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**CULTURAL HERITAGE MANAGEMENT PLAN  
RELATED TO ARCHAEOLOGICAL & HISTORICAL SITES  
RECORDED DURING PHASE 1 HIA'S FOR THE DEVELOPMENT OF A 300MW SOLAR  
PHOTOVOLTAIC (PV) FACILITY AND ASSOCIATED INFRASTRUCTURE ON SEVERAL  
PORTIONS OF FARMS IN THE HANOVER DISTRICT, EMTHANJENI LOCAL MUNICIPALITY,  
PIXLEY KA SEME DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE FOR SOVENTIX SA  
(rights sold to SolarAfrica Energy (Pty) Ltd, Project Hereafter referred to as Sun Central).**

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**APELSER ARCHAEOLOGICAL CONSULTING**

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## SUMMARY

APELSEER ARCHAEOLOGICAL CONSULTING cc was appointed by Ecoleges Environmental Consultants cc, on behalf of Soventix South Africa (Pty) Ltd, to draft and submit a Cultural Heritage Management Plan (CHMP) related to archaeological and historical sites identified during Phase 1 HIA's conducted in 2017 & 2021 by APAC cc (**See Reports APAC017/11 & APAC021/10**).

The HIA work was done for the proposed development of a 300MW solar photo-voltaic (PV) facility, comprising 3 interconnected 100MW plants, one sub-station that ties into existing overhead ESKOM 400kV transmission lines, and associated infrastructure including containerized lithium-ion battery storage and gas turbines, on several portions of farms in the Hanover District, Emthanjeni Local Municipality, Pixley Ka Seme District Municipality, Northern Cape Province. The CHMP is also done in accordance with the requirements of SAHRA (**Final Comments Letter Case ID#10210, dated Monday November 27, 2017 & Final Comments Letter Case ID# 15963, dated Tuesday March 30, 2021**).

A fairly large number of sites were identified in the study area during the 2017 & 2021 assessments, dating the Stone Age, proto-historical and later historical (Anglo-Boer War) periods. As some of the sites cannot be avoided and will therefore be directly & negatively impacted by the proposed development actions, they will form part of Phase 2 Archaeological Mitigation work that will be undertaken and completed in due course. Sites that are not directly impacted, but still falls within the development footprint, will have to be managed & preserved as part of the project and forms the focus of this Cultural Heritage Management Plan. A number of sites recorded during the 2017 & 2021 assessments fall outside of the development area footprint and are not included in the CHMP.

## **CONTINUATION STRATEGY**

A MANAGEMENT PLAN IS NOT A STATIC DOCUMENT AND ACCORDINGLY IT CAN BE CHANGED CONSTANTLY WITHIN THE PARAMETERS OF CULTURAL HERITAGE RESOURCES MANAGEMENT AND THE NATIONAL HERITAGE RESOURCES ACT SHOULD ANY CHANGES OCCUR WITHIN THOSE.

IT IS ALSO RECOMMENDED THAT A CHANCE FIND PROTOCOL FOR CULTURAL HERITAGE RESOURCES BE IMPLEMENTED FOR THE DEVELOPMENT. THIS WILL ENSURE THAT SHOULD ANY PREVIOUSLY UNKNOWN SITES, FEATURES OR CULTURAL MATERIAL DEPOSITS BE IDENTIFIED DURING ANY DEVELOPMENT ACTIONS THAT THESE ARE PROPERLY INVESTIGATED AND RECORDED AND RECOMMENDATIONS ON BEST PRACTICE BE PROVIDED. ANY SIGNIFICANT SITES, FEATURES AND DEPOSITS WILL THEN HAVE TO BE INCLUDED IN THIS DOCUMENT AND THE CULTURAL HERITAGE MANAGEMENT PLAN ADOPTED ACCORDINGLY

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## **1. INTRODUCTION**

APELSEER ARCHAEOLOGICAL CONSULTING cc was appointed by Ecoleges Environmental Consultants cc, on behalf of Soventix South Africa (Pty) Ltd, to draft and submit a Cultural Heritage Management Plan (CHMP) related to archaeological and historical sites identified during Phase 1 HIA's conducted in 2017 & 2021 by APAC cc.

The HIA work was done for the proposed development of a 300MW solar photo-voltaic (PV) facility, comprising 3 interconnected 100MW plants, one sub-station and associated infrastructure. The development is located on several portions of farms in the Hanover District of the Emthanjeni Local Municipality in the Pixley Ka Seme District Municipality of the Northern Cape. The CHMP is also done in accordance with the requirements of SAHRA as stipulated in their Final Comments Letters of the 27<sup>th</sup> of November 2017 & the 30<sup>th</sup> of March 2021.

During the 2017 & 2021 assessments a fairly large number of sites, dating to the Stone Age, proto-Historical and later historical (many related to the Anglo-Boer War of 1899-1902) periods, were recorded in the proposed development area. Some of the sites will be directly & negatively impacted by the activities related to the development, and they will form part of Phase 2 Archaeological Mitigation work that will be undertaken and completed in due course under a SAHRA permit. Sites that are not directly impacted, but still falls within the development footprint, will have to be managed & preserved as part of the development project and are included in this Cultural Heritage Management Plan. A number of the sites recorded during the 2017 & 2021 assessments fall outside of the development area footprint and are not included in the CHMP.

## **2. TERMS OF REFERENCE**

The Terms of Reference for the Cultural Heritage Management Plan for the Sun Central De Aar Solar PV Development is the following:

1. To provide a sustainable Management Plan for the preservation and management of the cultural heritage resources located at and close to the development's footprint to ensure that these sites are not negatively impacted by development actions & activities during and after the completion of the construction and commissioning of the Solar PV Facilities.

## **3. CONDITIONS & ASSUMPTIONS**

The following conditions and assumptions have a direct bearing on this Management Plan:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity. These include all sites, structure and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.

2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
3. Cultural significance is site-specific and relates to the content and context of the site. Any future developments planned should be discussed with full cognizance of this management plan. Sites with a high cultural significance are more important than any foreseeable future development and should therefore be preserved at all cost.
4. All recommendations are made with full cognizance of the relevant legislation.
5. A Management Plan entails recommendations as to the preservation, conservation, interpretation and utilization of cultural resources.

Management can be done through five steps that are mutually inclusive and not necessarily chronological. These steps are in accordance with the so-called Heritage Resources Paradigm (See Van Vollenhoven 2000). The steps are conservation/preservation, utilization, marketing, auditing and other action steps.

(a) **Conservation and preservation**

This refers to the criteria for keeping the historical character of a cultural resource intact. It entails the setting of criteria for the preservation of cultural resources. It also refers to the actions necessary for the preservation of the applicable resource. Security measures are also included. This refers to steps needed to prevent the looting of or damage done by humans to the cultural heritage resources. The last aspect here refers to the training of personnel in order for them to know how to deal with cultural heritage resources. The management guidelines and recommendations in this management plan will provide for this purpose.

(b) **Utilization**

This aspect refers to the sustainable utilization of cultural resources in order to also preserve it on the long term. The most important thing here which relates to the Cultural Heritage Sites at the Sun Central Solar PV Facilities is the interpretation of these resources, which will be in the form of Information Plaques erected on-site. Utilization may include an adapted (new), commercial or scientific use or a combination thereof.

(c) **Marketing**

This issue deals with the possibility to make cultural heritage resources accessible and useful for tourism purposes. It is important to realize that utilization will always be inferior to conservation and preservation principles.

(d) **Auditing**

Auditing refers to the peer review and evaluation of heritage reports and management plans. It also entails the frequent monitoring of management plans in order to determine whether the recommendations thereof are adhered to. For this purpose, a Continuation Strategy has been included on page 3 of this document.

(e) **Other action steps**

These are general steps that the Managing Authority should implement in order to preserve and conserve Cultural Heritage Resources while also maximizing their potential. This should be done within the capacity and capabilities of the managing authority, but it is important that the managing authority should take the necessary steps to improve its capacity and capabilities.

It could include measures to sensitize visitors and staff members to the importance of cultural heritage resources, training of personnel at institutions involved in cultural resources, forming partnerships with other institutions involved in cultural resources and obtaining the necessary funds to implement the management guidelines and recommendation of the management documents (in this case this Management Plan).

#### **4. LEGAL REQUIREMENTS**

Aspects concerning the conservation of cultural resources are dealt with mainly in two Acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

##### **4.1. The National Heritage Resources Act (Act 25 of 1999)**

According to the Act the following is protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g., prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

##### **The National Estate includes the following:**

- a. Places, buildings, structures and equipment of cultural significance
- a. Places to which oral traditions are attached or which are associated with living heritage



- b. Historical settlements and townscapes
- c. Landscapes and features of cultural significance
- d. Geological sites of scientific or cultural importance
- e. Sites of Archaeological and palaeontological importance
- f. Graves and Burial grounds
- g. Sites of significance relating to the history of slavery
- h. Movable objects (e.g., archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

### **Structures**

Section 34 (1) of the Act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

### ***Archaeology, palaeontology and meteorites***

Section 35(4) of the Act states that no person may, without a permit issued by the responsible heritage resources authority:

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite;
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency.

#### **4.2. The National Environmental Management Act (Act 107 of 1998)**

This Act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

#### **5. SHORT BACKGROUND TO THE SUN CENTRAL DE AAR SOLAR PV SITES AND PROJECT**

APelser Archaeological Consulting was appointed by Ecoleges Environmental Consultants cc in 2021, to conduct a Phase 1 Heritage Impact Assessment for their development of a 300MW solar photo-voltaic (PV) facility, comprising 3 interconnected 100MW plants, one sub-station that ties into existing overhead ESKOM 400kV transmission lines, and associated infrastructure including containerized lithium-ion battery storage and gas turbines, on several portions of farms in the Hanover District, Emthanjeni Local Municipality, Pixley Ka Seme District Municipality, Northern Cape Province. The assessment was a follow-up on previous work for the same Solar PV project conducted in 2017 by APAC cc, with the 2021 assessment focusing on the so-called PV2 Array area.

Background research indicated that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls with a number recorded and identified during the 2017 assessment. The February 2021 assessment identified a further number of sites, features and material of cultural heritage (archaeological and/or historical) significance in the study area, and included mainly individual Stone Age artifacts and scatters of Stone Age material.

*A total of 36 sites were identified and recorded during the February 2017 assessment.*

#### **Stone Age Sites: Sites 1 – 9; 11; 12; 15-16; 18; 22-23; 25-29; 31-33**

All the Stone Age sites identified during the 2017 assessment were open-air surface scatters of varying densities, with many single or more tool occurrences to extensive and very dense scatters covering a fairly large area (mainly Site 23). This site and others recorded during the February 2017 survey is similar to those recorded by others in the larger area during earlier assessments. They are located close to and around low rocky ridges and dolerite outcrops/dykes. Stone Age quarry sites are usually found at the foot of dolerite hills where hornfels outcrops occur. Site 23 and some of the other smaller sites seem to be so-called quarry sites, with dense scatters of flakes, more formal tools and numbers of cores occurring at these sites. Dolerite is also associated with engraving sites. One such site has been recorded at the Commonage in Hanover Town. Although no rock engravings were identified in the area during the 2017 assessment, some rocks with signs of edges being hammered or used were

identified. Many of these are located close to sites with stone-packed enclosures though to be associated with the Anglo-Boer War period in the area, although the possibility of these features being related to earlier pastoralist camps could not be excluded.

***Historical Sites: Sites 10; 13-14; 17; 19-21; 24; 30; 34-36***

Many of the historical sites found during the February 2017 assessment are similar to those found by Beater during her HIA for the Taaiboschfontein Solar PV Project in 2011. She indicated that these were related to the Anglo-Boer War period and assessed their significance as of local importance and therefore worthy of preservation. Site 30 is a stone cairn that could possibly be a grave and care should be taken not to impact this site without proper investigation. Farms and other historical settlements in the area date back to the 1840's, while the area also have evidence associated with the South African (Anglo Boer) War. Signs of historical occupation are common in the general area and include abandoned sheep kraals and homestead ruins (Sites 13, 35, 36). Old railway infrastructure (housing, old railway lines and foundations) was also recorded at nearby Burgervilleweg.

*A total of 12 sites were identified during the 2021 field assessment. They included rock engravings, a number of open-air Stone Age surface sites (with varying degrees of density) and a possible pastoralist site (stone-walled enclosure).*

***Rock Engravings: Site 1***

Site 1 is rocky outcrop with a number of rocks containing possible engravings in the form of various striations and lines. Although the age of the engravings can't be determined without a doubt, it could be related to proto-historic pastoralists that moved through the area. Stone Age material (tools/flakes) was also identified in the general proximity of the site.

***Stone Age Sites: Sites 2-10 & 12***

These sites were all open-air surface scatters with differing densities of material (flakes, more formal tools such as blades and scrapers & hammer stones) on them. These artifact and sites date to between the MSA and LSA and is similar to those found in other portions of the study and development area during the 2017 assessment and in other studies by archaeologists in the larger geographical area.

***Proto-Historical Site: Site 11***

Site 11 contains the remains of what seemed to be a collapsed stone-walled enclosure close to a low hill in the area, situated on a natural rocky terrace, as well as a smaller section of stone walling. A grinding hollow was also recorded in close proximity. Although the age and function of these features could not be determined conclusively as yet, it is most likely related to proto-historical pastoralists and represents the remnants of a small camp. Although the site is not completely intact, these types of sites are fairly scarce and slowly disappearing from the landscape as a result of various factors such as developments. It was therefore deemed as of fairly High Significance from a Cultural Heritage perspective.

### **GPS Coordinates for all the 2017 Sites**

S30.88294 E24.33964 (1)  
S30.88180 E24.34175 (2)  
S30.88106 E24.34267 (3)  
S30.87953 E24.34794 (4)  
S30.87787 E24.34549 (5)  
S30.87423 E24.34620 (6)  
S30.87229 E24.34713 (7)  
S30.87033 E24.34777 (8)  
S30.86413 E24.34636 (9)  
S30.86413 E24.34636 & S30.86391 E24.34581 (10)  
S30.86496 E24.34499 (11)  
S30.87028 E24.34580 (12)  
S30.87615 E24.34385 (13)  
S30.87650 E24.34393 (14)  
S30.88862 E24.33071 (15)  
S30.88920 E24.32936 (16)  
S30.89174 E24.32450 (17)  
S30.89070 E24.31404 (18)  
S30.89076 E24.31306 (19)  
S30.89010 E24.31322 (20)  
S30.88885 E24.31347 (21)  
S30.84758 E24.32518 (22)  
S30.84625 E24.32480 & S30.84395 E24.32683 (23)  
S30.84179 E24.33003 (24)  
S30.84137 E24.33806 (25)  
S30.84204 E24.33847 (26)  
S30.84346 E24.33838 (27)  
S30.84409 E24.33701 (28)  
S30.84504 E24.33320 (29)  
S30.84516 E24.33266 (30)  
S30.84546E24.33106 (31)  
S30.84626 E24.32862 (32)  
S30.84167 E24.31572 (33)  
No GPS Coordinates (34)  
S30.82383 E24.28488 (35)  
S30.85412 E24.27465 (36)

### **GPS Coordinates for all the 2021 Sites**

S30 51 32.10 E24 18 43.00 (1)  
S30 51 30.70 E24 18 46.50 (2)  
S30 52 09.80 E24 19 00.00 (3)  
S30 52 13.70 E24 19 16.00 (4)  
S30 52 12.20 E24 19 16.20 (5)

S30 52 19.20 E24 19 16.60 (6)  
S30 52 03.00 E24 18 48.30 (7)  
S30 53 30.60 E24 19 05.40 (8)  
S30 53 00.90 E24 18 45.90 (9)  
S30 52 58.50 E24 19 01.80 (10)  
S30 52 39.10 E24 18 42.60 (11)  
S30 52 43.00 E24 18 39.00 (12)

***The following sites will be negatively impacted and will form the focus of Phase 2 Archaeological Mitigation work:***

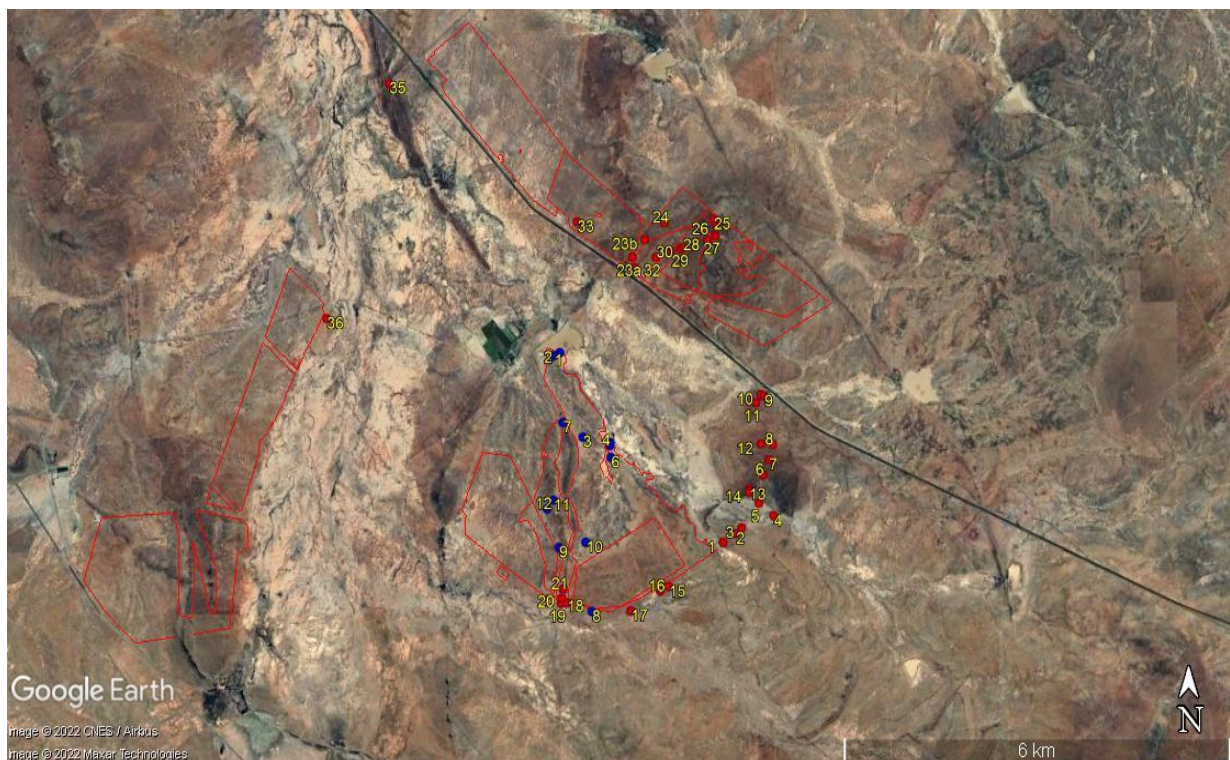
18-21, 23-24 (2017)

***The following sites fall outside of the development area footprint and no further mitigation measures are required:***

1-17, 34-35 (2017) & 4-5 and 8 (2021)

***The following sites fall inside of the development area footprint, and although they will not be directly impacted will have to be Managed (forming part of the focus of this CHMP):***

22, 30, 25-33 (2017) & 1-3, 6-7, 9-11 (2021)



**Figure 1: Map showing the location and distribution of sites found in the study & development area during 2017 and 2021 (red dots = 2017 blue dots = 2021) [Google Earth 2022].**

**THE PICTURES BELOW ARE RELATED TO THOSE SITES THAT WILL BE MANAGED AND PRESERVED AS PART OF THIS CHMP**



**Figure 2: Some of the Stone Age material at Site 22 (2017).**



**Figure 3: Site 25 (2017).**



**Figure 4: Historical artifacts at Site 25.**



**Figure 5: Some Stone tools at Site 26 (2017).**



**Figure 6: Site 28 (2017).**



**Figure 7: Site 29 (2017).**





**Figure 8: Site 30. This was identified as a possible grave (2017).**



**Figure 9: Site 31 (2017).**



**Figure 10: Site 32 (2017).**



**Figure 11: Site 33 (2017).**



**Figure 12: Site 1 with engravings (2021).**



**Figure 13: One of the rocks with “engravings” at Site 1.**



**Figure 14: Some of the Stone Age material at Site 2 (2021).**



**Figure 15: Stone Age material from Site 3 (2021).**



**Figure 16: A view of the Site 6 & 7 general area (2021).**



**Figure 17: Some of the Stone Age tools from Site 7 (2021).**



**Figure 18: Some stone tools from Site 9 (2021).**



**Figure 19: Some of the stone tools from Site 10 (2021).**

**THE PHOTO FOR SITE 12 WAS ACCIDENTALLY DISCARDED. THE SITE CONTAINS A SCATTER OF STONE AGE TOOLS LOCATED IN AN AREA NOT FAR FROM SITE 10.**

## **6. INTERNATIONAL CONVENTIONS FOR THE PROTECTION OF CULTURAL RESOURCES**

Three internationally accepted documents relating to the protection of cultural resources can be taken into consideration for this CHMP. These are:

1. The Australian ICOMOS charter for places of cultural significance, also called the Burra charter, of November 1999.
2. The Venice charter of January 1996.
3. The Conservation plan: a guide to the preparation of conservation plans for places of European cultural significance by James Semple Kerr of Augustus 1985.

Following the guidelines of these conventions will give the correct guidance in dealing with the protection of cultural resources. The principles of the documents correspond with the guidelines of the former National Monument Council (1983) for cultural sites.

### **6.1. The Burra Charter**

The Burra Charter is concerned with the implementation of conservation to repair the cultural significance of a place. In article 2 of the document, it is stated clearly that the aim of conservation is to repair the cultural significance of a place. It includes the protection, maintenance and future of such a place (ICOMOS 1999: 1). This idea is in line with the principles of heritage management. Factors that are taken into account for this purpose are the context of the ethical, historical, scientific and social value of a place (ICOMOS 1999).

Article 3 of the Charter states that work on a heritage site should be done with caution in order to take into consideration the existing material, functions, associations and meaning of a site. It basically means that as much change as necessary, but as little as possible should be implemented (ICOMOS 1999: 1).

Article 4 of the Burra Charter indicates that all disciplines which can potentially play a role in studying a place should be used in the study thereof (ICOMOS 1999: 1). It means that anything that could give information should be used. In line with this, article 5 states that all aspects of the cultural significance of a place should be taken into consideration without emphasizing any one to the detriment of the others. It is this cultural significance which, according to article 6, is determining for the conservation policy of a place. The conservation policy is determining for the use, changes, protection and preservation of a historical site (ICOMOS 1999: 2).

The Charter emphasize that even the condition of a place gives ample reason for the preservation of it in terms of cultural significance. Preservation includes the protection, maintenance and stabilization of structures.

Only if not enough information is available on the previous state of the structure which may be used to recapture and emphasize its cultural significance, one may use the processes of

restoration, reconstruction and adaptation of structures. However, the cultural significance of various periods should be taken into account (ICOMOS 1999: 2-3). Archaeological excavations are seen by the charter as an important method to collect information, either for restoration purposes or for the collection of scientific knowledge (ICOMOS 1999: 3-4).

In Article 25 the Charter indicates that the cultural significance of a place should be strengthened by supporting information such as photographs, drawings and material samples (ICOMOS 1999: 4). This clause is very important as it influences the methodology with regards to the research on places of cultural importance. It includes the documentation of sites by all means available and as completely as possible. It also includes the safekeeping and making available of this documentation and material.

The Burra Charter also has an important influence on the way in which the cultural heritage is handled. Cultural significance is sometimes also referred to as Heritage significance. The National Heritage Resources Act refers to this in article 3(3). According to this a place or object is regarded as part of the national estate when it has cultural significance for one of the following reasons:

- a. The importance for the community or in the history of South Africa;
- b. If it is an unusual, rare or endangered aspect of the natural or cultural heritage of South Africa;
- c. The potential to reveal information that will be a contribution to the understanding of South Africa's natural or cultural heritage;
- d. The importance to reveal the most important characteristics of certain classes of South Africa's natural or cultural places or objects;
- e. The importance in having specific aesthetical characteristics on which a community or cultural group place value;
- f. The importance to contain a high value of creative or technical achievements in a specific time period;
- g. The strong or special association of it with a specific community or cultural group for social, cultural or religious reasons;
- h. The strong or special association with the life and work of a person, a group or an organization of importance in the history of South Africa;
- i. Places of meaning with relation to the history of slavery in South Africa (Act 25 of 1999: 15).



## **6.2. The Venice Charter**

The Venice Charter sees historical sites as the most important living witness of the past. The heritage is accordingly seen as the responsibility of today's generation and that it should be conserved in an authentic state (ICOMOS 1996: 1).

The articles of the Venice Charter are more or less in agreement with those of the Burra Charter. It means that the application of last mentioned supports the first and will contribute to the upkeep of international standards in the conservation, preservation and the restoration of historical places.

## **6.3. The Conservation Plan of Kerr**

The Conservation Plan of Kerr is closely associated with the Burra Charter. Although it is stated that it is concerned with sites of European origin, it can also be applied to other historical and archaeological sites. It gives an explanation of the use of the Charter and the steps to be followed in the implementation of the conservation of a historical place. The process consists of two phases:

### **Phase 1**

The first phase deals with establishing cultural significance. It includes the collection of information (documents and physical), the analysis of the importance thereof, the assessment of this importance and the stating of the said importance (Kerr 1985: 2). Assessment consists of the establishing of criteria for the determination of cultural significance, whilst the stating of the cultural importance is only an explanation thereof (Kerr 1985: 8, 12).

### **Phase 2**

The second phase consists of the conservation plan. Firstly, information should be collected. This includes four sectors namely:

1. The needs of the client
2. External needs
3. Requirements for the maintenance of the cultural significance and
4. The physical condition of the place.

Following this, a Conservation Plan is developed, a Conservation Policy is stated and a strategy for the implementation of the Conservation Plan is rolled out (Kerr 1985: 2).

The needs of the client in this case are to maintain and protect the cultural heritage sites located in the Sun Central De Aar Solar PV Project area against negative impacts of the development. External needs refer to things such as legislation specifically with regards to heritage, but also includes local ordinances and regulations with regards to for instance safety and security.

The requirements for maintenance of the cultural significance refer to issues such as not to remove any cultural material and other objects from the sites. The physical condition refers to the current state of preservation of for instance stone walling and other site features associated with resources located here.

Although a conservation plan is stated here, it may be adapted from time to time. This management document therefore gives basic principles for the conservation and management of the site.

## **7. STATING THE MANAGEMENT PLAN**

***The most important principle in the Management Plan for the Cultural Heritage Sites located in the Sun Central De Aar Solar PV Project area is that the various heritage sites should be maintained in their current state. The development of the Sun Central De Aar 300MW Solar PV Facility and associated infrastructure should in no way impact negatively on any of the sites and any of the related features on it, and should be done in complete sympathy with it.***

## **8. MANAGEMENT & MAINTENANCE PRINCIPLES**

The reasons for the sites to be protected in accordance with the National Heritage Resources Act can be summarized as follows:

1. The importance of the sites for the community and in the history of South Africa
2. The importance in having specific aesthetical characteristics on which a community or cultural group place value
3. The strong or special association of it with a specific community or cultural group for social, cultural or religious reasons
4. The sites and associated structures and features are older than 100 years of age
5. The Cultural Heritage sites are unique, non-renewable, cultural resources, with both archaeological and historical significance, displaying both scientific and archaeological/historical research potential.

The following principles should be followed in the Management of these sites:

- I. No sites (Stone Age and recent historical) should under any circumstances be negatively impacted during the development of the Sun Central De Aar 300MW Solar PV Facility and any other activities associated with this
- II. Various Stone Age open-air surface-sites (Sites 22, 26-29 and 31-33 found in 2017 & Sites 2, 3, 6-7, 9-10 and 12 found during 2021), were rated of Low to Medium significance during the field assessments, and the Phase 1 documentation of these

sites were deemed as sufficient. A number of Stone Age sites found will form the focus of Phase 2 Archaeological Mitigation work, and the Low to Medium Significance sites can therefore be demolished.

- III. The rock engraving site (Site 1 found in 2021) should be preserved by fencing it to prevent accidental damage to the site or any of the engravings located on it. The detailed mapping, photographic recording and drawing of the site and the individual engravings (through detailed rubbings) to ensure the capturing of the information contained on the site as part of the Management of the site should be considered as well. This will ensure that an Object Register for the site is produced and submitted.
- IV. The stone-packed enclosure site (Site 25 found in 2017) that is most-likely related to the Anglo-Boer War (1899-1902) should be fenced-in to prevent accidental damage to the site and cultural material contained on it.
- V. Site 30 (found in 2017) is represented by a single stone cairn that was identified as a possible unknown and not formally marked grave. Although it is not possible to determine without a doubt if this feature is a grave without investigating it through excavations, the shape, size and orientation (in an east/west direction) is typical of stone-packed graves. As it is unknown with no headstone containing any inscriptions it is also deemed as older than 60 years of age and formally protected under the National Heritage Resources Act. As a result, the site should be avoided at all costs if possible and fenced-off to protect it against possible damage by the development & related activities. If it cannot be avoided, then the site can be mitigated through exhumation and relocation after all due social consultation and permitting process has been completed.
- VI. Site 11 (the Proto-Historical Site) containing the remains of what seemed to be a collapsed stone-walled enclosure was rated as a Highly Significant site from an Archaeological/Cultural Heritage perspective. Although the site is not completely intact, these types of sites are fairly scarce and slowly disappearing from the landscape as a result of various factors such as developments. It is therefore recommended that the site be fenced-in to prevent any accidental damage to it. Detailed Archaeological Research on the site in the form of excavations and mapping could also be undertaken in order to gather information and cultural material from it for research and dissemination.
- VII. It is furthermore recommended that Information Plaques on the general archaeology and history of the area, as well as more detailed information on the specific sites located here, should be produced and erected on-site, while an information plaque on Heritage Legislation and the Management and Preservation of Heritage Sites should also be considered. This will serve to educate and sensitize the site developers, contractors and other visitors to the Solar Facility on the significance of these sites and the motivation on why they need to be protected and managed. These plaques can be erected at a central point such as the Main Offices at the Solar PV Facility.

## **9. MAINTENANCE OF THE SITE, ITS FEATURES AND INFRASTRUCTURE**

The above-mentioned principles should be used as starting point.

### **Action steps**

- (1) If any additional/previously unidentified cultural heritage (archaeological and/or historical) sites, features or material (cultural objects/artifacts) are found during the development of the Sun Central De Aar 300MW Solar PV Facility & related Infrastructure, work should be stopped in the proximity of these so that detailed investigation of the finds is undertaken. Such work can only be done by a qualified archaeologist after obtaining the necessary permit from SAHRA. Although the previous Impact Assessments and subsequent detailed site recordings aimed at finding all possible sites & features of cultural heritage origin and significance in the development area, there is always a possibility that some might have been overlooked. The subterranean nature of archaeological & historical remains and features should be taken into consideration here as well. A Chance Find Protocol will be implemented in this case.
- (2) The sites that were given a High Significance Rating, and that will not form the focus of the Phase 2 Archaeological Mitigation work, should be properly protected through fencing in order for the development and related activities not to negatively impact on them.
- (3) In addition, It is recommended that Information Plaques should be erected at a Central Point such as the Main Offices of the PV Facility
- (4) The Management Plan should not be seen as a static document, and therefore needs to be reviewed and updated regularly should the need arise. This is specifically related to any possible changes that could occur in legislation (the National Heritage Resources Act) regarding Cultural Heritage Resources and Cultural Heritage Resources Management. Any previously unidentified sites, features and cultural material deposits that might be uncovered during the development activities will then also have to be included in the Management Plan.

### **Information Plaques**

- (1) It is recommended that Information Plaques are placed at a Central Point at the PV Facility as indicated earlier.
- (2) The plaques need to be weather-proof and UV coated, with chromadek suggested as it can be printed on and is fairly durable. Granite and other metal (such as bronze/brass) is not recommended as this type of material is highly sought after and stolen as a result

## **10. VISITORS CONTROL**

The area does not receive many visitors under normal circumstances. It is however envisaged that the number of visitors to the area will increase fairly dramatically (albeit only during the construction of the Solar PV Facility) for a limited period of time. Not only will these be visitors on foot, but also an increase in vehicular visits (construction vehicles etc.). Care should therefore be taken to limit the possible damage to the identified sites as a result, by preventing/limiting the number of visitors (if any) to the heritage sites.

No visitor should be allowed on the sites without prior arrangement with the developer or without supervision of appointed CLO or Site/Construction Manager. Visitors should not be allowed to climb over or sit on any of the stone-packed walls or other features or do anything that may compromise the cultural integrity of these sites. This will avoid undue damage and possible vandalism.

No person may pick up any archaeological or historical artifact from the sites. Such a find must be reported to an archaeologist who will recommend the appropriate action to be taken.

## **11. EDUCATIONAL ACTIVITIES**

One of the many communicative functions of a museum or heritage site is that of education (Van Zyl et al 1989: 5). Education is also seen as one of the most important museum functions and is aimed at interpreting the information contained inside the museum for the education and entertainment of the public at large (Van Zyl 1989: 10).

In this case it is not envisaged that the sites will be visited by large groups of people (such as school groups) or smaller tour groups, but possibly individual visitors from time to time. The history and archaeology of the area and the identified heritage sites will be made available to these visitors via the Information Plaques erected on-site.

## **12. CONCLUSIONS AND RECOMMENDATIONS**

This Management Plan is an Open document, meaning that additions and changes can be made and incorporated at any time. It is important to remember that although the recommendations put forward in this document is based on both applicable legislation and the knowledge and experience of the author and the sources utilized, the public at large (in this case the “owners” of the heritage sites and the community directly linked to its usage) can provide valuable insight into the management and preservation of the site. They should therefore be consulted when the plan is implemented and when it is reviewed as well so that they can give recommendations of their own. This document should also be lodged with SAHRA (The South African Heritage Resources Agency) for their knowledge and comments.

To conclude it is important to remember that there is always a possibility of the subterranean presence of archaeological or historical features or artifacts. Therefore, even though nothing might be visible on the surface of the development areas, construction work on the proposed

Sun Central De Aar 300MW Solar PV Facility, and any related infrastructure, should proceed with the necessary care. If anything is discovered, the work should cease and an archaeologist/heritage specialist be called in to investigate before work can continue. A Chance Find Protocol will be developed and implemented for this Solar PV Development in this regard.

### 13. REFERENCES

Location of Development/Study Area & Sites distribution: Google Earth 2017, 2021 & 2022

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## APPENDIX A

### **Definition of terms:**

#### **Artifact:**

Cultural object (made by humans).

#### **Buffer Zone:**

Means an area surrounding cultural heritage (see def. cultural heritage) which has restrictions placed on its use or where collaborative projects and programs are undertaken to afford additional protection to the site.

#### **Conservation:**

In relation to heritage resources, includes protection, maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance as defined.

#### **Co-management:**

Managing in such a way as to take into account the needs and desires of stakeholders/ neighbors and partners, and incorporating these into decision making through, amongst others, the promulgation of a local board.

#### **Conservation:**

All the processes used to maintain a place or object in order to keep its cultural significance. The process includes preservation, restoration, reconstruction and adaptation.

#### **Contextual Paradigm:**

A scientific approach which places importance on the total context as catalyst for cultural change and which specifically studies the symbolic role of the individual and immediate historical context.

#### **Cultural Resource:**

Any place or object of cultural significance (see Heritage Resource).

#### **Cultural Resource Management:**

The utilization of management techniques to protect and develop cultural resources so that these become long term cultural heritage which is of value to the general public (see Heritage Management).

#### **Cultural Significance:**

Means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance of a place or object for past, present and future humans.

#### **Feature:**



A coincidental find of movable cultural objects (also see Knudson 1978: 20).

**Grade/Grading:**

The South African heritage resource management system is based on grading, which provides for assigning the appropriate level of management responsibility to a heritage resource.

Grading is a step in the process towards a formal declaration, such as a declaration as a National Heritage Site, Provincial Heritage Site, or in the case of Grade 3 heritage resources the placing of a resource on the Register. It is not an end in itself, but a means of establishing an appropriate level of management in the process of formal protection. Grading may be carried out only by the responsible heritage resources authority or in the case of a Grade 3 heritage resource by the Local Authority. Any person may however make recommendations for grading. These are known as Field Ratings and usually accompany surveys and other reports.

**Heritage resource (Cultural):**

Any place or object of cultural significance (see Cultural Resource).

**Heritage Resources Management Paradigm:**

A scientific approach based on the Contextual paradigm, but placing the emphasis on the cultural importance of archaeological (and historical) sites for the community.

**Heritage management (Cultural):**

The utilization of management techniques to protect and develop cultural resources so that these become long term cultural heritage resources which are of value to the general public (see Cultural Resources Management).

**Historic:**

Means significant in history, belonging to the past; of what is important or famous in the past.

**Historical:**

Means belonging to the past, or relating to the study of history.

**Iron Age:**

In southern African archaeology, the Iron Age is the stage in the development of a specific groups or groups where the use of iron implements as tools and weapons is prominent. The adoption of this new material coincided with other changes in some past societies often including differing agricultural practices, religious beliefs and artistic styles, although this is not always the case.

**Maintenance:**

Means the continuous protective care of the fabric, contents and setting of a place. It does not involve physical alteration.

**Management:**

With reference to cultural heritage resources it includes preservation/ conservation, presentation and improvement of a place or object.

In relation to a protected area, includes control, protection, conservation, maintenance and rehabilitation of the protected area with due regard to the use and extraction of biological resources, community based practices and benefit sharing activities in the area in a manner consistent with the Biodiversity Act as defined and required as per the National Environmental Management: Protected Areas Act, No. 57 of 2003.

**Object:**

Artifact (cultural object) (also see Knudson 1978: 20).

**Partnership/s:**

Means a co-operative and/or collaborative arrangement/s between the various client/parties responsible for the implementation of the Management Plan and a third party that supports the achievement of the Project objectives.

**Preservation:**

Refers to protecting and maintaining the fabric of a place in its existing state and retarding deterioration or change, and may include stabilization where necessary. Preservation is appropriate where the existing state of the fabric itself constitutes evidence of specific cultural significance, or where insufficient evidence is available to allow other conservation processes to be carried out.

**Protection:**

With reference to cultural heritage resources this includes the protection, maintenance, preservation and sustainable utilization of places or objects in order to maintain the cultural significance thereof.

**Site:**

A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location (also see Knudson 1978: 20). Also means any area of land, including land covered by water, and including any structures or objects on it.

**Stone Age:**

The period encompasses the first widespread use of stone for the manufacture of tools and weapons in human evolution and the spread of humanity from the savannas of East Africa to the rest of the world. It ends with the development of agriculture, the domestication of certain animals and the smelting of copper ore to produce metal.

**Structure:**

A permanent building found in isolation or which forms a site in conjunction with other structures (also see Knudson 1978: 20). Also means any building, works, device or other

facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

**Sustainable:**

In relation to the use of a biological resource, means the use of such resource in a way and at a rate that would not lead to its long-term decline; would not disrupt the ecological integrity of the ecosystem in which it occurs; and would ensure its continued use to meet the needs and aspirations of present and future generations of people (as per National Environmental Management: Biodiversity Act, No. 10 of 2004).