foothill of a hill in Besemkop in an exposed calcrete layer.

Sannas-3 (Grade IIIC)

SAHRIS ID 46722

Site number 3 is a historic stone shed located within Besemkop farmstead. The main farmhouse and its outbuildings are modernised and the shed is the only remaining historical structure that exists in the farmstead. The shed has 3 north facing windows, 2 doors on either sides, 1 door on its southern façade. The shed is built using stone and has a corrugated iron sheet roof which seems to have been recently added on or refurbished.

Sannas-4 (NCW)

SAHRIS ID 46723

Graffiti inscription site located on the hill located south of Besemkop. The inscriptions show 1990s dates and are considered to be a form of graffiti as they are too young to meet the criteria for rock art consideration. The archaeologist was led to the site after he asked the farm workers about possible rock art sites on the hill.

Sannas-5 (Grade IIIA)

SAHRIS ID 46724

The site is located along the road leading to the farmstead. It is a cemetery, possibly created by the first farm owners of the area, consisting of approximately 8 graves. The graves have granite dressing and headstones. The graves burial orientation is east-west, a typical burial position.

These sites have been mapped in Figures 4.1 and 4.2.

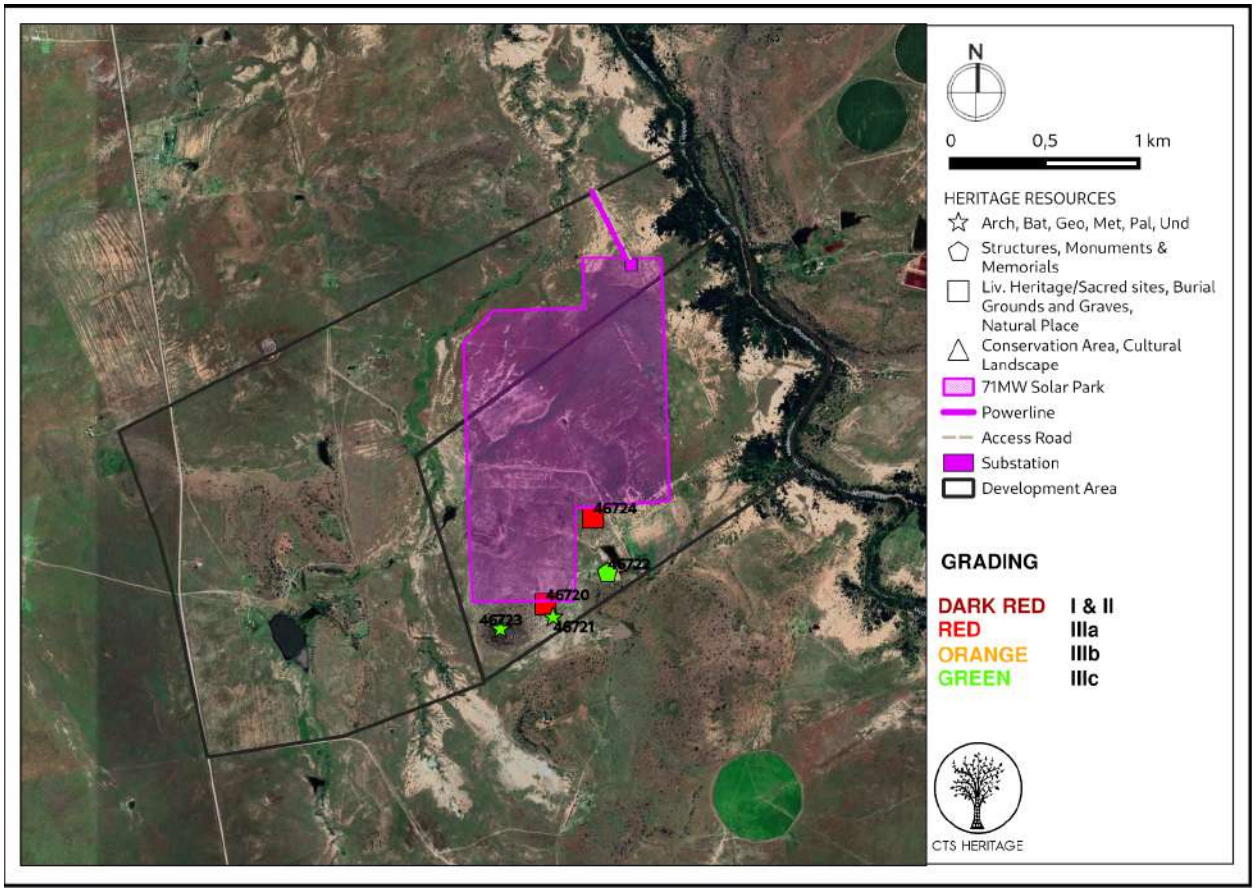

Figure 4.1. Map of all known heritage resources located within the Sannaspos PV Development area

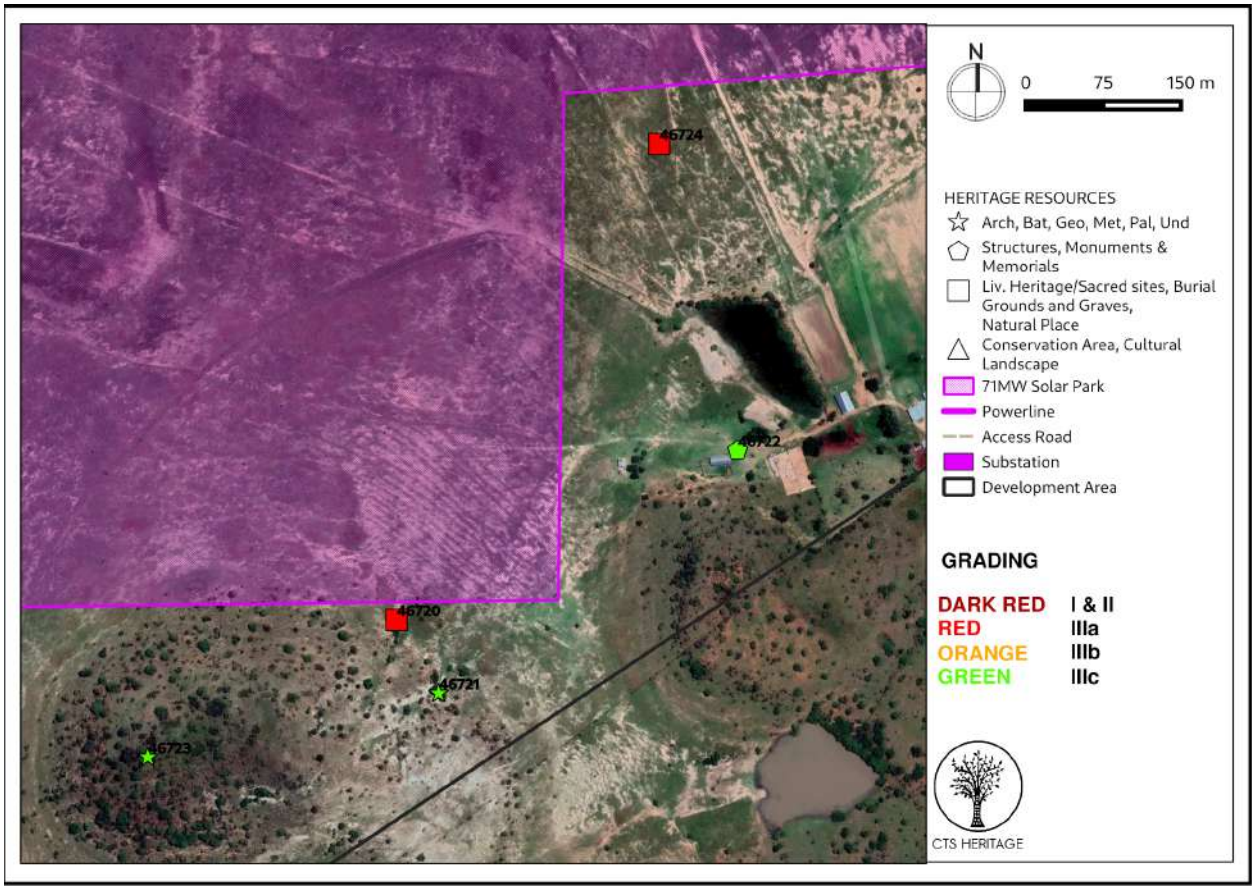

Figure 4.2. Map of all known heritage resources located within the Sannaspos PV Development area

3. SITE MANAGEMENT

3.1 Objectives of site management

The objectives of the heritage management plan for the Sannaspos PV Facility are to ensure that the heritage resources identified within the area proposed for the PV development are properly conserved and any further impacts to these heritage resources are appropriately managed.

The Heritage Management Plan identifies the steps required for the appropriate management of these heritage resources including:

- Regular monitoring of the physical integrity of the identified heritage resources
- Details regarding procedures and processes to follow in the event of negative impact to identified or new heritage resources during the construction or operational phases of the development
- Mitigation of potential impacts resulting from the construction, operational and decommissioning phases to the identified heritage resources

3.2 Potential Impacts to identified heritage resources

A. Construction Phase

- *Palaeontology*

The final layout does not impact any known palaeontological heritage resources. The construction of any infrastructure that requires excavation into bedrock or is located at sites of surface exposures of bedrock may have **high** impacts to fossil resources and as such, the attached Chance Fossil Finds Procedure (Appendix 2) must be implemented. However, due to the lack of irreplaceable, unique or rare fossils within the development footprint, and the extensive superficial deposits overlying the sensitive deposits, the significance of the overall impact of the development is expected to be **very low.**

- *Archaeology*

The final layout does not impact any known archaeological heritage resources of significance. Stone Age archaeology is very sparse in this area, with only a very few, isolated artefacts found in the vicinity of the development footprint.

- *Burial Grounds and Graves*

Two significant burial sites have been identified within the development area. High cultural value is placed on human remains and as such, no impact to these sites can take place. There is a high risk of accidental impact or disturbance to these sites during the construction phase of development.

Recommendations pertaining to the management of impact to these sites are included below. Furthermore, buried burial grounds or graves may be accidentally uncovered during this phase.

- *Built Environment*

The final layout does not impact any known structures directly. One structure of low significance was identified within the development area; however no impact to this structure is anticipated. Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

B. Operational Phase

- *Palaeontology*

Operational activities will not impact any known palaeontological heritage resources and impacts are unlikely during the operational phase. Should any palaeontological heritage be accidentally uncovered during this phase, the Chance Fossil Finds Procedure (Appendix 2) must be implemented.

- *Archaeology*

Operational activities will not impact any known archaeological heritage resources of significance and impacts are unlikely during the operational phase. Should any archaeological resources be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- *Burial Grounds and Graves*

Two significant burial sites have been identified within the development area. High cultural value is placed on human remains and as such, no impact to these sites can take place. Allowance must be made for access to these burial sites by relatives and relevant communities. Recommendations pertaining to the management of impact to these sites are included below.

Other than this, operational activities will not impact any known burial grounds or graves and impacts are unlikely during the operational phase. Should any burial grounds or graves be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- *Built Environment*

Operational activities will not impact any known structures directly and impacts are unlikely during the operational phase. Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be

contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

C. Decommissioning Phase

- *Palaeontology*

Infrastructure removal should not impact any known palaeontological heritage resources and impacts are unlikely during the decommissioning phase. Should any palaeontological heritage be accidentally uncovered during this phase, the Chance Fossil Finds Procedure (Appendix 2) must be implemented.

- *Archaeology*

Infrastructure removal should not impact any known archaeological heritage resources of significance and impacts are unlikely during the decommissioning phase. Should any archaeological resources be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- *Burial Grounds and Graves*

Infrastructure removal should not impact any known burial grounds or graves and impacts are unlikely during the decommissioning phase. Should any burial grounds or graves be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- *Built Environment*

Infrastructure removal should not impact any known structures directly and impacts are unlikely during the decommissioning phase. Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

3.3 Conservation and management requirements

Mitigation measures to reduce the anticipated negative impacts to the identified heritage resources during the various phases of the development include:

- The burial sites at Sannas-1 (SAHRIS ID 46720) and Sannas-5 (SAHRIS ID 46724) must be fenced using clearview fencing to ensure visual permeability and continuity in terms of sense of place. A gate must be created for access purposes for relatives and relevant community members. The position of this gate must be such that it can be accessed without risk to the Sannaspos PV facility. This fencing must be placed 5m from the nearest identifiable burial.

- No impact may take place within the fenced area. All development associated with the Sannaspos PV facility must take place more than 5m from the erected fence providing a 10m buffer between the burials and construction activities..
- Contact must be made with the present and past occupants of the property in order to identify relevant relatives of the deceased and relevant community members. A list of relevant relatives and community members that are likely to want access to the burial sites must be compiled and lodged with the Sannaspos PV Facility management. The individuals on this list will have access to the burial sites as required.
- Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.
- The Chance Fossil Finds Procedure (Appendix 2) must be implemented for the duration of the Sannaspos PV project
- If concentrations of pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the archaeologist and/or the South African Heritage Resources Authority (SAHRA) (021 462 4502) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collection of artefacts may then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

3.4 Consultation

The main stakeholders for the site currently are the owners of the property, the Local Authorities, the managers of the PV facility and the heritage authority for the Free State Province (SAHRA and HFS).

Additional stakeholders include the present occupants of the property as well as the relatives and relevant community members associated with the burial sites identified within the development area.

4. MONITORING

4.1 Objectives of Monitoring

The following recommendations are made for long-term management of the identified heritage resources to conserve the significance of the place as part of the irreplaceable history and shared cultural heritage of the landscape. The following management goals provide guidelines for use and maintenance of the heritage, acceptable physical protection and conservation, visitor education, monitoring and research.

4.2 Monitoring and Site Maintenance

Action	Responsible party	Performance Indicators	Evidence
CONSTRUCTION PHASE			
All site crew should be informed of the heritage significance of the resources in the study area	ECO	Once-off meeting held with site crew	Minutes of meeting
All sites within the development area should be inspected by the ECO during the construction phase to ensure they are being respected and that no impact takes place	ECO	Site inspections conducted at all sites at regular intervals	Monthly Site Inspection and Monitoring Report to be submitted to SAHRA
The burial sites at Sannas-1 (SAHRIS ID 46720) and Sannas-5 (SAHRIS ID 46724) must be fenced using clearview fencing to ensure visual permeability and continuity in terms of sense of place. A gate must be created for access purposes for relatives and relevant community members. The position of this gate must be such that it can be accessed without risk to the Sannaspos PV facility. This fencing must be placed 5m from the nearest identifiable burial.	ECO	Fences appropriately erected with gates	Existing fences with gates
No impact may take place within the fenced area. All development associated with the Sannaspos PV facility must take place more than 5m from the erected fence providing a 10m buffer between the burials and construction activities.	ECO	Site inspections conducted at all sites at regular intervals	Monthly Site Inspection and Monitoring Report to be submitted to SAHRA

Contact must be made with the present and past occupants of the property in order to identify relevant relatives of the deceased and relevant community members. A list of relevant relatives and community members that are likely to want access to the burial sites must be compiled and lodged with the Sannaspos PV Facility management. The individuals on this list will have access to the burial sites as required.	ECO	Engagement with occupants and family members	Contact list for visitors
Significant fossil finds to be reported to the South African Heritage Resources Agency (SAHRA) for recording and sampling by a professional palaeontologist;	ECO	Implementation of the HWC Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding the find and minutes of relevant meetings
Implementation of the Chance Fossil Finds Procedure	ECO	Implementation of the Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding the find and minutes of relevant meetings
If any archaeological material or human burials are uncovered during the course of development, then work in the immediate area should be halted at once. The find should be reported to the heritage authorities (SAHRA) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.	ECO	No unplanned impact or unplanned impact managed Halted within 4 hours	Written correspondence with relevant heritage authority regarding and minutes of relevant meetings
Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.	ECO	Section 34 permit application to HFS	Permit issued in terms of section 34 from the relevant heritage authority or correspondence in this regard.
OPERATIONAL PHASE			
Keep all disturbance within existing development footprint and ensure identified buffers and no-go areas are adhered to	Site Manager	No unplanned impact or unplanned impact	Site Inspection every 5 years and Monitoring

		managed halted within 4 hours	Report to be submitted to SAHRA
All site crew should be informed of the heritage significance of the resources in the study area	Site Manager	Meeting held with site crew	Minutes of meeting
Visitors to be allowed access to the burial sites as per the list of identified relatives and community members. A visitor protocol must be developed and implemented	Site Manager	Record of names and dates of visitors to be kept Visitor protocol to be developed.	Database of names and dates of visitors to the burial sites
Implementation of the Chance Fossil Finds Procedure	Site Manager	Implementation of the HWC Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding finds and minutes of relevant meetings
If any archaeological material or human burials are uncovered during the course of operations, then work in the immediate area should be halted at once. The find should be reported to the heritage authorities (SAHRA) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.	Site Manager	No unplanned impact or unplanned impact halted within 4 hours	Written correspondence with relevant heritage authority regarding finds and minutes of relevant meetings
Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.	Site Manager	Section 34 permit application to HFS	Permit issued in terms of section 34 from the relevant heritage authority or correspondence in this regard.
DECOMMISSIONING PHASE			
Keep all disturbance within existing development footprint and ensure identified buffers and no-go areas are adhered to	Site Manager/ECO	No unplanned impact or unplanned impact managed halted within 4 hours	Monthly Site Inspection and Monitoring Report to be submitted to SAHRA
All site crew should be informed of the heritage significance of the resources in the study area	Site Manager/ECO	Meeting held with site crew	Minutes of meeting

Implementation of the Chance Fossil Finds Procedure	Site Manager/ECO	Implementation of the HWC Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding and minutes of relevant meetings
If any archaeological material or human burials are uncovered during the course of operations, then work in the immediate area should be halted at once. The find should be reported to the heritage authorities (SAHRA) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.	Site Manager	No unplanned impact or unplanned impact halted within 4 hours	Written correspondence with relevant heritage authority regarding and minutes of relevant meetings
Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.	Site Manager	Section 34 permit application to HFS	Permit issued in terms of section 34 from the relevant heritage authority or correspondence in this regard.

5. APPLICABLE LEGISLATION

The development of the Sannaspos PV Facility triggers sections 38(1) and 38(8) of the National Heritage Resources Act (Act 25 of 1999) as this proposed development constitutes a change of character to a site exceeding 5000m^2. As such, this proposed development requires an evaluation of impacts to heritage resources in terms of other legislation (NEMA). This section states that the consenting authority must ensure that the assessment completed for impacts to heritage satisfies the requirements of the relevant heritage authority in terms of section 38(3) of the NHRA (SAHRA in the Free State), and that the recommendations of the relevant heritage authority must be taken into consideration prior to the granting of consent.

Section 38(3) of the NHRA details the information that MUST be included in a Heritage Impact Assessment drafted in terms of section 38 of the NHRA. Furthermore, SAHRA has published Minimum Standards for Archaeological and Palaeontological Impact Assessments. All such guidelines and minimum standards have been complied with in the HIA that was conducted for the Sannaspos PV Facility (Tomose 2013).

In terms of section 38(10) of the NHRA, if the applicant complies with the recommendations and requirements of the relevant heritage authority issued in terms of section 38(8) of the NHRA, then the applicant MUST be exempted from compliance with all other (general) protections included in the NHRA. As such, as long as the requirements of the heritage authority are satisfied, no permit application is required for the destruction of or impact to any heritage resource ***that has been identified in the HIA.***

In the instance of the Section 38 process followed for the Sannaspos PV facility, no recommendations or requirements were issued by the relevant heritage authority.

Should any heritage resources be newly uncovered during excavation activities ie. heritage resources that were not identified in the HIA, then as per the monitoring table above, work must cease in that area and the relevant heritage authority must be contacted regarding a way forward. Any alteration or destruction to or of heritage resources NOT anticipated in the HIA remains subject to the general protections and require permission from the relevant heritage authority.

- Impacts to any structures older than 60 years require a permit from NBKB (Northern Cape) in terms of section 34 of the NHRA

- Impacts to archaeological or palaeontological heritage not anticipated in the HIA requires a permit from SAHRA (Free State) in terms of section 35 of the NHRA
- Impacts to burial grounds or graves that are older than 60 years requires a permit from SAHRA (Free State) in terms of section 36 of the NHRA

6. DOCUMENTATION AND MONITORING

All site record sheets, digital photos and mapping have been loaded securely to SAHRIS so that the EA holder, site manager and ECO are able to access the information online. Access to the database is governed by SAHRA and certain categories of information are not freely available to the general public without special permission such as GPS coordinates of archaeological sites.

Please see the following links for information:

- Case Application on SAHRIS (Case ID 424)
  https://sahris.sahra.org.za/cases/sannaspos-solar-farm-360

It is important that any new or previously unrecorded heritage resources identified during the course of the Construction, Operational or Decommissioning Phases are recorded on SAHRIS.

7. REFERENCES

Heritage Impact Assessments				
Nid	**Report Type**	**Author/s**	**Date**	**Title**
114445	HIA	Nkosinathi Tomose	07/07/2013	A Phase 1 Heritage impact assessment study for the proposed photovoltaic (PV) solar energy facilities (in Sannaspos), near Bloemfontein, Free State Province: DEA Ref No: 14/12/16/3/3/2/360 (Phase 1); DEA Ref No: 14/12/16/3/3/1/615 (Phase 2)
114446	Desktop PIA	Job M. Kibii	31/07/2021	Proposed Sannaspos PV solar energy facilities, Portion 0 of Farm 1808 Besemkop and Portion 0 of Farm 2962 Lejwe of Mangaung Metropolitan Municipality, Free State Province
	PIA	Marion Bamford	06/08/2021	Palaeontological Impact Assessment for the proposed Sannaspos Photo voltaic Facility, Farms Lejwe and Besemkop, Free State Province

APPENDICES

APPENDIX 1:

A Summary of the SAHRA Minimum Standards for Archaeological Site Museums and Rock Art Sites open to the Public

The archaeological heritage of South Africa is unique and it is non-renewable. Archaeological sites, including those with rock paintings or rock engravings, are especially vulnerable to damage caused by visitors. All such sites are protected by the National Heritage Resources Act (Act No. 25 of 1999). Anyone opening a site to the public, either as a formal site museum or simply as a place of interest, must take basic precautions to ensure the safety of the site and its contents. This guide is also applicable to mitigate the negative impacts of increased human activity in proximity to significant archaeological sites.

Expert advice should be sought from the South African Heritage Resources Agency (SAHRA) and/or from one of the museums or university departments listed below. Interventions should be reversible and the integrity of the site should be maintained as far as possible. No site should be opened to the public without a prior professional investigation that includes a conservation management plan approved by the appropriate heritage agency and, for rock art sites, complete documentation in case of later damage.

Remember that a permit is required for ANY disturbance at an archaeological site for activities that fall outside of those activities assessed in a formal Heritage Impact Assessment process and this includes erecting noticeboards, boardwalks, fences, etc. Liaison with the local publicity office and regional services council is recommended.

THE FOLLOWING MINIMUM STANDARDS MUST FORM PART OF THE MANAGEMENT PLAN:

1. Notify SAHRA of intention to open site

2. Engage a professional with specialist knowledge to document the site, draw up a conservation management plan and advise on interpretation of the site.

3. Approach to the Site

3.1 Arrangements for visiting

* if the site is open at all times, there should be adequate signposting;

* if the site is kept locked, there should be clear arrangements for the collection and return of a key;
* if it is open only by appointment, there should be a specialist guide or a specially trained local guide who has had clear instructions on what to do and say.

3.2 Provision for vehicles

* there should be an adequate and well-maintained road, preferably paved to limit dust, with off-road parking;
* the parking should not encroach on the site: vehicles should not park closer than about 100 m from the edge of the site;
* the parking area should be marked by a barrier between it and the start of the path.

3.3 Facilities

* there should be a litter bin at the parking lot and it should he emptied regularly;
* consider the need for toilets and the supply of refreshments and other facilities such as a shop, public telephone, restroom, etc., depending on the number of visitors expected;
* consider the need to establish an interpretive centre separate from the site, where people can see displays and where you may be able to store material, provide accommodation, etc. Remember that a permit from HWC is required to collect any archaeological material and so displays are best done in collaboration with a professional or institution.

3.4 Design of the path

* make sure that the path to the site is distinct;
* the path should follow the contours to avoid unnecessary erosion of any hill slope;
* make sure there are discreet signs to indicate direction where the path crosses a rocky area;
* the path should not enter the site at a position where the deposits or the rock art can be damaged;
* the introductory notice board should be displayed at the end of the path and the beginning of the site, where it will not interfere with good photographic views.

4. Provision of Information

* at least an introductory notice board explaining that the site is protected by law;
* where appropriate, a display with more detailed information on what can be seen at the site and what it means;

* a visitors' book in a container to protect it from the weather, or at a farmhouse or other convenient place (copies of these can be sent to HWC for record purposes);
* a leaflet or pamphlet explaining visitor etiquette.
* an explanatory leaflet or pamphlet that is specific to the site.

5. Guides

* specialist guides or specially trained local guides ensure that the meaning of the rock art or, in the case of archaeological sites, the story of the people who used the site is interpreted and so enhance the experience for the visitor. They also teach appropriate visitor etiquette and contribute to the safety of the site.

6. Protection of the Site

* measures used to protect archaeological deposits should be effective, reversible and recognisable, yet harmonious. It is important that visitors appreciate that the site is being well looked after, so it should be clean and as natural as possible. Remember that a permit is required for any disturbance or intervention at a site.

7. Protection of the Art

* a psychological or physical barrier should be set up between the visitor and the rock art, or display area, in the form of anything from a low wooden railing to a fence that encloses the entire site, depending on the vulnerability of the site or precautions necessary for the safety of the visitor;
* boardwalks are recommended and may include railings. They must be of treated wood or non-flammable material,
* every effort should be made to remove graffiti from the site, as it attracts more graffiti. A permit is required to remove graffiti at a rock art site.

8. Protection of the Surface and Deposits

* an effective cover should be put on the floor of the site to prevent dust being kicked up and damaging rock art and to stop people picking up material on the surface. Cover can be provided by a boardwalk, geotextile, or medium to large slabs of natural rock from the surrounds of the site.
* excavated sections should be backfilled, in consultation with HWC

9. Regular Maintenance

* arrangements should be made with the appropriate heritage agency or museum for a monitoring programme.

* provision should be made for regular visits to the site by the manager or property owner to check on litter, damage, graffiti, etc., which should be reported to the heritage agency.
* there should be regular monitoring of vegetation around the site so that, if necessary:
    - measures can be taken to protect it against trampling,
    - potentially dangerous plants such as those with thorns can be controlled,
    - dead wood can be removed so that damage by veld fires can be avoided,
    - firebreaks can be maintained.

10. Avoid having:

* a litter bin on site unless very large groups are catered for;
* braai or picnic places on the site or right next to it;
* camping places within 500 m of an archaeological site;
* plastic sheeting or plastic bags exposed to view unless there is no other option;
* concrete barriers or surfaces;
* metal poles or wire in contact with rock shelter or cave walls as they rust and stain the rock;
* a sandy surface on the outer side of a fence as this will be eroded by people walking there and the fence will be under-cut.

11. Contact Information

South African Heritage Resources Agency (SAHRA)

Contact Person: Mr Phillip Hine

Tel: 021 462 4502

Email: phine@sahra.org.za

Website: www.sahra.org.za

Heritage Free State (HFS)

Contact Person: Ms Jeaane Nel

Tel: 051 4104750

Email: nelj@sacr.fs.gov.za

National Museum of Bloemfontein

Contact Person: Dr Will Archer

Tel: +27 51 447 9609

Email: will.archer@nasmus.co.za

Website: www.nasmus.co.za

University of Cape Town: Archaeology Department

Contact Person: Prof. John Parkington

Tel: 021 650 2353

Email: john.parkington@uct.ac.za

Website: http://www.archaeology.uct.ac.za/

APPENDIX 2:

Chance Fossil Finds Procedure