

# ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT FOR:

**PROPOSED 75MWP PHOTOVOLTAIC POWER PLANT AND ITS  
ASSOCIATED INFRASTRUCTURE ON A PORTION OF THE REMAINING  
EXTENT OF ERF 1 PRIESKA, NORTHERN CAPE - "ABC PRIESKA SOLAR  
1 PROJECT" | NEAS REFERENCE: DEA/EIA/0001221/2012 | DEA  
REFERENCE: 14/12/16/3/3/2/345**

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<b>TITLE:</b>	<b>ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT FOR:  PROPOSED 75MWP PHOTOVOLTAIC POWER PLANT AND ITS ASSOCIATED INFRASTRUCTURE ON A PORTION OF THE REMAINING EXTENT OF ERF 1 PRIESKA, NORTHERN CAPE - "ABC PRIESKA SOLAR 1 PROJECT"   NEAS REFERENCE: DEA/EIA/0001221/2012   DEA REFERENCE: 14/12/16/3/3/2/345</b>		
<b>PURPOSE OF SCOPE:</b> The purpose of this document is to describe the cultural values and heritage factors that may be impacted on by the proposed construction of the proposed 75MWP Photovoltaic Power Plantdevelopment. The proposed power plantdevelopment is located in Northern Cape Province.			
<b>DOCUMENT VERIFICATION</b>			
Signature:		Position:	
Name:		Date:	
Consulted: Thobile Duma of Kala-Hari Survey Solutionsto review the document. The document also went through Nzumbululo Heritage Solutions Quality Assurance Department for internal review.			
<b>ENDORSED</b> Client Project Responsible Officer to sign off.			
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Name:		Date:	

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Nzumbululo Reference	Photovoltaic Power Plant
Kala-Hari Survey Solution Reference	

## Caveat

### ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT FOR:

### PROPOSED 75MWP PHOTOVOLTAIC POWER PLANT AND ITS ASSOCIATED INFRASTRUCTURE ON A PORTION OF THE REMAINING EXTENT OF ERF 1 PRIESKA, NORTHERN CAPE - "ABC PRIESKA SOLAR 1 PROJECT" | NEAS REFERENCE: DEA/EIA/0001221/2012 | DEA REFERENCE: 14/12/16/3/3/2/345

**Authorship:** This Report has been prepared by Dr. M. Murimbika (Principal Investigator & Professional Archaeologist) assisted by Mr T Mlilo. The report is for the review of the Heritage Resources Agency (PHRA).

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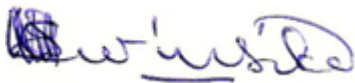
**Geographic Co-ordinate Information:** Geographic co-ordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

**Maps:** Maps included in this report use data extracted from the NTS Map and Google Earth Pro.

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The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the SAHRA Regulations and Guidelines as to the authorisation of proposed Power Plant development Project being proposed by ABC Prieska Solar (Pty) Ltd in the Siyathemba Local Municipality of Northern Cape Province.

Signed by Principle Investigator:



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McEdward Murimbika (Ph.D.),

August 2012

## AUTHOR IDENTIFICATION

Dr. M. Murimbika (Principal Archaeologist & Heritage Consultant) & T Mlilo conducted the HIA study and prepared this Report.

## ACKNOWLEDGEMENTS

The author acknowledges Kala-Hari Survey Solutions for their assistance with information, and the associated project BID as well as responding to technical queries related to the project.

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## EXECUTIVE SUMMARY

Nzumbululo Heritage Solutions has been commissioned by Kala-Hari Survey Solutions to conduct an Archaeological and Heritage Impact Assessment (AIA/HIA) Study for the proposed **PROPOSED 75MWP PHOTOVOLTAIC POWER PLANT AND ITS ASSOCIATED INFRASTRUCTURE ON A PORTION OF THE REMAINING EXTENT OF ERF 1 PRIESKA, NORTHERN CAPE - "ABC PRIESKA SOLAR 1 PROJECT" (NEAS REFERENCE: DEA/EIA/0001221/2012 | DEA REFERENCE: 14/12/16/3/3/2/345)**. The proposed development is situated within the Siyathemba Local Municipality area of Northern Cape Province. This report includes an impact study on potential archaeological and cultural heritage resources that may be associated with the proposed Photovoltaic Power Plant development project receiving area. The findings of this report have been informed by desktop data review, field survey and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the proposed project. This study was conducted as part of the specialist input for the Environmental Impact Assessment exercise. The proposed development consists of:

- Construction of 75Mwp Photovoltaic Power Plant and associated infrastructure.

Analysis of the archaeological, cultural heritage, environmental and historic contexts of the study area predicted that archaeological sites (Stone Age and Historic Archaeological), cultural heritage sites, burial grounds or isolated artefacts were likely to be present on the affected landscape. The field survey was conducted to test this hypothesis and verify this prediction within the proposed 75mwp Photovoltaic Power Plant area. The proposed site of interest for the proposed development is located within a portion of the remaining extent of Erf 1 Prieska. The total extent of this portion of Erf 1 Prieska is 1003 ha, but only 300 ha are required for the proposed PV plant and its associated infrastructure. The site can be accessed via the N10 in the west, the R357 in the east and R386 in the north of the site. The site is currently zoned agriculture. The residential areas in the area include Prieska and Douglas. The level of disturbance in some sections of these areas indicated that it is unlikely that large significant archaeological or physical heritage sites remain intact or well preserved in situ over most of the affected land portions.

The report makes the following observations:

- The Photovoltaic Power Plant is situated on generally accessible site. The project receiving areas are situated on previously disturbed land parcels.
- A background scatter of Early Stone Age (ESA) and Middle Stone Age (MSA) artefacts was found across the site and is of very low archaeological significance.
- Visual impacts to sense of place will be limited given the built-up areas in the immediate project receiving milieu and the topography.

The Report makes the following recommendations:

- Archaeological impacts are assessed as being of Low significance with no mitigation proposed.
  - In terms of the built environment, no impact is anticipated given the observation that the proposed development will not affect any built-infrastructure or structures.
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- Impacts of visual concern are rated as of Low and no mitigation is suggested for either. The receiving environment is currently is neighbouring to built up mining facilities, Eskom powerlines and Substation, and township settlements with their associated access roads and other infrastructures.
  - Overall, impacts to heritage resources are not considered to be highly significant for the project receiving environment. It is thus concluded that the project may be cleared to proceed as planned subject to inclusion of Heritage Monitoring Measures into the project construction environmental management plan. Such measure would ensure that chance archaeological mitigation would be implemented as necessary (should the identified stone tools scatter reveal more significant site materials during subsurface construction activities and;
  - Should construction work commence for this project:
    - The Photovoltaic Power Plant construction teams should be inducted on the significance of the possible archaeological resources that may be encountered during subsurface construction work before they work on the area in order to ensure appropriate treatment and course of action is afforded to any chance finds.
    - If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified and activity should not resume until appropriate management provisions are in place.
    - If any human remains are uncovered during development then work in the immediate vicinity should be halted and the finds protected and reported to SAHRA (021 462 4502).
    -
  - The findings of this report, with approval of the PHRA/SAHRA, may be classified as accessible to any interested and affected parties within the limits of the laws.
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## ABBREVIATIONS

AIA	Archaeological Impact Assessment
C	Contractor
CECO	Construction Environmental Conservation Officer
EAP	Environmental Assessment Practitioner
ECO	Environmental Conservation Officer
EIA	Environmental Impact Assessment
EM	Environmental Manager
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
NHRA	Nation Heritage Resources Act, Act 25 of 1999
PM	Project Manager
SM	Site Manager
SAHRA	South African Heritage Resources Agency

## DEFINITIONS

The following terms used in this A/HIA are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter (Burra Charter):

**Archaeological Material** remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures.

**Chance Finds** Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

**Cultural Heritage Resources** Same as Heritage Resources as defined and used in the National Heritage Resources Act (Act No. 25 of 1999). Refer to physical cultural properties such as archaeological and palaeontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or graves and their associated materials; geological or natural features of cultural importance or scientific significance. Cultural Heritage Resources also include intangible resources such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

**Cultural Significance** The complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

**Grave** A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery.

Historic Material remains resulting from human activities, which are younger than 100 years, but no longer in use, including artefacts, human remains and artificial features and structures.

In Situ material Material culture and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Late Iron Age this period is associated with the development of complex societies and state systems in southern Africa.

Material culture Buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Site A distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity

Place means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Fabric means all the physical material of the place including components, fixtures, contents and objects.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Use means the functions of a place, as well as the activities and practices that may occur at the place.

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Setting means the area around a place, which may include the visual catchment.

Interpretation means all the ways of presenting the cultural significance of a place.

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## 2. INTRODUCTION

### 2.1 Background

This Archaeological and Heritage Impact Assessment (A/HIA) Report has been prepared by Nzumbululo Heritage Solutions for the purpose of Environmental Impact Assessment commissioned by ABC Prieska Solar (Pty) Ltd into the development of the proposed Photo Voltaic Power Plant development in Northern Cape Province. In line with the growing need for cleaner energy production in South Africa, ABC Prieska Solar (Pty) Ltd proposes to construct and operate a 75MWp photovoltaic (PV) power plant and its associated infrastructure on a portion of ERF 1 Prieska, Northern Cape (see figure 1). The proposed development is located in an area of high solar irradiation and in close proximity to Eskom infrastructure. In terms of the EIA Regulations Section 24 (5), an application of this nature has to undergo both Scoping and Environmental Impact Assessment. Kala-hari Survey Solutions and Products has therefore been commissioned by ABC Prieska Solar (Pty) Ltd as the Environmental Assessment Practitioners (EAP) to undertake the EIA and submit all relevant documentation to the Department of Environmental Affairs (DEA) for approval. As part of this EIA study, Kala-Hari Survey Solutions commission Nzumbululo Heritage Solutions to conduct the necessary Archaeological and Heritage Impact Assessment specialist study for the proposed development.

This report details the field study, results of the study as well as discussion on the anticipated impacts of the proposed development as is required by the National Heritage Resources Act, Act 25 of 1999 Section 38. It focuses on identifying and assessing potential impacts on archaeological resources as well as on other physical cultural properties including historical heritage resources in relation to the proposed Photovoltaic Power Plant development. A professional archaeologist and a heritage specialist undertook the assessments, research and consultations required for the preparation of the report comprising archaeological and heritage impacts for the purpose of ensuring that the cultural environmental values are taken into consideration and reported into the EIA processes.

The study was designed to ensure that any significant archaeological or cultural physical property or sites are located and recorded, and site significance is evaluated to assess the nature and extent of expected impacts from the proposed development. The assessment includes recommendations to manage the expected impact of the Photovoltaic Power Plant development site. The report includes recommendations to guide heritage authorities in making appropriate decision with regards to approval process for the proposed development. The report concludes with detailed recommendations on heritage management associated with the Photovoltaic Power Plant development work.

Nzumbululo Heritage Solutions, an independent consulting firm, conducted the assessment, research and consultations required for the preparation of the HIA report in a manner consistent with its obligations set in the NHRA as well as the environmental management legislations. In line with SAHRA guidelines, this report, not necessarily in that order, provides:

- 1) Management summary
  - 2) Methodology
  - 3) Information with reference to the desktop study
  - 4) Map and relevant geodetic images and data
  - 5) GPS co-ordinates
  - 6) Directions to the site
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- 7) Site description and interpretation of the cultural area where the project will take place
- 8) Management details, description of affected cultural environment, photographic records of the project area
- 9) Recommendations regarding the significance of the site and recommendations regarding further monitoring of the site
- 10) Conclusion.

## 2.2 Location of Activity Area and Impact Area

The geographical area which is the subject of this HIA study (The HIA Area) has been determined by proposed preferred location for the photovoltaic power plant. The proposed development is located within a portion of the remaining extent of Erf 1 Prieska. The total extent of this portion of Erf 1 Prieska is 1003 ha, but only 300 ha are required for the proposed PV plant and its associated infrastructure. The site can be accessed via the N10 in the west, the R357 in the east and R386 in the north of the site. The site is currently zoned agriculture. The site is located within the jurisdiction of the Siyathemba Local Municipality in the Northern Cape Province. Siyathemba Municipality is located within the Karoo district area, within the Northern Cape Province and is constituted of Prieska, Niekerkshoop and Marydale. Prieska, which is the largest of the three towns in Siyathemba, and is located approximately 240km south-west of Kimberley on the N10 route (Figure 1). The nearest urban area consist of Prieska, (Kala-Hari Survey Solutions BID, 2012). The project area is accessed from the N10 North or N1 North Highway to R367 West Highway. (Refer to Fig. 1 – Google Site Map).



Figure 1: Site and directions to access to the proposed Photovoltaic Power Plant (Source: Kala-Hari Survey Solutions BID, 2012).

### 2.3 Activity Description

The HIA study was prompted by the proposed:

- Construction of 75MWp Photovoltaic Power Plant and associated infrastructure. The PV plant is expected to have a power generation capacity of 75MVA (electricity peak). ABC Prieska Solar (Pty) Ltd proposes to construct a PV plant to generate approximately 174GWh annually on a portion of the remaining extent of Erf 1, Prieska. The proposed PV plant will cover an area of approximately 300ha. The plant is expected to operate continuously for approximately 20 years.
  - The PV plant is likely to have the following components:
  - The construction of new internal roads to accommodate the construction vehicles and access to site and upgrading of existing accesses;
  - Construction of water supply line, water booster pump station and water storage facility
  - Construction of ablution facilities, mess area and conservancy tanks
  - Construction of an overhead power line and substations/transformers to connect the proposed PV plant to the Eskom grid;
  - Boundary fence to prevent illegal trespassing; and
  - Other infrastructure includes an office, guardhouse and a warehouse (Kala-Hari Survey Solutions BID, 2012).

## 3. STATUTORY REQUIREMENTS

This HIA report is a component of a broader EIA Study and addresses the requirements of the NHRA Act 25 of 1999 Section 38 and EIA Terms of Reference in relation to the assessment of impacts of the proposed development on the cultural and heritage resources associated with the receiving environment. The legislations requires that when constructing a linear development exceeding 300m in length or developing an area exceeding 5000 m<sup>2</sup> in extent, the developer must notify the responsible heritage authority of the proposed development and they in turn must indicate within 14 days whether an impact assessment is required. The NHR Act notes that "any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent", the heritage authority here being Provincial Authority (PHRA-G).

The statutory mandate of heritage impact assessment studies is to encourage and facilitate the protection and conservation of archaeological and cultural heritage sites, in accordance with the provisions of the National Heritage Resources Act, Act 25 of 1999 and auxiliary regulations. The National Heritage Resources Act (NHRA) No. 25 of 1999 protects all defined heritage resources including palaeontological, prehistoric and historical material (including ruins) more than 100 years old (under Section 35), human remains older than 60 years and located outside of a formal cemetery administered by a local authority (under Section 36) and non-ruined structures older than 60 years (under Section 34). A

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broader protection is also offered to Landscapes with cultural significance, which are also protected under the definition of the National Estate (Section 3 (3.2d)).

Specific to this study, Section 38 (2a) emphasise that if there is reason to believe that heritage resources will be affected by any proposal to change the status quo, and then an impact assessment report must be submitted. This study was therefore conducted in pursuit of this requirement. Given the fact that this study is part of specialist studies for Environmental Impact Assessment, under the applicable sections of the National Environmental Management Act, the heritage authorities are required to provide comments on the proposed project in order to facilitate issuance of the Record of Decision (ROD) by the Department of Environmental Affairs (DEA).

For this project, since it is located in the Northern Cape Province, the relevant provincial heritage authorities are NgwaoBoswaKapaBokoni (Heritage Northern Cape) for built structures and the South African Heritage Resources Agency for archaeology.

#### 4. STUDY TERMS OF REFERENCE

Nzumbululo heritage specialists were asked to conduct an AIA/HIA study under the guidance of the requirements of Section 38(3) of the NHRA. As outlined in the introduction section, the activities would include:

- Hypothesise and Conducting a detailed desk-top level investigation to identify all archaeological, cultural and historic sites in the proposed project receiving areas;
- Conduct appropriate archaeological and physical cultural properties field work and survey to verify results of desktop investigation;
- During the field survey, document (GPS coordinates and map) all archaeological sites, objects and structures and physical cultural properties identified within the project's receiving environment;
- Compile an Archaeological and Heritage Impact Assessment report which would include:
- Identification of archaeological, cultural and historic sites within the affected development areas;
- Assess the sensitivity and significance of archaeological remains within the affected development areas;
- Estimate and evaluation of the potential impacts of the proposed construction, operation and maintenance of the proposed development on archaeological, cultural and historic sites in the proposed project receiving areas;
- Measure the impacts in terms of the scale of impact (local, regional, national), magnitude of impact (low, medium or high) and the duration of the impact (construction, up to 10 years after construction (medium term), more than 10 years after construction (long term));
- Provide appropriate Recommendation of mitigation measures that may add positive impacts while reducing the identified negative impacts on archaeological, cultural and historic sites in the proposed project receiving areas;
- The recommendations should be applicable enough to effectively guide the compliance authorities in issuing a decision regarding the authorisation of the proposed development.
- If necessary, develop a cultural resources management plan which includes recommendations on the management of the objects, sites or features, and also guidelines on procedures to be implemented if chance archaeological materials or previously unidentified cultural resources are accidentally uncovered during later developments in the area;

- Consideration of relevant PHRA and SAHRA as well and international best practices guidelines; and
- Cognisance must be taken of the Department of Environmental Affairs and
- Development Planning guideline: "Guideline for involving heritage specialists in EIA
- processes".

In essence, both the national legislations and provincial provisions provide protection for the following categories of heritage resources:

- Landscapes, cultural or natural;
- Buildings or structures older than 60 years;
- Archaeological Sites, palaeontological material and meteorites;
- Burial grounds and graves;
- Public monuments and memorials;
- Living heritage (defined as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) (Also see Appendix 4).



Plate 1: View of middle section of proposed Photovoltaic Power Plantsite and commercial agriculture fields in the background (Photograph © by Author 2012).





Plate 2: View of gravel stones which are typical of some sections of the Power Plant site(Photograph © by Author 2012).



Plate 3: Stone tool in situ





Plate 4: View of Eskom Substation situated on the periphery of the project area. This image also gives the typical cultural landscape within the project area. (Photograph © by Author 2012).

## 5. METHODOLOGY

The proposed Photovoltaic Power Plant development requires clearance and authorisation from government compliance agencies including the heritage authority of SAHRA. Key A/HIA objectives for this project are to fulfil the statutory requirements of the National Heritage Resources Act, Act 25 of 1999. In order to meet the objectives of the A/HIA Phase I study, the following tasks were conducted: 1) site file search, 2) limited literature review, 3) consultations with the affected family, 4) completion of a field survey and assessment and 5) analysis of the acquired data and report production. The following tasks were undertaken:

- Preparation of a predictive model for archaeological heritage resources in the study area.
- A review and gap analysis of archaeological, historical and cultural background information, including possible previous heritage consultant reports specific to the affected project area, the context of the study area and previous land use history as well as a site search;
- Field survey of sampled sections of the Power Plant site within the study area, in order to test the predictive model regarding that heritage sites are in the area;
- Physical cultural property recording of any identified sites or cultural heritage places;
- Identification of heritage significance; and
- Preparation of A/HIA report with recommendation, planning constraints and opportunities associated with the proposed development.

Large urban settlements, irrigated cornfields fields, grazing lands, vegetated river valleys; access and main road infrastructures, bulk water pipelines, existing Eskom Substation, transmission and distribution, residential areas and other auxiliary infrastructures dominate the affected

project area. Although he affected farmland in more than a 1000 ha, the photovoltaic facility will only cover 300 ha (Kala-Hari Survey Solutions BID, 2012). As such, the survey covered judiciously systematic stratified sampled areas across the affected landscape. However, the entire project area was accessible through a network of access roads and farm tracks used to access the settlements. Although limited sections of ground surface were covered with grass and thick bushes, this did not impede surficial feature identification of possible archaeological sites in sampled areas particularly those earmarked for the Photovoltaic Power Plant development (Plates I to II).

Geographic coordinates were obtained with a handheld Garmin GPS global positioning unit. Photographs were taken as part of the documentation process during field study.

### 5.1. Assumptions and Limitations

No existing archaeological or heritage inventory records specifically for the receiving project area were accessed for this particular study. Literature review was completed to provide the general archaeological and historical context of the general Prieska area to determine the sensitivity of the potentially affected cultural landscape. Literature does highlight that most of the northeast Northern Cape cultural landscape has a significant density of archaeological, palaeontological and historic archaeology (colonial) and historical sites (also see Hart, 2005; Kaplan, 2010; Kiberd, 2006; Morris, 1990; Orton, 2011; Orton & Halkett 2011).

The field survey did not include any form of subsurface inspection beyond the inspection of burrows, road cut sections, and the sections exposed by erosion or field ploughing. Some assumptions were made as part of the study and therefore some limitations, uncertainties and gaps in information would apply. It should however, be noted that these do not invalidate the findings of this study in any significant way:

- The proposed Photovoltaic Power Plant development will be limited to specific right of way sites and corridors as detailed in the development layout.
- The construction team to provide link and access to the Photovoltaic Power Plant development site and service sites will use the existing access roads and there will be no without any major deviations.
- Given degraded nature on most affected project area and the level of high existing developments within the affected landscape, most sections of the project area have low potential to yield significant in situ archaeological or physical cultural properties.
- No excavations or sampling were undertaken, since a permit from heritage authorities is required to disturb a heritage resource. As such the results herein discussed are based on surface indicators. However, these surface observations concentrated on exposed sections such as road cuts and clear farmland.
- No palaeontological survey was conducted.
- This study did not include any ethnographic and oral historical studies nor did it investigate the settlement history of the area.

### 5.2. Consultation

No independent community consultation was conducted during this phase of the A/HIA study. However, the EIA Public Participation Process invited comments from affected municipalities and other interested parties on any matter related to the proposed development.

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## 6. CULTURE HISTORY BACKGROUND OF THE PROJECT AREA

Archaeological and heritages studies in the Northern Cape indicate that the area is of high Stone Age archaeological and heritage significance. It is in fact a cultural landscape where Stone Age, Iron Age and Historical period sites contribute the bulk of the cultural heritage of the region (also see Hart, 2005; Kaplan, 2010; Kiberd, 2006; Morris, 1990; Orton, 2011). A study conducted by Schalkwyk (2011) for the establishment of a mainstream renewable solar power in Prieska region revealed that most sites in this region belong to the Stone Age that are the Early Stone Age (ESA), Middle Stone Age (MSA) and Late Stone (LSA). Similar observations were made by Morris (2000), Kiberd (2001, 2006) who also excavated Budu Pan 25 -30 km northwest of Copperton where a profile ESA, MSA and LSA deposits was recorded. Several LSA sites in the northwest and south of the Prieska region were also investigated by Beaumont *et al.*, (1995), Smith (1995a), and Parsons (2003, 2004, 2007). Rock engraving sites are also found in the Prieska region. Kuil and Driekopseiland are some of the rock engraving sites in the region (Beaumont *et al.*, 1995, Beaumont and Vogel 1989, Rudner and Rudner 1968, Rush and Parkington 2010, Wilman 1933). Orton (2012) found scrapped engravings between Copperton and Vanwyksvlei. Stone circles belonging to the LSA were also recorded further along the Orange River by Orton (2012) in addition to what Sampson (1968) had earlier recorded. Cave sites also exist in the landscape eastern Northern Cape regions with MSA deposits. A British fort at Prieska is one of the heritage sites that is ruminant of the late 19<sup>th</sup>-century Anglo-Boer war. In addition there are also war graves in the region (also see Southerncape 2010, Orton 2012). A study conducted by Orton (2012) revealed also historical sites in Klipgat Pan.

## 7 RESULTS OF THE ARCHAEOLOGICAL/HERITAGE ASSESSMENT STUDY

### 7.1 Archaeological finds

Scatters of stone tools were recorded to in areas that are in close proximity to the Substation. As one moves from the substation towards the tarred road (R357) the occurrence of the tools became rare. The stones tools occurred in densities between 0-3 per square meter on the open gravel sections that were identified. The stone tools comprised Middle Stone Age retouched flakes, scrapers, blades, points and cores. The recorded scatters lacked definable provenance and the exposed tools were generally highly eroded. The level of erosion was indicative of the results of attrition and exposure to the weather elements. As such, none of the recorded scatters were attributed to in situ archaeological sites and their source of origin was most probably elsewhere. are some of the areas where scatters of stone tools were recorded.



Typical ESA and MSA tools identified on isolated localities within gravel exposures on the project site.

Although some sections of the site are heavily degraded from previous and current agricultural land use and from powerline and pipeline developments the site has potential to yield more Stone Age tools and palaeontological resources. Most of the proposed Power Plant site

surface is characterised by gravel stones on the surface, which are typical of the landscape. There exist a substation, powerlines, grazing land and roads and other associated infrastructures across the entire project area. As such the proposed Power Plant construction will be additional to in situ developments already on project area (Figure; also see Plates ). However, the chances of recovering significant archaeological materials in situ are possible.



Plate 5: MSA Stone artefacts recorded during the survey at coordinates 29° 42' 11.3" S; 22° 45' 43.50" E within the project area.





Plate 6: typical gravel exposures found across sections of the project area. Some of these exposure contain scatters of stone tools.

## 7.2. Historical and Built Environment

Generically speaking, historic sites are associated with colonial era white settlers, colonial wars, industrialization; recent and contemporary African population settlements, contemporary ritual sites dating to the last hundred years. However, recent historic period sites and features associated with the, African communities, settler and commercial farming communities are on record in the general project area environs. Although the affected general landscape is associated with historical events such as white settler migration, colonial wars and the recent African peopling of the region, no listed specific historical sites are on the proposed development sites. The more common functions of places of cultural historical significance may include:

- Domestic
- Recreation & culture
- Commerce & trade
- Agriculture & subsistence
- Social & Health care
- Religion
- Designed landscape
- Funeral (cemeteries, graves and burial grounds)
- Civil and Structural Engineering
- Education
- Defence /Military

There are no historical archaeological sites or relics recorded on proposed development site. However, the general farmland is considered part of the Prieska cultural landscape associated with broader historical events such as white settler migration, colonial wars and the indigenous African peopling of the region. No historic architectural structures are situated within the project-receiving environment.



Plate 7: the project area is surrounded by existing urban and mining settlements of Prieska town (Photo: Kala-Hari, 2012).

### **7.3 Burial grounds and graves**

The field survey did not identify any burial site within the affected development site. However, a formal municipal cemetery was recorded on the periphery of the farmland earmarked for the proposed development (see Plate 8). However, whether they are known or not on record, from a heritage perspective, burial grounds and gravesites are accorded the highest social significance threshold (see Appendix 3). They have both historical and social significance and are considered sacred. Wherever they exist they may not be tampered with or interfered with during any proposed development. It is important to note that the possibility of encountering human remains during subsurface earth moving works anywhere on the landscape is ever present. Although the possibility of encountering previously unidentified burial sites is low on the Photovoltaic Power Plant site, should such sites be identified during subsurface construction work, they are still protected by applicable legislations and they should be protected (also see Appendixes for more details).



Plate 8: View of the contemporary cemetery associated with the settlements in the neighbouring properties next to the proposed development site.

#### **7.4. Historical Monuments**

There are currently no places within the HIA Area that are listed on the National Heritage List.

#### **Cultural landscapes**

Within the neighbouring farms there are established urban settlements associated with the mining complex (Plate XXX). There are other active agricultural farms agri-complexes with a windmills, some feeding/wateringtroughs and a stone-lined dam and irrigation facilities. These features may not be all that old, but some of the existing farm and urban settlement structures and infrastructures are likely more than 60 years of age. However, none of these built up areas are affected by the proposed development. The photovoltaic infrastructure will merely add to several modern built-up areas within the general cultural landscape around Prieska.

#### **Scenic routes, sense of place and visual concerns**





Plate 9: Mining centre visible from the proposed project area.

The site can be accessed via the N10 in the west, the R357 in the east and R386 in the north of the site (Fig. 1). The R357, which connects Prieska with Vanwyksvlei via Copperton, is generally scenic in that one experiences the typical vast, undeveloped open space of the Karoo while driving along it. The study area is visible from these main roads and may result in a significant detracting from the sense of place and scenic value from the road. However, it should be borne in mind that the proposed development is an in situ development adding to existing developments such as urban settlements at Prieska, surrounding mining centres, the irrigation agricultural landscape, the Eskom substation and associated access roads, powerlines and boundary fence lines. Therefore any possible visual impacts to the project area is less significant and would be of reduced concern. The solar energy facility would not exceed 4.5 m in height whereas there are other modern infrastructures that are already visible from distances in the surrounding areas, e.g. the mining centre (Plate 9).

## 7 DISCUSSION

Although scatters of Stone Age tools were recorded within sections of the proposed Photovoltaic Power Plant, the proposed project is unlikely to affect any discernable archaeological site. The following observations are worthy of emphasising in this discussion prior to making final recommendations:

1. The Photovoltaic Power Plant is situated within a developed and partially degraded area, and has reduced sensitivity for the presence of high significance physical cultural site remains, be they archaeological, historical or burial sites, due to previous agricultural activities, settlement developments and associated infrastructures, earth moving disturbances resulting from developments and other land uses in the project area.



2. That the survey focused on sample sections that had high potential to yield possible archaeological sites. Due to the area of the Power Plant site, it was impractical to cover every inch of 1001 ha buffer zone to the 300 ha project site. As such, there is the possibility that previously unknown low to medium archaeological sites may exist in the project area whereas the sampled sections fell outside sections with such potential distinct archaeological sites.
3. Limited ground surface visibility on sections of the project area that were not cleared at the time of the study may have impeded the detection of other physical cultural heritage site remains or archaeological signatures immediately associated with the site of interest. This factor is exacerbated by the fact that the study was limited to general survey without necessarily conducting any detailed inspection of specific locations where the final individual towers will be installed or such localities that will be affected by the Power Plant establishment.
4. The absence of confirmable and significant archaeological cultural heritage sites is not evidence in itself that such in situ sites did not exist in the project area. It may be that, given the dense development in most sections of the Power Plant site, if such sites existed before, changing earth-moving activities may have destroyed their surficial evidence. Furthermore, some sections were not accessible due to thick vegetation cover. Significance of the Sites of Interest (proposed Power Plant site) is not limited to presence or absence of physical archaeological sites.

## 8 CULTURAL HERITAGE SITE ASSESSMENT OF SIGNIFICANCE

The appropriate management of cultural heritage resources is usually determined on the basis of their assessed significance as well as the likely impacts of any proposed developments. Cultural significance is defined in the Burra Charter as meaning aesthetic, historic, scientific or social value for past, present or future generations (Article 1.2). Social, religious, cultural and public significance are currently identified as baseline elements of this assessment, and it is through the combination of these elements that the overall cultural heritage values of the site of interest, associated place or area are resolved. Not all sites are equally significant and not all are worthy of equal consideration and management. The significance of a place is not fixed for all time, and what is considered of significance at the time of assessment may change as similar items are located, more research is undertaken and community values change.

The above observation does not lessen the value of the heritage approach, but enriches both the process and the long-term outcomes for future generations as the nature of what is conserved and why, also changes over time (Pearson and Sullivan 1995:7). This assessment of the Indigenous cultural heritage significance of the Site of Interest as its environments of the study area is based on the views expressed by the Claimant and his community representatives consulted documentary review and physical integrity.

African indigenous cultural heritage significance is not limited to items, places or landscapes associated with pre-European contact. Indigenous cultural heritage significance is understood to encompass more than ancient archaeological sites and deposits, broad landscapes and environments. It also refers to sacred places and story sites, as well as historic sites, including mission sites, memorials, and contact sites. This can also refer to modern sites with particular resonance to the indigenous community. The site of interest considered in this project falls within this realm of broad significance.

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## 9.1. Assessment Criteria

The Guidelines to the SAHRA Guidelines and the Burra Charter define the following criterion for the assessment of cultural significance:

### Aesthetic Value

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; sense of place, the smells and sounds associated with the place and its use.

### Historic Value

Historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. The overall Prieska region as a place have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

### Scientific value

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information. Scientific value is also enshrined in natural resources that have significant social value. For example, pockets of forests and bushvelds have high ethnobotany value.

### Social Value

Social value embraces the qualities for which a place has become a focus of spiritual, religious, political, local, national or other cultural sentiment to a majority or minority group. Social value also extend to natural resources such as bushes, trees and herbs that are collected and harvested from nature for herbal and medicinal purposes.

## 9 STATEMENT OF SIGNIFICANCE

### Aesthetic Value

The aesthetic values of the HIA Study Area (Power Plantsite and the overall project area) are contained in the valley bushveld environment and landscape typical of this part of the Northern Cape Province. The visual and physical relationship between HIA study area and the surrounding historical Cultural Landscape demonstrates the connection of place to the local and oral historical stories of the African communities who populated this region going back into prehistory.

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The proposed Power Plant development will be situated within an environment and associated cultural landscape, which, although developed by existing settlements, remains representative of the original historical environment and cultural landscape of this part of Northern Cape area. The local communities consider the project area a cultural landscape linked to their ancestors and history. However, the proposed developments will not alter this aesthetic value in any radical way since it will add to the constantly changing and developing settlements (Table XX).

Assessment of impacts to Aesthetic Values related to the scenic routes and sense of place

	Before Mitigation	After Mitigation
Magnitude	Low	NA
Extent Local -	Local	NA
Duration Long term -	Long term	NA
Significance	Low -	NA
Probability	Definite -	NA
Status	Negative -	NA
Reversible	Yes (with rehabilitation after plant is decommissioned)	NA
Cumulative	A number of PV and wind energy facilities are planned for the area which may lead to cumulative visual impacts to the landscape if they were to be constructed. This maybe of concern and will detract from peoples' experience of the general regional sense of place.	

**Historic Value**

The historic values of the site under development are imbedded in the overall Prieska area. These are contained in the possible historic homesteads, forts such as the British Fort, war graves and shrines being located on in the town of Prieska. There are no such historic relics on the site affected with development. Therefore such history goes back to the pre-colonial period, through the colonial era, the colonial wars and subsequent colonial rule up to modern day Northern Cape.

Assessment of impacts to Historic Values related to the project area.

	Before Mitigation	After Mitigation
Magnitude	Low	Low
Extent Local -	Specific Site	Specific Site
Duration Long term -	Long term	Long term
Significance	Low -	Low -
Probability	Definite -	probable
Status	Negative -	Negative -
Reversible	Yes (with rehabilitation after plant is decommissioned)	No
Cumulative	No historic or historic archaeology sites will be affected by this development. However, there are similar developments if the region that may affected highly significant sites which will lead to permanent loss of physical cultural property record of the region.	

**Scientific value**

Past settlements and associated roads, and other auxiliary infrastructure developments and disturbance within the HIA study area associated with the proposed Power Plant site have resulted in limited intact significant cultural landscapes with the potential to retain intact large scale

or highly significant open archaeological site deposits. However, should intact archaeological sites be recorded within the Power Plant and immediate surrounding areas, they may retain scientific evidence that may add value to the local and regional history.

Assessment of impacts to Archaeological Scientific Values related to the project area.

	Before Mitigation	After Mitigation
Magnitude	Low	NA
Extent Local -	Specific Site	NA
Duration Long term -	Long term	NA
Significance	Low -	NA
Probability	Definite -	NA
Status	Negative -	NA
Reversible	Yes (with rehabilitation after plant is decommissioned)	NA
Cumulative	The archaeological resources falling within the project area are not significant since they do not constitute distinct sites. Since no significant pre-colonial resources occur, cumulative impacts are thus not of concern on this site. There are other significant archeological sites in the region that may be protected for archeological and scientific reasons.	

### Social Value

The project sites fall within a larger and an extensive Northern Cape cultural landscape that is integrated with the wider inland northeast Northern Cape region. The overall area has social value for the local community, as is the case with any populated landscape. The land provides the canvas upon which daily socio-cultural activities are painted. The remains of historic homesteads that are found around the project area testify to the fact of generational homes and settlements. All these factors put together confirms the social significance of the project area. However, this social significance is not going to be negatively impacted by the proposed Power Plant development especially given the fact that the development will add value to the human settlements and activities already taking place. In addition the area is already affected by development and this project is an addition to what already existing infrastructure such as roads, sub power station and agricultural fields.

Sections of the Power Plant covered in thick bushes and vegetation retain social value as sources of important herbs and traditional medicines. As such, they must be considered as medium significant social value sites.

## 10 RECOMMENDATIONS

The only identified heritage sites recorded in the HIA study Area are the scatters of isolated stone tools. These sites are of low significance since they do not constitute in situ archaeological sites. However, there scatters point to the possibility of the existence of archaeological sites in the project area. However, the study did not find any permanent barrier to the proposed PV Power Plant development. As such, it is recommended to the heritage authority that the development be cleared to proceed subject to specified recommendations made in the following sections. The following recommendations are based on the results of the A/HIA research, cultural heritage background review, site inspection and assessment of significance.

### 11.1 Management & Policy Recommendations

#### Community Advisory

Should community consultations being held through the project EIA PPP refer to any cultural issues associated with the project area, such matters should be addressed adequately. The proposed PV Power Plant is associated with existing Prieska communities and a heritage or cultural aspirations they have that may potentially be affected by the development should be acknowledged should they be identified in the course of the proposed development. To date, the PPP consultation process has not identified cultural heritage contestation to the project.

#### Recommendation 1

The Project Public Participation Process should ensure that any cultural heritage related matter for this project is given due attention whenever it arises and is communicated PHRA throughout the proposed project development. This form of extended community involvement would pre-empt any potential disruptions that may arise from previously unknown cultural heritage matter that may have escaped the attention of this study.

### 11.2. Archaeological Graves and Burial & Cultural Heritage Sites

No intact surface archaeological heritage deposits were recorded within the study area. Therefore no direct conflicts between archaeological sites and the proposed development are anticipated when construction begins.

#### Recommendation 2

A heritage monitoring plan herein presented should be incorporated into the project EMP. This would be a cautionary measure to ensure that should any subsurface archaeological materials be unearthed, appropriate rescue or salvage operations would be implemented.

#### Recommendation 3

From a heritage point of view project site is feasible. However, the proposed Power Plant development should be approved to proceed as planned under observation that construction work does not extend beyond the surveyed Power Plant site. The footprint impact of the proposed Power Plant development and associated infrastructure should be kept to minimal to limit the possibility of encountering chance finds within servitude and surrounded areas around the Power Plant site.

#### Recommendation 4

- In situations where unpredicted impacts occur (such as accidentally disturbing a previously unknown grave), construction activities should be stopped and the heritage authority notified immediately. In the unlikely event of chance archaeological material or previously unknown human remains being disturbed during subsurface construction, the finds should be left in situ subject to further instruction from the project archaeologist or heritage authorities (refer to Appendixes 1 - 4 for additional details). The overriding objective, where remedial action is warranted, is to minimize disruption in construction scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the PHRA and NHRA regulations.

- A professional archaeologist should be retained to monitor all significant earth moving activities that may be implemented as part of the proposed Power Plant development. The monitoring process would ensure that should any archaeological or human remains be disturbed during subsurface construction work at the Sites of Interest, immediate remedial rescue and salvage work would be actioned without delay.

The recommended heritage monitoring operations will not stop work but will form part of the proposed project's construction EMP in line with best-practice heritage procedures.

### 11.3. Interpretation & Active Management Recommendations

The local communities have a long and significant connection with project area. Like any other generational society, there are several other cultural activities that take place within the affected settlement areas associated with the proposed Power Plant development.

#### Recommendation 5

Although the possibility of conflict between the community and the proposed development related to culture heritage is unlikely, PHRA should acknowledge on behalf of the community, that the project area is situated in a culturally significant landscape associated with local history and cultural activities. PHRA may also acknowledge that such significance is not tied to physical sites or archaeological sites only, but to intangible heritage such as popular memories, oral history, ancestral remembrance, religious rituals, aesthetic appreciations, living experiences and folklores. As such, the community retains the right to have their constitutionally guaranteed cultural heritage rights respected and protected without being limited to existence of physical evidence such as archaeological sites. Should such issues arise in association with this proposed development, adequate attention should be devoted by the proponent, PHRA and community to address them?

#### Recommendation 6

Subject to the recommendations herein made, there are no significant cultural heritage resources barriers to the proposed Power Plant development in the Northern Cape Province. The PHRA may approve the proposed development to proceed as planned with special commendations to implement the recommendations here in made.

## 12. CONCLUDING REMARKS

The literature review and field research confirmed that the project area is situated within a contemporary cultural landscape dotted with settlements with long local history. Field survey was conducted during which it was established that the affected project area is degraded by existing and previous land use activities and developments. Although the area is degraded, there is a possibility that the HIA Study Area Site of Interest is part of a wider archaeological and historical site within and significant cultural landscape as confirmed by existence of isolated yet insignificant Stone Age tool scatters. Although historical and contemporary cultural sites exist in the neighbouring farmlands, none were recorded within the project area that retained high significance that may be affected by the proposed substations and powerline

developments. This report concludes that the proposed Power Plant developments may be approved by PHRA to proceed as planned subject to recommendations herein made which include conditional inclusion of heritage monitoring measures in the project EMP (also see Appendices).

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### 13. BIBLIOGRAPHY

- AUSTRALIA ICOMOS (1999) *The Burra Charter: The Australia ICOMOS charter for places of cultural significance*. Burwood.
- BAUMANN, N. & WINTER, S. 2005. *Guideline for involving heritage specialists in EIA process*. Edition I. CSIR report No ENV-S-C 2005 053E. Provincial Government of the Western Cape: Department of Environmental Affairs and Developmental Planning.
- BEAUMONT, P.B. & VOGEL, J.C. 1984. Spatial patterning of the ceramic Later Stone Age in the northern Cape, South Africa. In: Hall, M., Avery, G., Avery, D.M., Wilson, M.L. & Humphreys, A.J.B. (eds) *Frontiers: southern African archaeology today: 80-95*. Oxford: British Archaeological Reports International Series 207.
- BEAUMONT, P.B. & VOGEL, J.C. 1989. Patterns in the age and context of rock art in the northern Cape. *South African Archaeological Bulletin* 44: 73-81.
- BEAUMONT, P.B., SMITH, A.B. & VOGEL, J.C. 1995. *Before the Einiqua: the archaeology of the frontier zone*. In: Smith, A.B. (ed.) *Einiqualand: studies of the Orange River frontier: 236-264*. Cape Town: University of Cape Town Press.
- BICKFORD, A AND SULLIVAN, S. 1977. "Assessing the research significance of historic sites" in S Sullivan and S Bowdler (eds) *Site Surveys and Significance assessment in Australian Archaeology*. Canberra: ANU.
- BURKE, H. And SMITH, C. 2004. *The archaeologist's field handbook*. Australia. Allen and Unwin.
- Cambridge: Bell.
- COOPER, M. A., FIRTH, A., CARMAN, J. & WHEATLEY, D. (eds.) 1995: *Managing Archaeology*. London: Routledge.
- DEACON H.J. AND DEACON J. 1999. *Human beginnings in South Africa*. Cape Town: David Philips Publishers.
- GLAZEWSKI, J., 2000: *Environmental Law in South Africa*. Durban: Butterworths.
- HART, T. 2005. *Heritage impact assessment of a proposed Sutherland golf estate, Sutherland, Northern Cape Province*. Unpublished report prepared for DJ Environmental. Archaeology Contracts Office, University of Cape Town.
- KAPLAN, J. 2010. *Archaeological scoping study and impact assessment of a proposed photovoltaic power generation facility in Copperton Northern Cape*. Unpublished report prepared for DJ Environmental Consultants.
- KIBERD, P. 2001. *Bundu Farm: a Middle and Later Stone Age pan site, Northern Cape, South Africa: preliminary results of fieldwork*. NyameAkuma 55: 51-55.
- KIBERD, P. 2001. *Bundu Farm: a Middle and Later Stone Age pan site, Northern Cape, South Africa: preliminary results of fieldwork*. NyameAkuma 55: 51-55.
- KIBERD, P. 2006. *Bundu Farm: a report on archaeological and palaeoenvironmental assemblages from a pan site in Bushmanland, Northern Cape, South Africa*. *South African Archaeological Bulletin* 61: 189-201.
- National Museum Bloemfontein Memoir 4: I-III.
- RUSCH, N. & PARKINGTON, J. 2010. *San rock engravings marking the Karoo landscape*. Cape Town: Struik Travel & Heritage.
- SAHRA APM. 2006. *Guidelines: Minimum standards for the archaeological and palaeontological Component of Impact Assessment Reports*. SAHRA: Cape Town.
- SAHRA APMHOB 2002. *General Introduction to surveys, impact assessments and management plans*. SAHRA: CT.
- SAHRA APMHOB. 2004. *Policy for the management of Archaeology, Palaeontology, Meteorites and Heritage Object*. SAHRA: Cape Town.



- SAHRA. 2002. General guidelines to Archaeological Permitting Policy. SAHRA: Cape Town.
- SAHRA. 2002. General Introduction to surveys, impact assessments and management plans.
- SAHRA. What to do when Graves are uncovered accidentally.
- Sampson, C.G. 1968. The Middle Stone Age industries of the Orange River scheme area.
- SAMPSON, C.G. 1984. A prehistoric pastoralist frontier in the Upper Zeekoe Valley, South Africa. In: Hall, M., AVERY, G., AVERY, D.M., WILSON, M.L. & HUMPHREYS, A.J.B (EDS) *Frontiers: southern African archaeology today*: 96 – 110. Oxford: British Archaeological Reports International series 207.
- SAMPSON, C.G. 1985. Atlas of Stone Age settlement in the central and upper Seacow Valley. *Memoirs of the National Museum (Bloemfontein)* 20: 1-116.
- SAMPSON, C.G. 1986. Model of a prehistoric herder-hunter contact zone: a first approximation. *South African Archaeological Society Goodwin Series* 5: 50-56.
- SAMPSON, C.G. 2010. Chronology and dynamics of Later Stone Age herders in the Seacow River valley, South Africa. *Journal of Arid Environments* 74:848-848.
- SMITH, A.B. 1995. Archaeological observations along the Orange River and its hinterland. In: Smith, A.B. (ed.) *Einiqualand: studies of the Orange River frontier*: 236-264. Rondebosch: UCT Press.
- SMITH, A.B. 1995B. Introduction. In: Smith, A.B. (ed.) *Einiqualand: studies of the Orange River frontier*: xvii-xx. Rondebosch: UCT Press.
- SOUTH AFRICA 1999. NATIONAL HERITAGE RESOURCES ACT (No 25 of 1999), Government Gazette. Cape Town.
- SOUTH AFRICA, 1983. Human Tissue Act. Government Gazette.
- SOUTHERN CAPE. 2010. <http://www.southerncape.co.za/towns/prieska/welcome.php>. Accessed 24 August 2012.
- VOGEL, J.C., VISSER, E. & FULS, A 2001. Suitability of ostrich eggshell for radiocarbon dating. *Radiocarbon* 43:133-137.
- WILMAN, M. 1933. The rock engravings of Griqualand West and Bechuanaland, South Africa.

## 14. APPENDIX 1: HUMAN REMAINS AND BURIALS IN DEVELOPMENT CONTEXT

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Developers, land use planners and professional specialist service providers often encounter difficult situations with regards to burial grounds, cemeteries and graves that may be encountered in development contexts. This may be before or during a development project. There are different procedures that need to be followed when a development is considered on an area that will impact upon or destroy existing burial grounds, cemeteries or individual graves. In contexts where human remains are accidentally found during development work such as road construction or building construction, there are different sets of intervention regulations that should be instigated. This brief is an attempt to highlight the relevant regulations with emphasis on procedures to be followed when burial grounds, cemeteries and graves are found in development planning and development work contexts. The applicable regulations operate within the national heritage and local government legislations and ordinances passed in this regard. These guidelines assist you to follow the legal pathway.

1. First, establish the context of the burial:

A. Are the remains less than 60 years old? If so, they may be subject to provisions of the Human Tissue Act, Cemeteries Ordinance(s) and to local, regional, or municipal regulations, which vary from place to place. The finding of such remains must be reported to the police but are not automatically protected by the National Heritage Resources Act (Act 25 of 1999).

B. Is this the grave of a victim of conflict? If so, it is protected by the National Heritage Resources Act (Section 36(3a)). (Relevant extracts from the Act and Regulations are included below).

C. Is it a grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local

authority? If so, it is protected by the National Heritage Resources Act (Section 36(3b)).

D. Are the human or hominid remains older than 100 years? If so, they are protected by the National Heritage Resources Act (Section 35(4), see also definition of "archaeological" in Section 2).

2. Second, refer to the terms of the National Heritage Resources Act most appropriate to the situation, or to other Acts and Ordinances:

A. Human remains that are NOT protected in terms of the National Heritage Resources Act (i.e. less than 60 years old and not a grave of a victim of conflict or of cultural significance) are subject to provisions of the Human Tissue Act and to local and regional regulations, for example Cemeteries Ordinances applicable in different Provincial and local Authorities.

B). All finds of human remains must be reported to the nearest police station to ascertain whether or not a crime has been committed.

C). If there is no evidence for a crime having been committed, and if the person cannot be identified so that their relatives can be contacted, the remains may be kept in an institution where certain conditions are fulfilled. These conditions are laid down in the Human Tissue Act (Act No. 65 of 1983). In contexts where the local traditional authorities given their consent to the unknown remains to be re-buried in their area, such re-interment may be conducted under the same regulations as would apply for known human remains.

3. In the event that a graveyard is to be moved or developed for another purpose, it is incumbent on the local authority to publish a list of the names of all the persons buried in the graveyard if there are gravestones or simply a notification that graves in the relevant graveyard are to be disturbed. Such a list would have to be compiled from the names on the gravestones or from parish or other records. The published list would call on the relatives of the deceased to react within a certain period to claim the remains for re-interment. If the relatives do not react to the

advertisement, the remains may be re-interred at the discretion of the local authority.

A. However, it is the responsibility of the developer to ensure that none of the affected graves within the cemetery are burials of victims of conflict. The applicant is also required in line with the heritage legislation to verify that the graves have no social significance to the local communities.

B. It is illegal in terms of the Human Tissue Act for individuals to keep human remains, even if they have a permit, and even if the material was found on their own land.

4. The Exhumations Ordinance (Ordinance No. 12 of 1980 and as amended) is also relevant. Its purpose is "To prohibit the desecration, destruction and damaging of graves in cemeteries and receptacles containing bodies; to regulate the exhumation, disturbance, removal and re-interment of bodies, and to provide for matters incidental thereto". This ordinance is supplemented and supported by local authorities regulations, municipality by-laws and ordinances.

#### DEFINITIONS AND APPLICABLE REGULATIONS

1). A "Cemetery" is defined as any land, whether public or private, containing one or more graves.

2). A "grave" includes "(a) any place, whether wholly or partly above or below the level of ground and whether public or private, in which a body is permanently interred or intended to be permanently interred, whether in a coffin or other receptacle or not, and (b) any monument, tombstone, cross, inscription, rail, fence, chain, erection or other structure of whatsoever nature forming part of or appurtenant to a grave.

3). No person shall desecrate, destroy or damage any grave in a cemetery, or any coffin or urn without written approval of the Administrator.

4). No person shall exhume, disturb, remove or re-inter anybody in a cemetery, or any coffin or urn without written approval of the Administrator.

5). Application must be made for such approval in writing, together with:

a). A statement of where the body is to be re-interred.

b). Why it is to be exhumed.

c). The methods proposed for exhumation.

d). Written permission from local authorities, nearest available relatives and their religious body owning or managing the cemetery, and where all such permission cannot be obtained, the application must give reasons why not.

6). The Administrator has the power to vary any conditions and to impose additional conditions.

7). Anyone found guilty and convicted is liable for a maximum fine of R200 and maximum prison sentence of six months.

5. Human remains from the graves of victims of conflict, or any burial ground or part thereof which contains such graves and any other graves that are deemed to be of cultural significance may not be destroyed, damaged, altered, exhumed or removed from their original positions without a permit from the National Heritage Resources Agency. They are administered by the Graves of Conflict Division at the SAHRA offices in Johannesburg.

"Victims of Conflict" are:

a). Those who died in this country as a result of any war or conflict but excluding those covered by the Commonwealth War Graves Act, 1992 (Act No. 8 of 1992).

b). Members of the forces of Great Britain and the former British Empire who died in active service before 4 August 1914.

c). Those who, during the Anglo Boer War (1899-1902) were removed from South Africa as prisoners and died outside South Africa, and,

d). Those people, as defined in the regulations, who died in the "liberation struggle" both within and outside South Africa.

6. Any burial that is older than 60 years, which is outside a formal cemetery administered by a local authority, is protected in terms

of Section 36(3b) of the National Heritage Resources Act. No person shall destroy, damage, alter, exhume or remove from its original position, remove from its original site or export from the Republic any such grave without a permit from the SAHRA.

There are some important new considerations applicable to B & C (above).

SAHRA may, for various reasons, issue a permit to disturb a burial that is known to be a grave of conflict or older than 65 years, or to use, at a burial ground, equipment for excavation or the detection or the recovery of metals.

(Permit applications must be made on the official form Application for Permit: Burial Grounds and Graves available from SAHRA or provincial heritage resources authorities.) Before doing so, however, SAHRA must be satisfied that the applicant:

- a). Has made satisfactory arrangements for the exhumation and re- interment of the contents of such a grave at the cost of the applicant.
- b). Has made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such a grave and,
- c). Has reached an agreement with these communities and individuals regarding the future of such a grave or burial ground.

#### PROCEDURE FOR CONSULTATION

The regulations in the schedule describe the procedure of consultation regarding the burial grounds and graves. These apply to anyone who intends to apply for a permit to destroy, damage, alter, remove from its original position or otherwise disturb any grave or burial ground older than 60 years that is situated outside a formal cemetery administered by a local authority. The applicant must make a concerted effort to identify the descendants and family members of the persons buried in and/or any other person or community by tradition concerned with such grave or burial ground by:

- 1). Archival and documentary research regarding the origin of the grave or burial ground;
- 2). Direct consultation with local community organizations and/or members;
- 3). The erection for at least 60 days of a notice at the grave or burial ground, displaying in all the official languages of the province concerned, information about the proposals affecting the site, the telephone number and address at which the applicant can be contacted by any interested person and the date by which contact must be made, which must be at least 7 days after the end of the period of erection of the notice; and
- 4). Advertising in the local press.

The applicant must keep records of the actions undertaken, including the names and contact details of all persons and organizations contacted and their response, and a copy of such records must be submitted to the provincial heritage resources authority with the application.

Unless otherwise agreed by the interested parties, the applicant is responsible for the cost of any remedial action required.

If the consultation fails to reach an agreement, the applicant must submit records of the consultation and the comments of all interested parties as part of the application to the provincial heritage resources authority.

In the case of a burial discovered by accident, the regulations state that when a grave is discovered accidentally in the course of development or other activity:

- a). SAHRA or the provincial heritage resources authority (or delegated representative) must, in co-operation with the Police, inspect the grave and decide whether it is likely to be older than 60 years or otherwise protected in terms of the Act; and whether any further graves exist in the vicinity.
- b). If the grave is likely to be so protected, no activity may be resumed in the immediate vicinity of the grave, without due investigation approved by SAHRA or the provincial heritage resources authority; and

c). SAHRA or the provincial heritage resources authority may at its discretion modify these provisions in order to expedite the satisfactory resolution of the matter.

d. Archaeological material, which includes human and hominid remains that are older than 100 years (see definition in section 2 of the Act), is protected by the National Heritage Resources Act (Section 35(4)), which states that no person may, without a permit issued by the responsible heritage resources authority - destroy, damage, excavate, alter or remove from its original site any archaeological or palaeontological material.

The implications are that anyone who has removed human remains of this description from the original site must have a permit to do so. If they do not have a permit, and if they are convicted of an offence in terms of the National Heritage Resources Act as a result, they must be liable to a maximum fine of R100 000 or five years imprisonment, or both.

#### TREAT HUMAN REMAINS WITH RESPECT

a). Every attempt should be made to conserve graves in situ. Graves should not be moved unless this is the only means of ensuring their conservation.

b). The removal of any grave or graveyard or the exhumation of any remains should be preceded by an historical and archaeological report and a complete recording of original location, layout, appearance and inscriptions by means of measured drawings and photographs. The report and recording should be placed in a permanent archive.

c). Where the site is to be re-used, it is essential that all human and other remains be properly exhumed and the site left completely clear.

d). Exhumations should be done under the supervision of an archaeologist, who would assist with the identification, classification, recording and preservation of the remains.

e). No buried artifacts should be removed from any protected grave or graveyard without the prior approval of SAHRA. All

artifacts should be re-buried with the remains with which they are associated. If this is not possible, proper arrangements should be made for the storage of such relics with the approval of SAHRA.

f). The remains from each grave should be placed in individual caskets or other suitable containers, permanently marked for identification.

g). The site, layout and design of the area for re-interment should take into account the history and culture associated with, and the design of, the original grave or graveyard.

h). Re-burials in mass graves and the use of common vaults are not recommended.

i). Remains from each grave should be re-buried individually and marked with the original grave markers and surrounds.

j). Grouping of graves, e.g. in families, should be retained in the new layout.

k). Material from the original grave or graveyard such as chains, kerbstones, railing and should be re-used at the new site wherever possible.

l). A plaque recording the origin of the graves should be erected at the site of re-burial.

m). Individuals or groups related to the deceased who claim the return of human remains in museums and other institutions should be assisted to obtain documentary proof of their ancestral linkages.



## 15. APPENDIX 2: HERITAGE MANAGEMENT PLAN INPUT INTO THE PVPROJECT EMP

Objective	<ul style="list-style-type: none"> <li>• Protection of archaeological sites and land considered to be of cultural value;</li> <li>• Protection of known physical cultural property sites against vandalism, destruction and theft; and</li> <li>• The preservation and appropriate management of new archaeological finds should these be discovered during construction.</li> </ul>								
No.	Activity	Mitigation Measures	Duration	Frequency	Responsibility	Accountable	Contacted	Informed	
Pre-Construction Phase									
1	Planning	Ensure all known sites of cultural, archaeological, and historical significance are demarcated on the site layout plan, and marked as no-go areas.	Throughout Project	Weekly Inspection	Contractor (C) CECO	SM	ECO	EA EM PM	
Construction Phase									
1	Emergency Response	Should any archaeological or physical cultural property heritage resources be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped until heritage authority has cleared the development to continue.	N/A	Throughout	C CECO	SM	ECO	EA EM PM	
		Should any archaeological, cultural property heritage resources be exposed during excavation or be found on development site, a registered heritage specialist or PHRA-G official must be called to site for inspection.		Throughout	C CECO	SM	ECO	EA EM PM	
		Under no circumstances may any archaeological, historical or any physical cultural property heritage material be destroyed or removed from site;		Throughout	C CECO	SM	ECO	EA EM PM	
		Should remains and/or artefacts be discovered on the development site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Construction Manager who in turn will inform PHRA-G.		When necessary	C CECO	SM	ECO	EA EM PM	
		Should any remains be found on site that is potentially human remains, the PHRA-G and South African Police Service should be contacted.		When necessary	C CECO	SM	ECO	EA EM	

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Rehabilitation Phase								
		Same as construction phase.						
Operational Phase								
		Same as construction phase.						

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### 16. APPENDIX 3: HERITAGE MITIGATION MEASURE TABLE

SITE REF	HERITAGE ASPECT	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBLE PARTY	PENALTY	METHOD STATEMENT REQUIRED
Chance Archaeological and Burial Sites	General area where the proposed project is situated is a historic landscape, which may yield archaeological, cultural property, remains. There are possibilities of encountering unknown archaeological sites during subsurface construction work which may disturb previously unidentified chance finds.	<p>Possible damage to previously unidentified archaeological and burial sites during construction phase.</p> <ul style="list-style-type: none"> <li>• Unanticipated impacts on archaeological sites where project actions inadvertently uncovered significant archaeological sites.</li> <li>• Loss of historic cultural landscape;</li> <li>• Destruction of burial sites and associated graves</li> <li>• Loss of aesthetic value due to construction work</li> </ul>	<p>In situations where unpredicted impacts occur construction activities must be stopped and the heritage authority should be notified immediately.</p> <p>Where remedial action is warranted, minimize disruption in construction scheduling while recovering archaeological data. Where necessary, implement emergency measures to mitigate.</p> <ul style="list-style-type: none"> <li>• Where burial sites are accidentally disturbed during construction, the affected area should be demarcated as no-go zone by use of fencing during construction, and access thereto by the construction team must be denied.</li> <li>• Accidentally discovered burials in development context should be salvaged and rescued to safe sites as may be directed by relevant heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor /</li> <li>• Project Manager</li> <li>• Archaeologist</li> <li>• Project EO</li> </ul>	Fine and or imprisonment under the PHRA-G Act & NHRA	<p>Monitoring measures should be issued as instruction within the project EMP.</p> <p>PM/EO/Archaeologists</p> <p>Monitor construction work on sites where such development projects commences within the farm.</p>

		<ul style="list-style-type: none"> <li>Loss of sense of place</li> <li>Loss of intangible heritage value due to change in land use</li> </ul>	<p>authority. The heritage officer responsible should secure relevant heritage and health authorities permits for possible relocation of affected graves accidentally encountered during construction work.</p>			
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## 17. APPENDIX 4: LEGAL BACK GROUND AND PRINCIPLES OF HERITAGE RESOURCES MANAGEMENT IN SOUTH AFRICA

Extracts relevant to this report from the National Heritage Resources Act No. 25 of 1999, (Sections 5, 36 and 47):

General principles for heritage resources management

5. (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognise the following principles:

(a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;

(b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans;

(c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and

(d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

(2) To ensure that heritage resources are effectively managed—

(a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and

(b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.

(3) Laws, procedures and administrative practices must—

(a) be clear and generally available to those affected thereby;

(b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and

(c) give further content to the fundamental rights set out in the Constitution.

(4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

(5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.

(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.

(7) The identification, assessment and management of the heritage resources of South Africa must—

(a) take account of all relevant cultural values and indigenous knowledge systems;

(b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;

(c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;

(d) contribute to social and economic development;

(e) safeguard the options of present and future generations; and

(f) be fully researched, documented and recorded.

### Burial grounds and graves

36. (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources

authority.

(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—

(a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and

(b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

(6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—

(a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and

(b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.

(b) The Minister must publish such lists as he or she approves in the Gazette.

(8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

#### General policy

47. (1) SAHRA and a provincial heritage resources authority—

(a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and

(b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and

(c) must review any such statement within 10 years after its adoption.

(2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.

(3) A conservation management plan may at the discretion of the heritage resources authority concerned and for a period not exceeding 10 years, be operated either solely by the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine.

(4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned.

(5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan.

(6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.

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