



PGS HERITAGE

ARCHAEOLOGICAL MONITORING REPORT ON THE DESTRUCTION OF SITE PGS06, ON THE FARM NO. 469, NEAR DANIËLSKUIL, ZF MGCAWU DISTRICT MUNICIPALITY, NORTHERN CAPE.

**Proposed Solar Thermal Power Plant on the farm No. 469, near
Daniëlskuil, Northern Cape.**

Phase 2 – Heritage Mitigation

Issue Date: 30 August 2018
Revision No.: 0.1
Project No.: 324HM



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Declaration of Independence

- I, Ilan Smeyatsky, declare that –
- General declaration:
- I act as the independent heritage practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting heritage impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in section 38 of the NHRA when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- All the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected from a heritage practitioner in terms of the Act and the constitutions of my affiliated professional bodies; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the NEMA.

Disclosure of Vested Interest

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

HERITAGE CONSULTANT:

PGS Heritage (Pty) Ltd

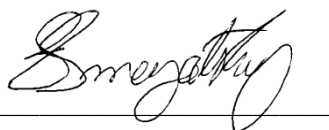
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ACKNOWLEDGEMENT OF RECEIPT

Report Title	ARCHAEOLOGICAL MONITORING REPORT ON THE DESTRUCTION OF SITE PGS06, ON THE FARM NO. 469, NEAR DANIËLSKUIL, ZF MGCAWU DISTRICT MUNICIPALITY, NORTHERN CAPE.		
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CLIENT: ACWA Power SolarReserve Solar Thermal Power Plant RF (Pty) Ltd

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SIGNATURE: _____

EXECUTIVE SUMMARY

PGS Heritage (Pty) Ltd was appointed by ACWA Power SolarReserve Solar Thermal Power Plant RF (Pty) Ltd to undertake Archaeological Monitoring as part of the destruction of site PGS06 for the ACWA Power SolarReserve Redstone Solar Thermal Power Plant, on the farm No. 469, near Daniëlskuil, ZF Mgcau District Municipality, Northern Cape.

This document outlines the Archaeological Mitigation and Monitoring for the construction activities associated with the ACWA Power SolarReserve Redstone Solar Thermal Power Plant.

ACWA Power and SolarReserve commissioned the implementation of this monitoring program to minimise possible impacts on archaeological resources as per the recommendations of the completed Phase 2 Archaeological Mitigation Project (Forssman, Hutten & Angel 2016) and the subsequently issued SAHRA Destruction Permit (CaseID: 10423; Permit ID: 2630). An Archaeological Monitoring Programme was one of the conditions of SAHRA's approval for the continuation of the ACWA Power SolarReserve Redstone Solar Thermal Power Plant development, and a requirement of the permit issued by SAHRA dated 17/10/2017.

This document reports on the results of the monitoring program which took place on the 18th July 2018. The program saw the destruction of site PGS06, during which no significant cultural or human remains were uncovered. Therefore, it is our professional opinion that there are no more significant archaeological features within the foot print area of PGS06 and that the ACWA Power SolarReserve Redstone Solar Thermal Power Plant development should continue unimpeded.

However, it must be noted that there is always a possibility that some archaeological or human remains may be uncovered during the construction process and under such circumstances, construction activities must be halted with immediate effect and a professional archaeologist must be contacted.

TABLE OF CONTENT

1	INTRODUCTION	1
1.1	Scope of the Study	1
1.2	Specialist Qualifications	1
1.3	Assumptions and Limitations	1
2	TECHNICAL DETAILS OF THE PROJECT	2
2.1	Locality	2
2.2	Technical Project Description	3
3	CURRENT STATUS QUO.....	4
3.1	Site Description	4
3.2	Site Significance	5
3.3	Monitoring Program Report – July 2018	7
	<i>3.7.1 Introduction</i>	7
	<i>3.7.2. Findings and Discussion</i>	10
4	CONCLUSIONS AND RECOMMENDATIONS.....	12
5	REFERENCES	12

List of Figures

Figure 1 – Human and Cultural Time line in Africa (Morris, 2008)	xi
Figure 2 – Locality of study area	2
Figure 3 – Position of study area in relation to current solar farms	3
Figure 4 – General view of environment	5
Figure 5 – View of site in its environmental context	5
Figure 6 – Site layout and grid system for PGS06	6
Figure 7 – Surface distribution of lithics	6
Figure 8 – Remains of previous mitigation work still visible on the day of the monitoring.....	8
Figure 9 – Site PGS06 once on site monitoring process was completed.....	8
Figure 10 – MSA Chert Bladelet core.....	9
Figure 11 – MSA Chert Blade (Dorsal).....	9
Figure 12 - MSA Chert Blade (Ventral)	9
Figure 13 – MSA Chert End scraper (Dorsal)	9
Figure 14 - MSA Chert End scraper (Ventral)	9
Figure 15 – MSA Chert flakes	10
Figure 16 – 1 st Edition 1970 Topographic Map (2823AD).....	11

List of Tables

Table 1 – List of abbreviations used in this report.....	x
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List of Appendices

A	Legislative Requirements – Terminology and Assessment Criteria
B	SAHRA Destruction Permits
D	Project team CV's

TERMINOLOGY AND ABBREVIATIONS

Archaeological resources

This includes:

- material remains resulting from human activity 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;
- rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- carrying out any works on or over or under a place;
- subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- constructing or putting up for display signs or boards;
- any change to the natural or existing condition or topography of land; and
- any removal or destruction of trees, or removal of vegetation or topsoil

Early Stone Age

The archaeology of the Stone Age between 700 000 and 3 300 000 years ago.

Fossil

Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

Heritage resources

This means any place or object of cultural significance and can include (but not limited to) as stated under Section 3 of the NHRA,

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, and
- sites of significance relating to the history of slavery in South Africa;

Holocene

The most recent geological time period which commenced 10 000 years ago.

Late Stone Age

The archaeology of the last 30 000 years associated with fully modern people.

Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's, associated with iron-working and farming activities such as herding and agriculture.

Middle Stone Age

The archaeology of the Stone Age between 30 000-300 000 years ago, associated with early modern humans.

Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

TERMINOLOGY AS PART OF POLICY**Client**

Construction – Developer.

Client

Operational and Maintenance - Home Owners Association.

Archaeologist

Professional Archaeologist accredited with the Association of Southern African Professional Archaeologists (ASAPA).

Archaeological Contractor

Professional Archaeologist accredited with ASAPA, conducting rehabilitation or research on heritage sites in development.

Contractor

Any other person doing construction work on site including earthmoving, digging of holes and ditches.

Site Manager

Person appointed by the Client to manage the day to day activities of construction.

Or a person directly responsible for maintenance activities on the heritage sites under the supervision of the Archaeologist.

Environmental Control Officer (ECO)

Person responsible for the monitoring of the environment during construction work.

Primary or Direct Impacts

Activities that might have a direct impact on heritage sites that will result in destruction of such sites, during construction. These include earthmoving, building of roads and other structures.

Secondary Impacts

Activities that may impact on heritage sites after construction in the development has stopped. These may include people walking through heritage sites and causing erosion of sites, damaging of stone walls by climbing over them, the collection of artefacts by residents.

Table 1 – List of abbreviations used in this report

Abbreviations	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
ECO	Environmental Control Officer
EIA practitioner	Environmental Impact Assessment Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
I&AP	Interested & Affected Party
LSA	Late Stone Age
LIA	Late Iron Age
MSA	Middle Stone Age
MIA	Middle Iron Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
PSSA	Palaeontological Society of South Africa
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency

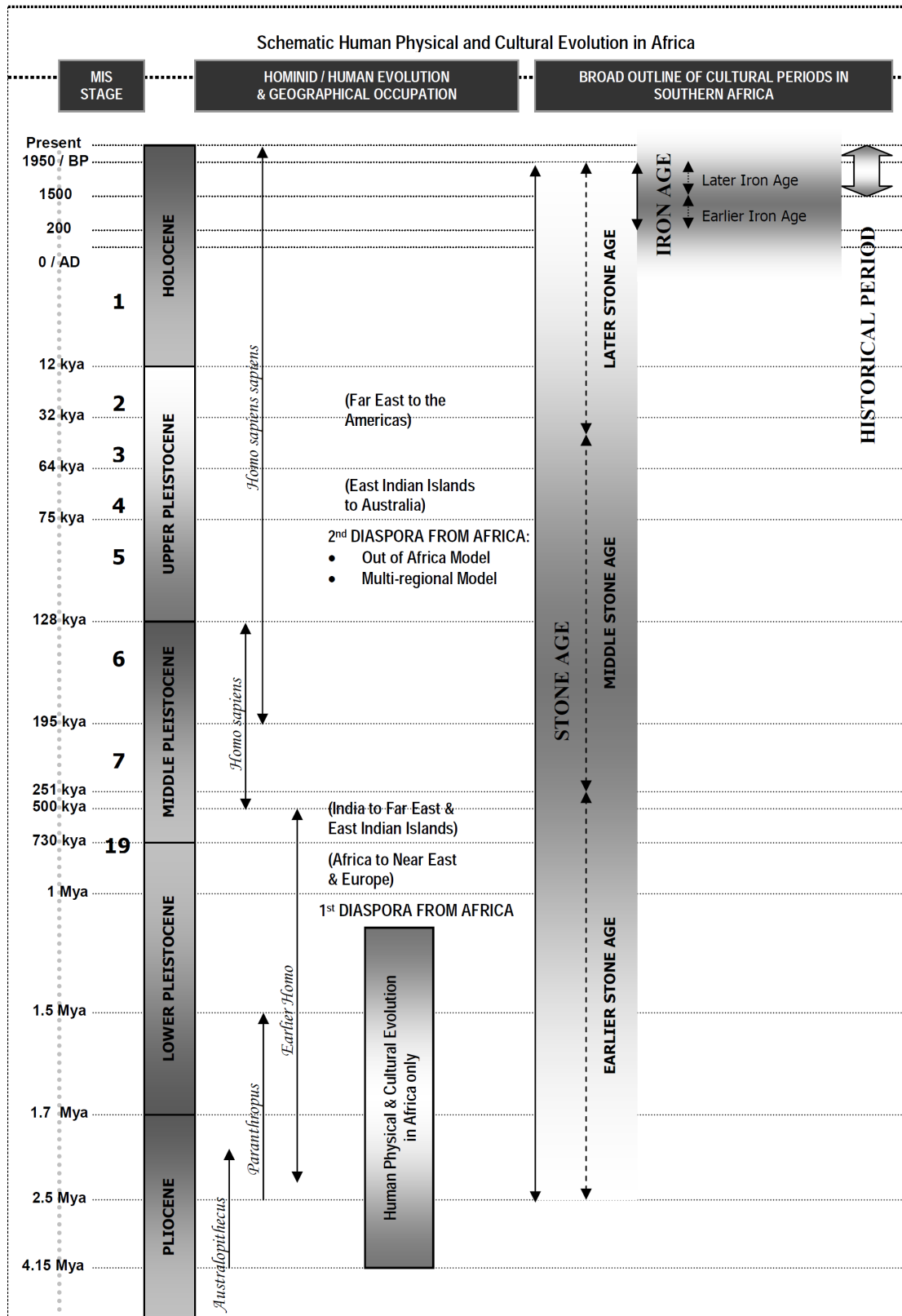


Figure 1 – Human and Cultural Time line in Africa (Morris, 2008)

1 INTRODUCTION

PGS Heritage (Pty) Ltd was appointed by ACWA Power SolarReserve Solar Thermal Power Plant RF (Pty) Ltd to undertake Archaeological Monitoring as part of the destruction of site PGS06 for the ACWA Power SolarReserve Redstone Solar Thermal Power Plant, on the farm No. 469, near Daniëlskuil, ZF Mgcawu District Municipality, Northern Cape.

1.1 Scope of the Study

The main aim of this document is the management of primary impacts resulting from the destruction of the archaeological site PGS06 during construction activities and it will report on the results of the monitoring visit which took place on 18th July 2018.

Furthermore, it aims to assist the developer in managing the discovered heritage resources in a responsible manner, in order to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999) (NHRA).

1.2 Specialist Qualifications

This Monitoring Report was compiled by PGS Heritage (PGS).

The staff at PGS has a combined experience of nearly 40 years in the heritage consulting industry. PGS and its staff have extensive experience in managing HIA processes. PGS will only undertake heritage assessment work where they have the relevant expertise and experience to undertake that work competently.

Mr. Ilan Smeyatsky, graduated with his Master's degree (MSc) in Archaeology; is registered as a Professional Archaeologist with the Association of Southern African Professional Archaeologists (ASAPA) and is accredited as a Field Supervisor.

Wouter Fourie, the Project Coordinator, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is accredited as a Principal Investigator; he is further an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners (APHP).

1.3 Assumptions and Limitations

The report expressly focusses on the controlled destruction of site PGS06. The report does not exclude the development from conforming to any other requirements as stipulated in the approved HIA for the project.

2 TECHNICAL DETAILS OF THE PROJECT

2.1 Locality

The project area is located within the ZF Mgcau District Municipality in the Northern Cape. Site PGS06 is situated approximately 25km south-west of Daniëlskuil, approximately 27km east of Postmasburg (**Figure 2**). The project proposes the development and construction of the ACWA Power SolarReserve Redstone Solar Thermal Power Plant.

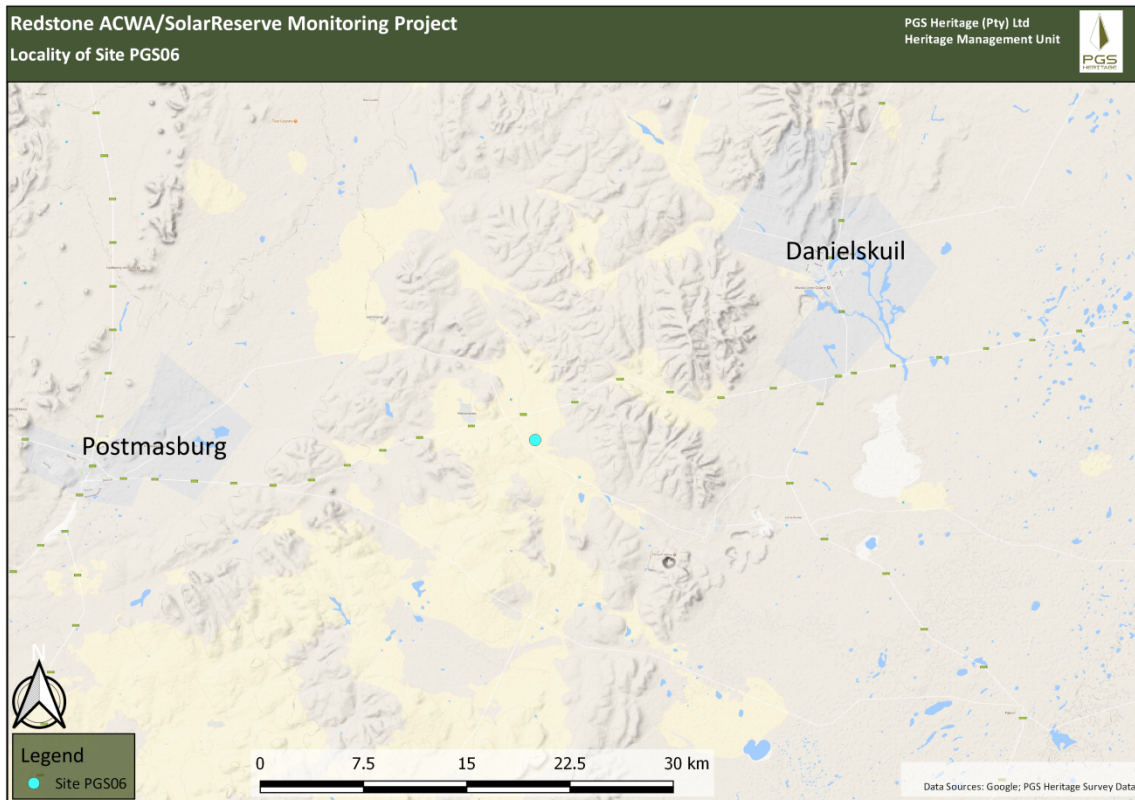


Figure 2 – Locality of study area



Figure 3 – Position of study area in relation to current solar farms

2.2 Technical Project Description

Solar Reserve is assessing the feasibility of constructing a CSP plant in the Northern Cape with a generating capacity of 100 MW. This facility will utilise the sun as the fuel source.

The CSP plant comprises of four main subsystems and is summarised below:

- **Solar Field** – the solar field consists out of all services and infrastructure related to the management and operation of the heliostats.
- **Molten Salt Circuit** which includes the thermal storage tanks for storing the hot and cold liquid salt, a concentration tower, pipelines and heat exchangers;
- **The Power Block;** and
- **Auxiliary facilities and infrastructure** which includes the steam turbine, condenser-cooling system, electricity transmission lines, a grid connection, access routes, water supplies and facility start-up energy plant (gas or diesel generators).

3 CURRENT STATUS QUO

3.1 Site Description

The site marked for destruction occurs at the following location within the farm No. 469:

- PGS06 - 28° 18.317'S; 23° 21.410'E

The project area is located within the ZF Mgcawu District Municipality in the Northern Cape. Site PGS06 is situated approximately 25km south-west of Daniëlskuil, approximately 27km east of Postmasburg (**Figure 2**). It is situated in a rural area under the Bojanala District Municipality.

The property is bordered to the north by the R385 which connects Daniëlskuil and Postmasburg, and the D3381 gravel road, from Lime Acres, which divides the south western section of the property (**Figure 3**).

The central portion of the property is undulating with the low-lying areas covered in grasveld. The areas to the west and east of the central flat lands is characterised by rising rocky ridges covered with shrubs and trees (**Figure 4**).

The southern and south western section of the study area is characterised by a perennial stream and a tributary running down from the south western section of the study area. Due to the intermittent rainfall of the area the stream has created a dry pan/flood plain that is only filled during high rainfall episodes.

The site itself is relatively undisturbed save for the portions that have been mitigated during the Phase 2 Archaeological Mitigation Project (**Figure 5**). The study area predominantly consists of Karoo type vegetation with pockets of fairly dense and bushes. Overall, the site was accessible by foot and site detection visibility was good.



Figure 4 – General view of environment



Figure 5 – View of site in its environmental context

3.2 Site Significance

The Heritage Impact Assessment (HIA) (Fourie 2011) completed for the project, identified 25 heritage sites in the general project vicinity, eight of which having relatively high heritage significance, with one requiring management as part of the construction activities (Later Stone Age site: PGS06). This HIA noted that site **PGS06** represented a medium density of MSA flakes, cores and waste in situ with a small scan of a 1m² produced between 20-40 artefacts. The site measuring a total extent of approximately 5mx5m (Fourie 2011). Site **PGS06** was ascertained to represent a localised Stone Age site with indications of napping (production of lithics), the position of the site points to a possible hunting/lookout base, thus heritage significance of the site is seen as being of Medium significance and rated as **Generally Protected B** (Fourie 2011). It was recommended that if the site could not be avoided, then an archaeological mitigation process would have to be implemented in the form of its documentation through a surface collection and test excavation to determine the extent of the site, including the mapping of the lithic distribution as well as analysis of the lithic assemblage (Fourie 2011).

The Phase 2 Archaeological Mitigation Project (AMP) (Forssman, Hutten & Angel 2016) served to fulfil the recommendations of the 2011 Phase 1 HIA by completing the surface collection process as well as performing a partial test excavation. The methodology applied was to sample all lithics within the vicinity of Site PGS 06 (S28 18 19.0, E23 21 24.6) that will be negatively impacted by the proposed infrastructural development. In view of the relative low densities and the patterning, all the lithics were recorded with a Total Station. The lithics were then removed for analyses by Dr Forssman (Forssman, Hutten & Angel 2016).

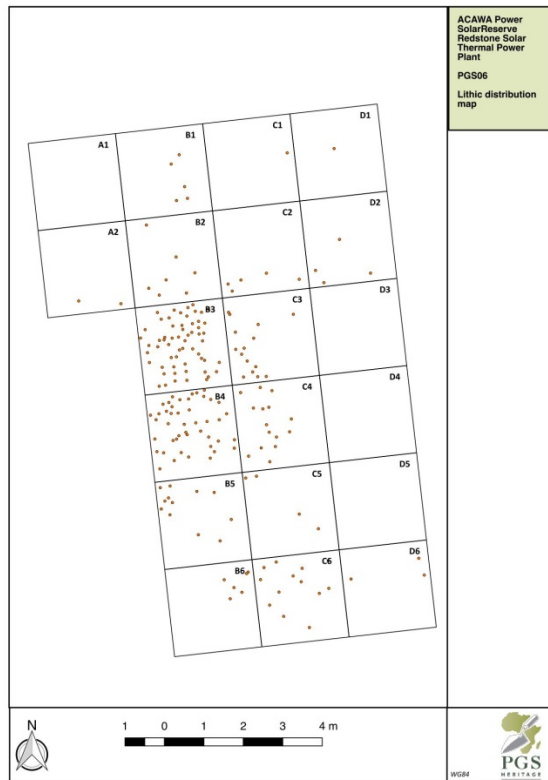
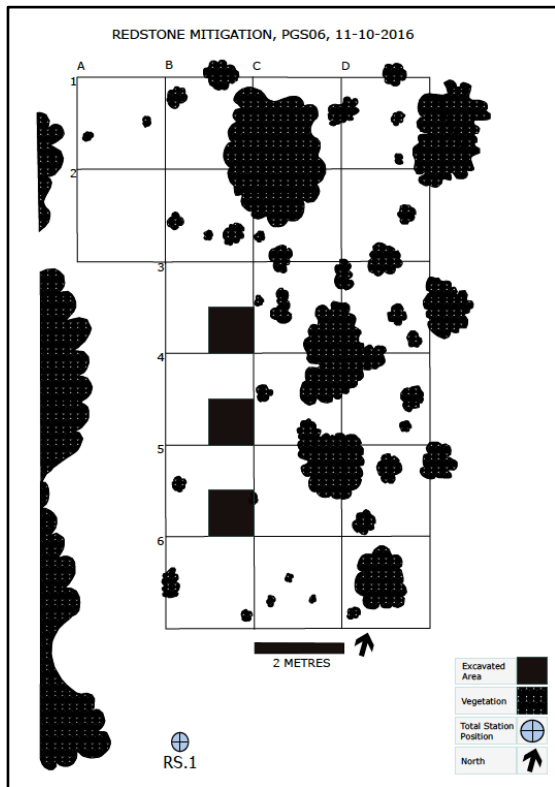


Figure 6 – Site layout and grid system for PGS06 Figure 7 – Surface distribution of lithics

The sampled lithics (total n = 496) produced indices of 79% for debitage/waste (discarded material from the reduction process and from the shaping of tools), 13.6% cores (or objective pieces), and 6.5% formal stone tools for the surface collections and 95% waste, 2.2% cores and 1.9% formal tools for the excavated materials. All surface and excavated lithic elements had been collected from the designated squares, including small chips and spalls (Forssman, Hutten & Angel 2016).

The large scrapers are not entirely unlike Oakhurst scrapers. These are typically large and made using coarse-grained material. Oakhurst assemblages are also thought to be macrolithic but there are microlithic components in the Redstone assemblage as well. This includes small scrapers and backed tools very alike to Wilton period artefacts. This may indicate that the assemblage is a mixture of Oakhurst and later Wilton components; the presence of MSA artefacts certainly indicates some form of mixing has occurred. However, both Oakhurst and Wilton assemblages have a variety of tool types. The most likely chronological period is the last 500 years based on the similarities between the Redstone and Canteen Kopje assemblage. Until absolute dating is obtained, which is unlikely given that no organic material was found, this is only a suggestion and may need revision (Forssman, Hutten & Angel 2016).

The site was subject to a full surface collection and the excavation of three squares. That only a small assemblage was recovered, which is believed to be representative, suggests that the site was not a substantial occupation camp. In addition, no datable material was identified meaning that determining the precise chronology of the site is not possible at this stage, and may not be even with further excavations since the deposit is so shallow. Mitigatory work conducted at the site is thus sufficient and no additional work is deemed necessary (Forssman, Hutten & Angel 2016).

Thus it was their opinion that site PGS06 was sufficiently documented under permit Permit ID: 2385 as issued by SAHRA. The client could then proceed with the application for the destruction of the site, upon which SAHRA issued a destruction permit (Case ID: 10423; Permit ID: 2630) to ACWA Power SolarReserve Solar Thermal Power Plant RF (Pty) Ltd.

3.3 Monitoring Program Report – July 2018

3.7.1 Introduction

PGS staff arrived on site at 9:00AM, 18 July 2018 and met up with environmental officer and casual labourers. After which they made their way to the site **PGS06**. The site was located with the help of GPS coordinates however, the exact surface collection/test excavation grid implemented during the Phase 2 AMP, was ascertained from the positioning of the still visible test excavation squares (**Figure 8**).

At approximately 9:30am, the site was carefully dug through using pick axes as part of the preparatory groundwork before construction activities, with the previous surface collection grid used as a guide as to where the highest concentrations of artefacts were recovered from (an indication of what might be below the surface). The digging was carefully observed by the archaeologist on site, with excavations being halted every meter or so to sift through the soil for any archaeological remains. After an area of 8mx4m had been excavated to a depth of 10cm, the archaeologist was confident that the extent of the archaeological deposit had been exhausted both vertically and horizontally (**Figure 9**).



Figure 8 – Remains of previous mitigation work still visible on the day of the monitoring



Figure 9 – Site PGS06 once on site monitoring process was completed



Figure 10 – MSA Chert Bladelet core



Figure 11 – MSA Chert Blade (Dorsal)



Figure 12 - MSA Chert Blade (Ventral)



Figure 13 – MSA Chert End scraper (Dorsal)

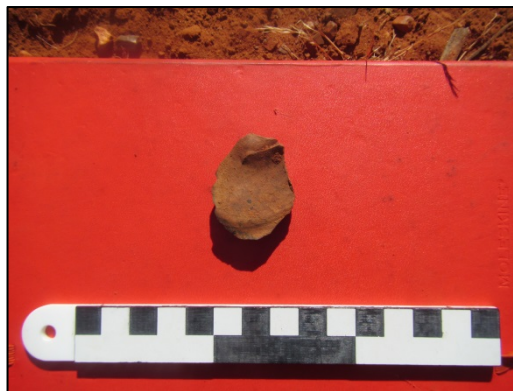


Figure 14 - MSA Chert End scraper (Ventral)



Figure 15 – MSA Chert flakes

3.7.2. Findings and Discussion

By the end of the monitoring period, no significant cultural or human remains relating to the Later Stone Age (LSA) had been uncovered. A few LSA artefacts were uncovered however they were by no means significant enough to have warranted the cessation of construction works. It seems that the vast majority of archaeological remains had already been recovered during the Phase 2 AMP conducted in 2016 (Forssman, Hutten & Angel 2016).

Looking at the topographical map 2529BB (First Edition) from 1962, we can see that no heritage features are indicated (**Figure 16**). This is probably due to the arid nature of area, dissuading any significant occupation of the area. Therefore, the likelihood of uncovering remains from other time periods, such as Iron Age or colonial, is highly unlikely.

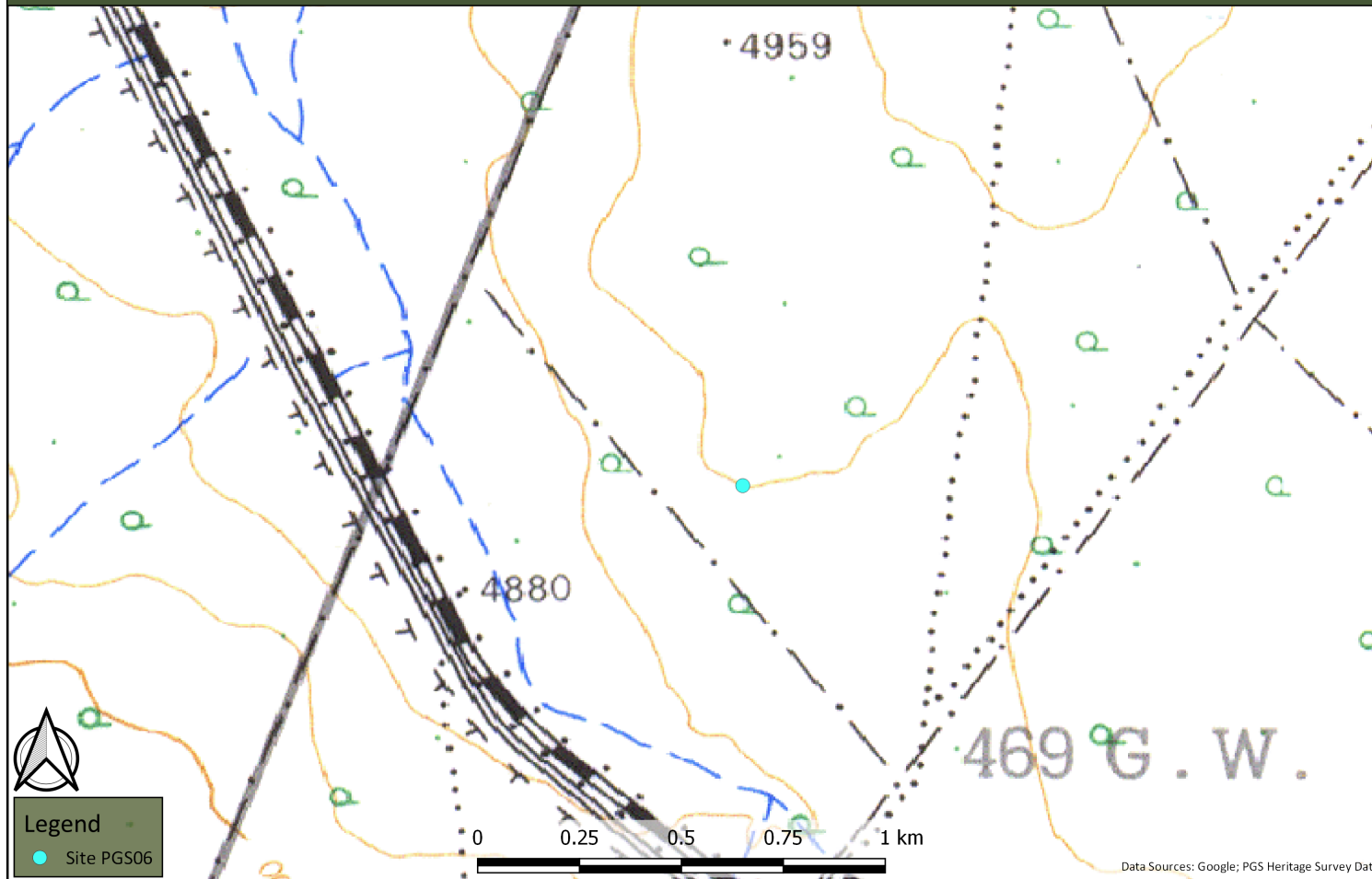


Figure 16 – 1st Edition 1970 Topographic Map (2823AD)

4 CONCLUSIONS AND RECOMMENDATIONS

This document outlines the Archaeological Monitoring for the destruction of site PGS06 associated with the ACWA Power SolarReserve Redstone Solar Thermal Power Plant.

ACWA Power SolarReserve Solar Thermal Power Plant commissioned the implementation of this monitoring program to minimise possible impacts on archaeological resources as per the recommendations of the completed Phase 2 Archaeological Mitigation Project (Forssman, Hutten & Angel 2016) and the subsequently issued SAHRA Destruction Permit (CaseID: 10423; PermitID: 2630). An Archaeological Mitigation Programme was one of the conditions of SAHRA's approval for the continuation of the ACWA Power SolarReserve Redstone Solar Thermal Power Plant development, and a requirement of the permit issued by the SAHRA (17/10/2017).

This document reports on the results of the monitoring program which took place on 18th July 2018. The program saw the destruction of designated site, during which no significant cultural or human remains were uncovered. Therefore, it is our professional opinion that there are no more significant heritage features within the development area and that the ACWA Power SolarReserve Redstone Solar Thermal Power Plant development should continue unimpeded.

However, it must be noted that there is always a possibility that some archaeological or human remains may be uncovered during the construction process and under such circumstances, construction activities must be halted with immediate effect and a professional archaeologist must be contacted.

5 REFERENCES

- FORSSMAN, T., HUTTEN, M., & ANGEL, J. 2016. Phase 2 Specialist Study of affected Stone Age Locality on the ACWA Power SolarReserve Redstone Solar Thermal Power Plant.
- FOURIE, W. 2011. Humansrus Solar Thermal Energy Power Plant Postmasburg: Heritage Impact Report.
- MORRIS, D. 2008. Archaeological and Heritage Phase 1, Impact Assessment for proposed upgrading of Sishen Mine Diesel Depot Storage Capacity at Kathu, Northern Cape. Kimberley: McGregor Museum.

Appendix A

Legislative Requirements – Terminology and Assessment Criteria

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation -

- i. NEMA;
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999; and
- iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002.

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

- i. GNR 982 of 2014 (Government Gazette 38282) promulgated under the NEMA:
 - a) Basic Assessment Report (BAR) – Regulations 19 and 23
 - b) Environmental Scoping Report (ESR) – Regulation 21
 - c) Environmental Impacts Report (EIR) – Regulation 23
 - d) EMPr – Regulations 19 and 23
- ii. NHRA:
 - a) Protection of Heritage Resources – Sections 34 to 36; and
 - b) Heritage Resources Management – Section 38
- iii. MPRDA Regulations of 2014:
 - a) Environmental reports to be compiled for application of mining right – Regulation 48.

The NHRA stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. Section 34 (1) of the NHRA states that, “no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority...”. The NEMA (Act No 107 of 1998) states that an integrated EMP should, (23 -2 (b)) “...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage”. In accordance with legislative requirements and EIA rating criteria, the regulations of the South African Heritage Resources Agency (SAHRA) and the Association of Southern African Professional Archaeologists (ASAPA) have also been incorporated to ensure that a comprehensive legally compatible HIA report is compiled.

Appendix B
SAHRA Destruction Permits

PGS06 - Application for destruction

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Phillip Hine
Tel: 021 462 4502
Email: phine@sahra.org.za
CaseID: 10423

Date: Friday February 10, 2017
Page No: 1

PermitID: 2431

PERMIT: Destruction

In terms of Section 35(4) of the National Heritage Resources Act (Act 25 of 1999)

Permit Holder: Mr Terence Krishan Moonsamy Govender
ACWA Power SolarReserve Redstone Solar Thermal Power Plant (RF) Proprietary Limited
Office XXX07001
90 Grayston
90 Grayston Drive
Snadton

Site: PGS06 - Humansrus, Daniëlskuil (PGS06)

This permit is issued to Mr Terence Govender (Acwa Power) for the destruction of an archaeological site (PGS06). The was subject to a Phase 2 mitigation assessment and will be impacted by the ACWA Power SolarReserve Redstone Solar Thermal Power Plant on the farm Humansrus 469, Daniëlskuil, Northern Cape. SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit is satisfied with the Phase 2 mitigation assessment.

Conditions:

1. This permit allows for the destruction of site PGS06 that will be impacted by the Redstone Solar Thermal Power Plant.
2. SAHRA requires that the professional archaeologist monitoring the destruction of the site. The name and qualification of the archaeologist in question should be submitted to SAHRA for approval.
3. A report from the destruction activities must be submitted to SAHRA by the archaeologist monitoring the activities by the end of December 2017.
4. SAHRA shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities in connection with this permit.
5. SAHRA reserves the right to cancel this permit by notice to the permit holder.

This permit is valid from **13/12/2016 to 31/12/2017**.

Phillip Hine

PGS06 - Application for destruction

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Phillip Hine
Tel: 021 462 4502
Email: phine@sahra.org.za
CaseID: 10423

Date: Friday February 10, 2017
Page No: 2

PermitID: 2431

Heritage Officer: Permitting
South African Heritage Resources Agency

John Gribble
Manager: Maritime and Underwater Cultural Heritage Unit / Acting Manager: Archaeology, Palaeontology and
Meteorites Unit
South African Heritage Resources Agency

Additional Info:

Please note that this permit may be suspended should an appeal against the decisions be received by SAHRA within 14 days from the date of the permit. SAHRA may not be held responsible for any costs or losses incurred in the event of the suspension or retraction of this permit.

Our Ref:



an agency of the
Department of Arts and Culture

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CaseID: 10423

Date: Tuesday October 17, 2017
Page No: 1

Letter

In terms of Section 35(4) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Mr Terence Krishan Moonsamy Govender
ACWA Power SolarReserve Redstone Solar Thermal Power Plant (RF) Proprietary Limited
Office XXX07001
90 Grayston Drive
Sandton

Application for destruction of archaeological site in terms of section 35(4) of the South African Heritage Resources Act - Site PGS06, ACAWA Power SolarReserve Redstone Solar Thermal Power Plant on the farm Humansrus 469, Daniëlskuil, Northern Cape

Dear Mr Fourie,

SAHRA has received your application for extension of permit 2431 for the destruction of site PGS06 which will be impacted by the development of the Redstone Solar Thermal Power Plant on the farm Humansrus 469, Daniëlskuil. SAHRA has reviewed your application for extension and decided to approve it.

We wish you every success with this project.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

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

PGS06 - Application for destruction

Our Ref:



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T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
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CaseID: 10423

Date: Tuesday October 17, 2017
Page No: 2

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/375666>

PGS06 - Application for destruction

Our Ref:



an agency of the
Department of Arts and Culture

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South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Phillip Hine
Tel: 021 462 4502
Email: phine@sahra.org.za
CaseID: 10423

Date: Tuesday October 17, 2017
Page No: 1

PermitID: 2630

PERMIT: Destruction

In terms of Section 35(4) of the National Heritage Resources Act (Act 25 of 1999)

Permit Holder: Mr Terence Krishan Moonsamy Govender
ACWA Power SolarReserve Redstone Solar Thermal Power Plant (RF) Proprietary Limited
Office XXX07001
90 Grayston Drive
Sandton

Site: PGS06 - Humansrus, Daniëlskuil (PGS06)

This permit is issued to Mr Terence Govender (Acwa Power) for the destruction of an archaeological site (PGS06). The site was subject to a Phase 2 mitigation assessment and will be impacted by the ACWA Power SolarReserve Redstone Solar Thermal Power Plant on the farm Humansrus 469, Daniëlskuil, Northern Cape. SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit is satisfied with the Phase 2 mitigation assessment.

Conditions:

1. This permit allows for the destruction of site PGS06 that will be impacted by the Redstone Solar Thermal Power Plant.
2. SAHRA requires that the professional archaeologist monitoring the destruction of the site. The name and qualification of the archaeologist in question should be submitted to SAHRA for approval.
3. A report from the destruction activities must be submitted to SAHRA by the archaeologist monitoring the activities by the end of June 2019.
4. SAHRA shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities in connection with this permit.
5. SAHRA reserves the right to cancel this permit by notice to the permit holder.

This permit is valid from
01/01/2018 to 31/12/2018

PGS06 - Application for destruction

Our Ref:



an agency of the
Department of Arts and Culture

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Page No: 2

PermitID: 2630

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

Additional Info:

Please note that this permit may be suspended should an appeal against the decisions be received by SAHRA within 14 days from the date of the permit. SAHRA may not be held responsible for any costs or losses incurred in the event of the suspension or retraction of this permit.

ADMIN: Direct URL to case: <http://www.sahra.org.za/node/375666>

Appendix C
Project team CV's

WOUTER FOURIE

Professional Heritage Specialist and Professional Archaeologist and Director PGS Heritage

Summary of Experience

Specialised expertise in Archaeological Mitigation and excavations, Cultural Resource Management and Heritage Impact Assessment Management, Archaeology, Anthropology, Applicable survey methods, Fieldwork and project management, Geographic Information Systems, including *inter alia* -

Involvement in various grave relocation projects (some of which relocated up to 1000 graves) and grave “rescue” excavations in the various provinces of South Africa

Involvement with various Heritage Impact Assessments, within South Africa, including -

- Archaeological Walkdowns for various projects
- Phase 2 Heritage Impact Assessments and EMPs for various projects
- Heritage Impact Assessments for various projects
 - Iron Age Mitigation Work for various projects, including archaeological excavations and monitoring
 - Involvement with various Heritage Impact Assessments, outside South Africa, including -
- Archaeological Studies in Democratic Republic of Congo
- Heritage Impact Assessments in Mozambique, Botswana and DRC
- Grave Relocation project in DRC

Key Qualifications

BA [Hons] (Cum laude) - Archaeology and Geography - 1997

BA - Archaeology, Geography and Anthropology - 1996

Professional Archaeologist - Association of Southern African Professional Archaeologists (ASAPA)
- Professional Member

Accredited Professional Heritage Specialist – Association of Professional Heritage Practitioners (APHP)

CRM Accreditation (ASAPA) -

- Principal Investigator - Grave Relocations
- Field Director – Iron Age
- Field Supervisor – Colonial Period and Stone Age
- Accredited with Amafa KZN

Key Work Experience

2003- current - Director – Professional Grave Solutions (Pty) Ltd

2007 – 2008 - Project Manager – Matakoma-ARM, Heritage Contracts Unit, University of the Witwatersrand

2005-2007 - Director – Matakoma Heritage Consultants (Pty) Ltd

2000-2004 - CEO– Matakoma Consultants

1998-2000 - Environmental Coordinator – Randfontein Estates Limited. Randfontein, Gauteng

1997-1998 - Environmental Officer – Department of Minerals and Energy. Johannesburg, Gauteng

Worked on various heritage projects in the SADC region including, Botswana, Mozambique and the Democratic Republic of the Congo

ILAN SMEYATSKY

Professional Archaeologist

Personal Details

- **Name:** Ilan
- **Surname:** Smeyatsky
- **Identity Number:** 9109275072080
- **Date of Birth:** 27-09-1991
- **Citizenship:** South African
- **Gender:** Male
- **Marital Status:** Single
- **Languages Spoken:** English

Education History

2010-2013: BSc Bachelors Degree

University of the Witwatersrand, Johannesburg, South Africa

- Archaeology
- Psychology
- Statistics
- Research Design and Analysis
- 67% Pass (**2:1 Qualification**)

2014: BSc (Hons) in Archaeology

AWARDS:

- Received the 2014 Center of Excellence in Palaeoscience award - **Bursary to the value of ZAR 30000 ≈ \$2500**
- Received the Post-Graduate Merit Award in 2015 for academic merit for my Honours academic results - **Bursary to the value of ZAR 25000 ≈ \$1800**

University of the Witwatersrand, Johannesburg, South Africa

- Archaeology
- Excavation techniques
- Theory
- 69% Pass (**2:1 Qualification**)
- **Distinction** received for thesis entitled: "Stylistic variation in Later Stone Age tanged arrowheads: a pilot study using geometric morphometrics"

2015-2017: MSc by Research (Archaeology)

University of the Witwatersrand, Johannesburg, South Africa

- Archaeology
- Statistical analysis
- GIS (Geographic Information Systems)
- Thesis entitled: “Discerning and explaining shape variations in Later Stone Age tanged arrowheads, South Africa”

Aug 2016 –

Jan 2017: Semester of Archaeology Masters

AWARD: Received the 2016 AESOP+ full Masters scholarship to study at Uppsala University, Uppsala, Sweden – **Scholarship to the value of ZAR 160,000 ≈ \$11,000**

Uppsala University, Uppsala, Sweden

- Archaeological theory
- GIS (Geographic Information Systems)
- Invitational research

Employment History

Part time employment as a student:

- **2009-2013:** Part-Time Electrician Apprentice: Assisting in home electrical repair jobs.
- **2014-2015:** Lab Research Assistant: Analysing and classifying lithic artefacts, Data capturing, Mentoring trainee research assistants.

Experience in the field of archaeology:

- **2013-2015: Fieldwork/Excavator - Responsibilities:** Feature detection, excavation, sieving, sorting, analysis, soil sampling, field documentation, ‘dumpy’ operation , Total Station operation, DGPS operation, rock art tracing and photography, engraving tracing and photography.
 - South African excavations:
 - Early Stone Age excavation at Maropeng World Heritage Site in Gauteng (1 Week – August 2015)
 - Pig cadaver exhumation as part of forensic experiment near Pretoria, Gauteng (1 Week – December 2014) - Praised for having the determination of returning for each subsequent excavation day as it was

performed on a purely volunteer basis and the work conditions were particularly strenuous - Dr. Coen Nienaber

- Iron Age excavation at Komati Gorge, Mpumalanga (1 Week – August 2014) - Praised for being exceptionally “methodical and proficient” with my excavation techniques – Dr. Alex Schoeman
 - Rock art fieldwork at Komati Gorge, Mpumalanga (1 Week – August 2014)
 - Underwater archaeology site mapping Komati Gorge, Mpumalanga (1 Week – August 2014)
 - Early Stone Age excavation at Maropeng World Heritage Site in Gauteng (2 Weeks - September 2013) - Personally uncovered some of the only stone tools (~1.8 million years old) found during that digging season.
- **2016: Excavation Supervisor - Responsibilities:** Supervision of two junior excavators, site detection, decision of excavation grid placement, excavation, sieving, sorting, soil sampling, field documentation.
 - Historical (farm site) excavation at Graaff-Reinet, Eastern Cape, South Africa (2 Weeks)
 - Completed dig 1 week ahead of schedule aided by my efficient direction, drive and support to the excavators under my supervision.
 - **April 2017 – April 2018:** Intern Archaeologist – PGS Heritage: Heritage Impact assessments, background research, report writing, permit applications, collections management, stakeholder engagement and grave relocation.
 - **April 2018 – PRESENT:** Archaeologist – PGS Heritage: Heritage Impact assessments, background research, report writing, permit applications, collections management, stakeholder engagement and grave relocation.

Professional Body Membership:

- Professional Archaeologist - Association of Southern African Professional Archaeologists (ASAPA) - Professional Member
- CRM Accreditation (ASAPA) -
 - Field Supervisor – Stone Age, Iron Age & Grave Relocations