



SolarReserve SA (Pty) Ltd

Humansrus Solar Thermal Energy Power Plant

Postmasburg

Heritage Impact Report

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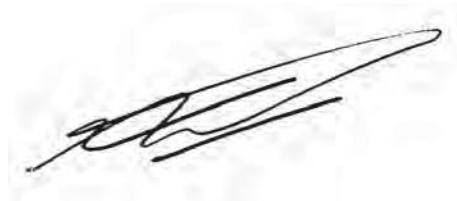
Project No.:

Declaration of Independence

The report has been compiled by PGS Heritage & Grave Relocation Consultants an appointed Heritage Specialist for WorleyParson. The views stipulated in this report are purely objective and no other interests are displayed during the decision making processes discussed in the Heritage Impact Assessment Process that includes the Scoping as well as this final report

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EXECUTIVE SUMMARY

PGS Heritage & Grave Relocation Consultants was appointed by WorleyParson to undertake a Heritage Impact Assessment (HIA) that forms part of the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the Concentrated Solar Project for SolarReserve SA (Pty) Ltd, on the farm 469 "Humansrus" close to Postmasburg in the Northern Cape Province.

The Heritage Scoping Report, that forms part of the HIA, has shown that the area between Postmasburg and Daniëlskuil generally referred to as the Ghaap plateau has a rich history of occupation from the Stone Age with hunter gatherers to the Thlaping and Thlaro during the Iron Age period. The 1800's saw the rise of the Griqua people in the area and their loss of sovereignty after 1880 to Cape rule.

The field work that feeds into the Heritage Impact has utilised the findings of the Scoping report to guide this work. The field work identified a total of 25 heritage sites of which the following will require further mitigation:

Archaeological Sites

PGS06 – The sites need to be documented through a surface collection and test excavation to determine the extent of the site. This will include mapping of the lithic distribution as well as analysis of the lithic assemblage.

Cemeteries

AC02 - PGS09 and PGS13

It is recommended that the development layout be adjusted to accommodate the cemeteries and that the cemeteries be fenced with a 10 meter buffer.

It is further recommended that in the event that the cemeteries cannot be incorporated into the development the graves be relocated after a full grave relocation process that includes comprehensive social consultation. The grave relocation process must include:

- A detailed social consultation process, that will trace the next-of-kin and obtain their consent for the relocation of the graves, that will be at least 60 days in length;
- Site notices indicating the intent of the relocation

- Newspaper Notice indicating the intent of the relocation
- A permit from the local authority;
- A permit from the Provincial Department of health;
- A permit from the South African Heritage Resources Agency if the graves are older than 60 years or unidentified and thus presumed older than 60 years;
- An exhumation process that keeps the dignity of the remains and family intact;
- An exhumation process that will safeguard the legal implications towards the developer
- ;
- The whole process must be done by a reputable company that are well versed in relocations;
- The process must be conducted in such a manner as to safeguard the legal rights of the families as well as that of the development company.

Possible infant burials at **ACO013, PGS11-13** needs to monitored during construction. However best practice would be to do test excavations to ascertain the presence of possible infant burials at each of these sites.

Further to these recommendations the general Heritage Management Guideline in Sections 6 needs to be incorporated in to the EMP for the project.

The overall impact of the development on heritage resources is seen as acceptably low and can impacts can be mitigated to acceptable levels.

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1 INTRODUCTION

PGS Heritage & Grave Relocation Consultants was appointed by WorleyParson to undertake a Heritage Impact Assessment (HIA) that forms part of the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the Concentrated Solar Project for SolarReserve SA (Pty) Ltd, on the farm 469 “Humansrus” close to Postmasburg in the Northern Cape Province.

1.1 Scope of the Study

The aim of the study is to identify possible heritage sites and finds that may occur in the proposed development area. The Heritage Impact Assessment aims to inform the EIA in the development of a comprehensive EMP 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 Heritage Scoping Report was compiled by PGS Heritage & Grave Relocation Consultants (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.

Wouter Fourie, Principal Archaeologist for this project, and the two field archaeologists, Henk Steyn and Marko Hutton are registered with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation.

Since 2002 Dr Almond has also carried out palaeontological impact assessments for developments and conservation areas in the Western, Eastern and Northern Cape under the aegis of his Cape Town-based company Natura Viva cc. He is a long-standing member of the

Archaeology, Palaeontology and Meteorites Committee for Heritage Western Cape (HWC) and an advisor on palaeontological conservation and management issues for the Palaeontological Society of South Africa (PSSA), HWC and SAHRA. He is currently compiling technical reports on the provincial palaeontological heritage of Western, Northern and Eastern Cape for SAHRA and HWC. Dr Almond is an accredited member of PSSA and APHAP (Association of Professional Heritage Assessment Practitioners – Western Cape).

1.3 Assumptions and Limitations

Not subtracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. Various factors account for this, including the subterranean nature of some archaeological sites and the current dense vegetation cover. As such, should any heritage features and/or objects not included in the present inventory be located or observed, a heritage specialist must immediately be contacted.

Such observed or located heritage features and/or objects may not be disturbed or removed in any way until such time that the heritage specialist had been able to make an assessment as to the significance of the site (or material) in question. This applies to graves and cemeteries as well. In the event that any graves or burial places are located during the development the procedures and requirements pertaining to graves and burials will apply as set out below.

1.4 Legislative Context

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. National Environmental Management Act (NEMA) Act 107 of 1998
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999
- iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
- iv. Development Facilitation Act (DFA) Act 67 of 1995

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

- i. National Environmental Management Act (NEMA) Act 107 of 1998
 - a. Basic Environmental Assessment (BEA) – Section (23)(2)(d)
 - b. Environmental Scoping Report (ESR) – Section (29)(1)(d)
 - c. Environmental Impacts Assessment (EIA) – Section (32)(2)(d)
 - d. EMP (EMP) – Section (34)(b)
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999
 - a. Protection of Heritage resources – Sections 34 to 36; and
 - b. Heritage Resources Management – Section 38
- iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
 - a. Section 39(3)
- iv. Development Facilitation Act (DFA) Act 67 of 1995
 - a. The GNR.1 of 7 January 2000: Regulations and rules in terms of the Development Facilitation Act, 1995. Section 31.

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 (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 SAHRA and ASAPA have also been incorporated to ensure that a comprehensive legally compatible AIA report is compiled.

1. Terminology

Abbreviations	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
DWA	Department of Water Affairs
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 Agency
PSSA	Palaeontological Society of South Africa
ROD	Record of Decision
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency

Archaeological resources

This includes:

- i. 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;
- ii. 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;

- iii. 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;
- iv. 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 the change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- i. construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- ii. carrying out any works on or over or under a place;
- iii. subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- iv. constructing or putting up for display signs or boards;
- v. any change to the natural or existing condition or topography of land; and
- vi. 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 2500 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

Holocene

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

Late Stone Age

The archaeology of the last 20 000 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 20-300 000 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.

Refer to **Appendix C** for further discussions on heritage management and legislative frameworks

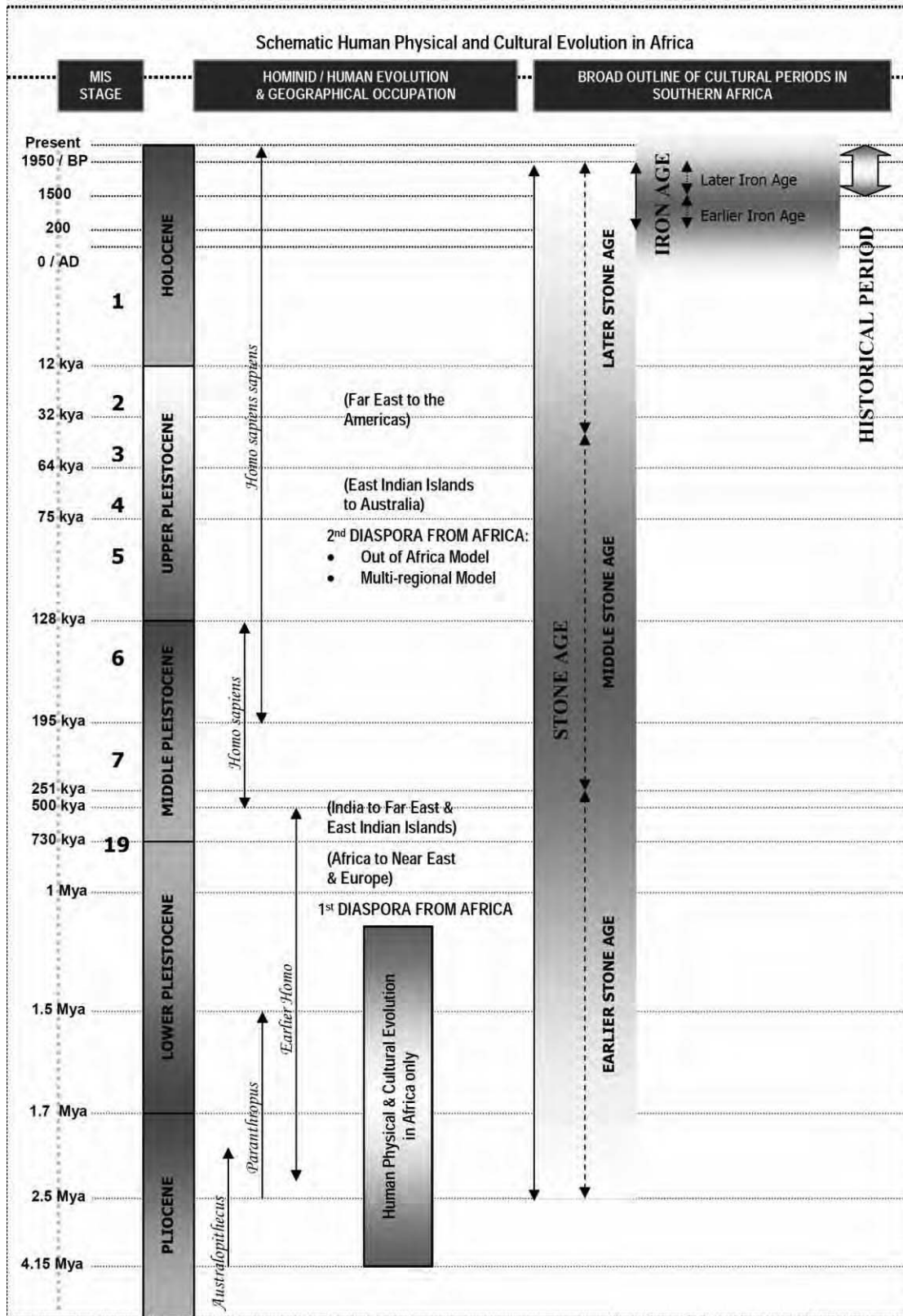


Figure 1—Human and Cultural Time line in Africa (Morris, 2008)

2 TECHNICAL DETAILS OF THE PROJECT

2.1 Site Location and Description

Location	(E23.37224,S28.32263), The land is situated 30 kilometres west of Postmasburg on the R385.
Land	1431 Hectares of land under option.
Land Description	The land is greenfield veld (bush) type, zoned for agricultural use however used for grazing at present.

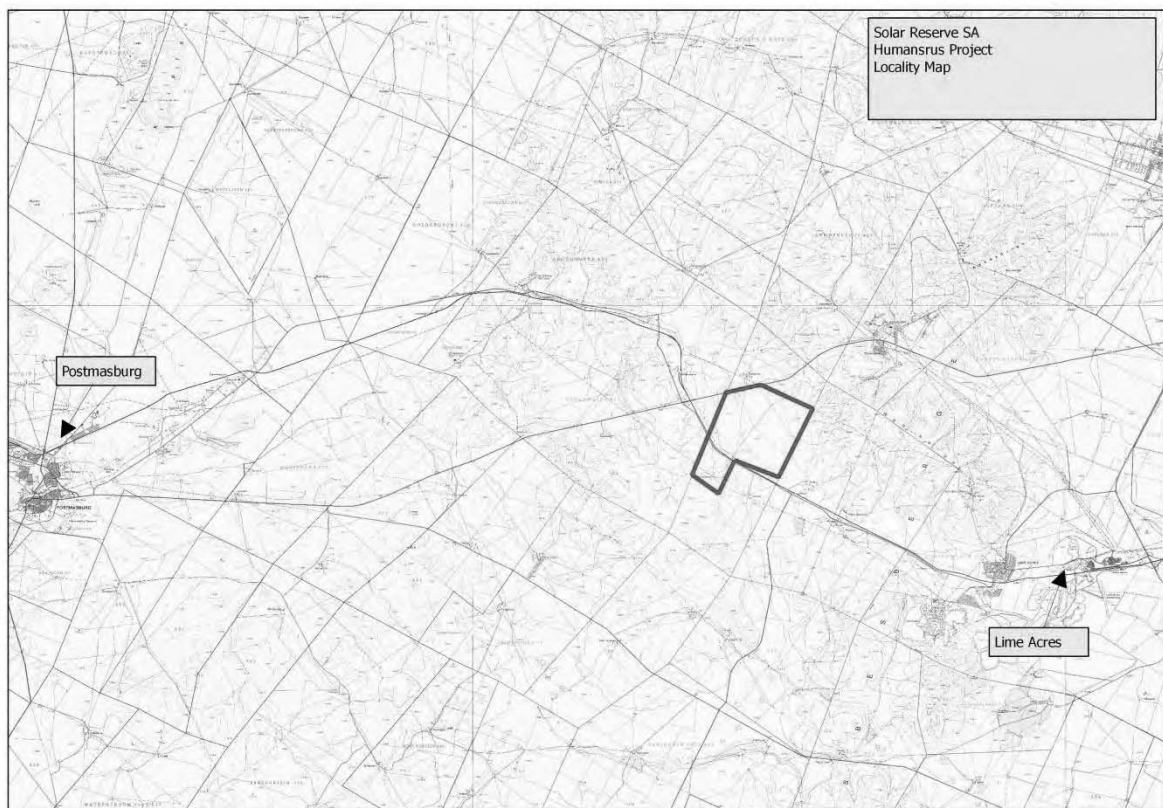


Figure 2 -Humansrus locality

2.2 Technical Project Description

Solar Reserve is assessing the feasibility of constructing a CSP plant with a maximum capacity of 100 MW electricity in the Northern Cape. 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).

2.3 Project overview

The proposed project can be defined as a solar thermo-electric power plant that is embodied in the form of a Concentrated Solar Power (CSP) Plant. This project focuses on the possible establishment of a Concentrating Solar Power (CSP) plant in the Northern Cape area. The proposed CSP plant is proposed to consist of a maximum installed capacity of up to 100 MW. The plant requires approximately 3 square kilometres of terrain with little relief to satisfy construction needs. The key factor, however, is the amount of thermal storage required, as this determines the number of heliostats to be installed.



Figure 3 - An example of a power plant using central receiver technology. This is a 10MW demonstration plant that was built in the United States – image courtesy NREL.

The CSP Plant being considered is a molten salt-type, Central Receiver technology. This technology is based on the concept of thousands of large tracking mirrors (known as heliostats) which track the sun and reflect the beam radiation to a common focal point. This focal point (the receiver) is located well above the heliostat field in order to prevent interference between the reflected radiation and the other heliostats.

A heliostat (**Figure 4**) is a mirror mounted on an axis by which the sun is steadily reflected onto one spot. Heliostats are arranged in an elliptical formation around the focal point with the majority of the reflective area weighted to the more effective side of the heliostat field



Figure 4- Single heliostat – image courtesy NREL

The central receiver is situated on the top of the central tower (**Figure 5**). This receiver is in essence a heat exchanger which absorbs the concentrated beam radiation, converts it to heat and transfers the heat to the working fluid (i.e. molten salt) which is in turn used to generate steam for conventional power generation.



Figure 5- Receiver heat exchange panels – image courtesy NREL

Power is generated through a conventional Rankine cycle (steam turbine process). The working fluid is a salt mix of a 60:40 ratio of Sodium Nitrate (NaNO_3) and Potassium Nitrate (KNO_3). The cold salt is pumped up the central tower at approximately 300°C and flows through the central receiver where it is heated to approximately 550°C after which it can be stored for use in the conventional power generation process (maintaining 98% thermal efficiency)(Figure 6).

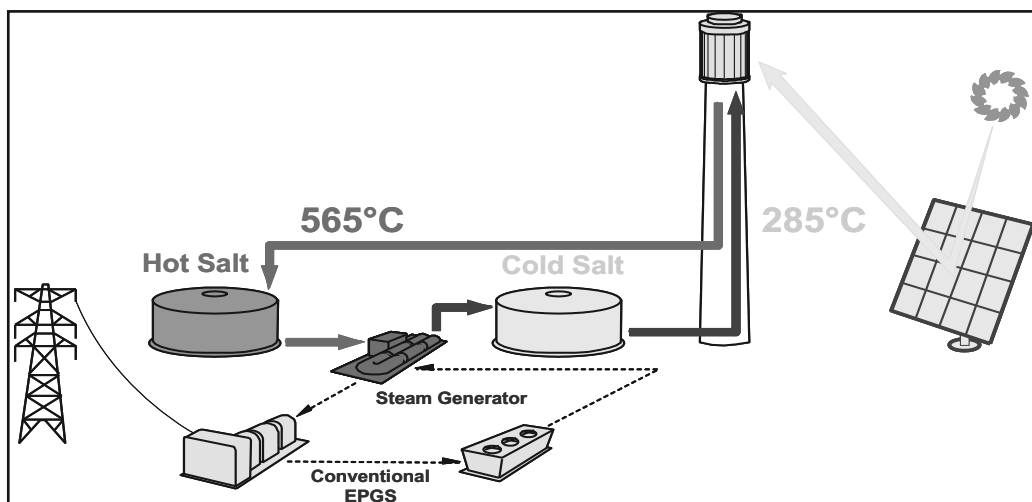


Figure 6- Flow diagram showing the power generation process in a CSP plant.

3 ASSESSMENT METHODOLOGY

The section below outlines the assessment methodologies utilised in the study.

3.1 Methodology for Assessing Heritage Site significance

This Heritage Impact Assessment (HIA) report was compiled by PGS Heritage and Grave Relocation Consultants (PGS) for the proposed Humansrus Project. The applicable maps, tables and figures, are included as stipulated in the NHRA (no 25 of 1999), the National Environmental Management Act (NEMA) (no 107 of 1998) and the Minerals and Petroleum Resources Development Act (MPRDA) (28 of 2002). The HIA process consisted of three steps:

- Step I – Literature Review: The background information to the field survey leans greatly on the Heritage Scoping Report completed by PGS for this site in September 2010.
- Step II – Physical Survey: A physical survey was conducted on foot through the proposed project area by qualified archaeologists (February 2011), aimed at locating and documenting sites falling within and adjacent to the proposed development footprint.
- Step III – The final step involved the recording and documentation of relevant archaeological resources, as well as the assessment of resources in terms of the heritage impact assessment criteria and report writing, as well as mapping and constructive recommendations

The significance of heritage sites was based on four main criteria:

- site integrity (i.e. primary vs. secondary context),
- amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter)
 - Low - <10/50m²
 - Medium - 10-50/50m²
 - High - >50/50m²
- uniqueness and
- potential to answer present research questions.

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

- A - No further action necessary;
- B - Mapping of the site and controlled sampling required;
- C - No-go or relocate pylon position
- D - Preserve site, or extensive data collection and mapping of the site; and
- E - Preserve site

Impacts on these sites by the development will be evaluated as follows

Site Significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report.

Table 1: Site significance classification standards as prescribed by SAHRA

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High Significance	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High Significance	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	-	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium Significance	Recording before destruction
Generally Protected C (GP.A)	-	Low Significance	Destruction

3.2 Methodology for Impact Assessment

The rating system used for assessing impacts is based on three criteria, namely:

- The relationship between impacts/issues and impact status (Box 1);
- The relationship between impacts/issues and spatial scale (Box 2);
- The relationship between impacts/issues and temporal scale (Box 3);
- The relationship between impacts/issues and probability (Box 4)
- The relationship between impacts/issues and severity (Box 5);

These five criteria are combined to describe the overall importance rating, namely the significance (Box 6).

Table 2: Status of impacts

Rating	Description	Quantitative Rating
Positive	A benefit to the receiving environment.	+
Neutral	No cost or benefit to the receiving environment.	N
Negative	A cost to the receiving environment.	-

Table 3: Spatial scale of impacts

Rating	Description	Quantitative Rating
None	No impact	0
Low	Site Specific; Occurs within the site boundary.	1
Medium	Local; Extends beyond the site boundary; Affects the immediate surrounding environment (i.e. up to 5km from Project Site boundary).	2
High	Regional; Extends far beyond the site boundary; Widespread effect (i.e. 5km and more from Project Site boundary).	3
Very High	National and/or international; Extends far beyond the site boundary; Widespread effect.	4

Table 4: Temporal scale of impacts

Rating	Description	Quantitative Rating
None	No impact	0
Low	Short term; Quickly reversible; 0 – 5years.	1
Medium	Medium term; Reversible over time; 5 – 15 years.	2
High	Long term; Approximate lifespan of the project: 16 -30 years.	3
Very High	Permanent; over 30 years and resulting in a permanent and lasting change that will remain.	4

Table 5: Probability of impacts

Rating	Description	Quantitative Rating
None	No impact	0
Improbable	Possibility of the impact materialising is negligible; Chance of occurrence <10%.	1
Probable	Possibility that the impact will materialise is likely; Chance of occurrence 10 – 49.9%.	2
Highly Probable	It is expected that the impact will occur; Chance of occurrence 50 – 90%.	3
Definite	Impact will occur regardless of any prevention measures; Chance of occurrence >90%.	4

Table 6: Severity of impacts

Rating	Description	Quantitative Rating
None	No impact	0
Negligible / Minor	The system(s) or party(ies) is marginally affected by the proposed development.	1
Average	Medium or short term impacts on the affected system(s) or party(ies). Mitigation is very easy, cheap, less time consuming or not necessary. For example, a temporary fluctuation in the	2

Rating	Description	Quantitative Rating
	water table due to water abstraction.	
Severe	Medium to long term impacts on the affected system(s) or party (ies) that could be mitigated. For example constructing a narrow road through vegetation with a low conservation value.	3
Very Severe	An irreversible and permanent change to the affected system(s) or party(ies) which cannot be mitigated. For example, the permanent change to topography resulting from a quarry.	4

Table 7: Significance of impacts

Impact	Rating	Description	Quantitative Rating
Positive	High	Of the highest positive order possible within the bounds of impacts that could occur.	+ 12 – 16
	Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. Other means of achieving this benefit are approximately equal in time, cost and effort.	+ 6 – 11
	Low	Impacts is of a low order and therefore likely to have a limited effect. Alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time-consuming.	+ 1 – 5
No Impact	No Impact	Zero impact.	0

An example of a ratings table:

Issue	Specific Impact	No Mitigation						With Mitigation					
		Status	Extent	Duration	Probability	Intensity	Significance	Status	Extent	Duration	Probability	Intensity	Significance
Soils	Potential loss of soil types of high agricultural potential	-	1	1	4	4	-10	-	1	1	4	4	-10
	Potential loss of soil types of high agricultural potential	-	1	1	3	2	-7	-	1	1	1	1	-4
	Potential loss of soil types of high agricultural potential	-	1	1	3	2	-7	-	1	1	1	1	-4
	Potential loss of soil types of high agricultural potential	-	1	1	3	2	-7	-	1	1	1	1	-4

4 CURRENT STATUS QUO

4.1 Site Description

The property (**Figure 7**) is bordered to the north by the R385 which connects Daniëlskuil and Postmasburg (**Figure 8**), and the D3381 gravel road, from Lime Acres, which divides the south western section of the property (**Figure 9**).

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. The farm is currently being used for grazing by livestock and for the breeding of horses.

The southern and south western section of the study area is characterised by 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 (**Figure 10**).

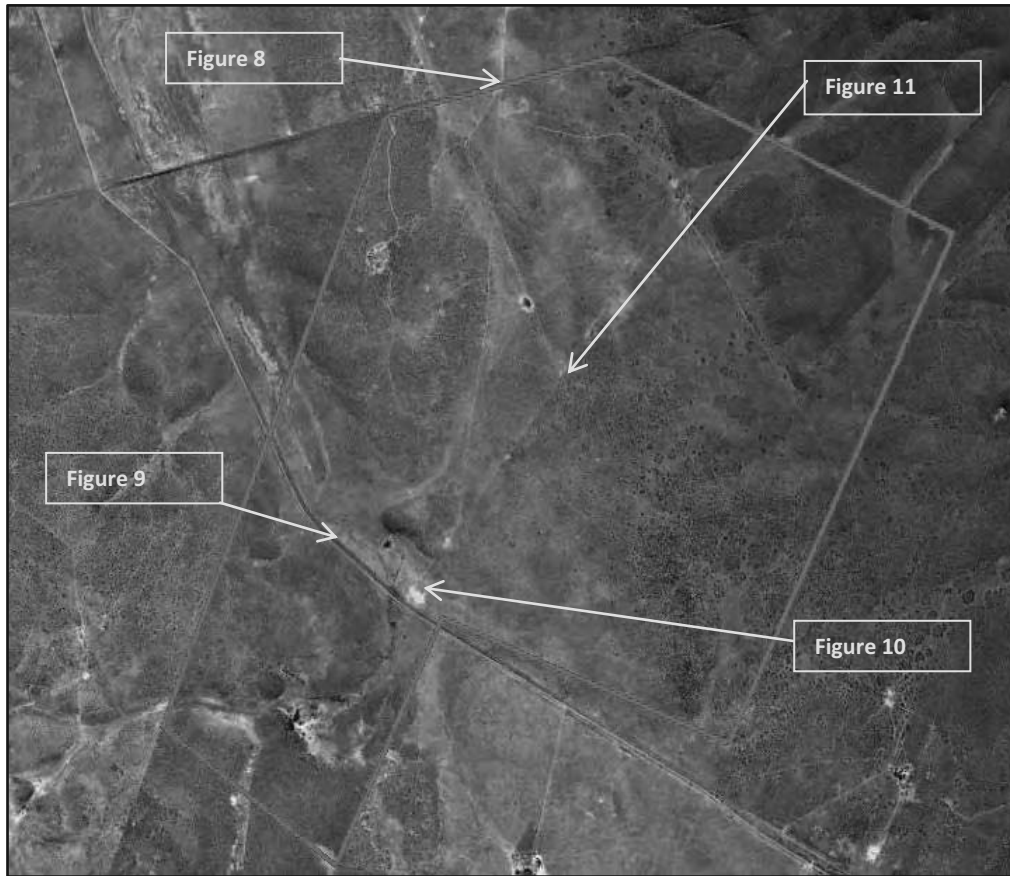


Figure 7 – Aerial view of study area with position of photographs shown



Figure 8 – View of to the R385 towards Postmasburg (Study area on the left)



Figure 9 – View of gravel road and rail line in the southern section of the study area



Figure 10 – View of dry pan from rail line in southern section of the study area

The south eastern section of the study area is also characterised by clumps of wild olive trees (*Olea europaea*) (**Figure 11**).



Figure 11 – Wild olive trees in the study area (Webley, 2010)

4.1.1 Archival findings

The archival research focused on available information sourced that was used to compile a background history of the study area and surrounds. This data then informed the possible heritage resources to be expected during field surveying.

4.1.2 Findings of the Heritage Scoping Document

The findings can be compiled as follow:

Palaeontology

No further palaeontological studies are recommended for this development.

Should substantial fossil remains be exposed during construction, however, the ECO should safeguard these, preferably in situ, and alert SAHRA as soon as possible so that appropriate action (e.g. recording, sampling or collection) can be taken by a professional palaeontologist.

Archaeology

The possibility of archaeological finds in the study area has been indicated by previous research in the greater Daniëlskuil-Postmasburg and Ghaap plato area. This is confirmed by a short reconnaissance survey by Webley (2010) and an initial site visit by an archaeologist from PGS of the study area. Concentrations of Stone Age artefact around the dry pans and rivers were found as well as spot finds in the flat sandy areas.

Although the current owners indicated no knowledge of rock art it is recommended that special attention is given to rocky areas as such sites could be prevalent.

Historical

As the area of Groenwater was settled since 1880 as a location for the Thlaping and Thlaro the possibility of scattered homesteads cannot be excluded and the report of Webley (2010) indicates the existence of structures only demarcated by single rows of rocks, indicating the position of the house foundations.

The position of the two wagon routes through the study area also leaves the possibility for ephemeral camp sites and outspans in the study area.

To be able to compile a heritage management plan to be incorporated into the EMP the following further work was required for the HIA for inclusion in the EIA.

Archaeological walk through the whole of the study area, with specific attention given to the areas around pans, outcrops, wagon route alignments and historical structures will be required.

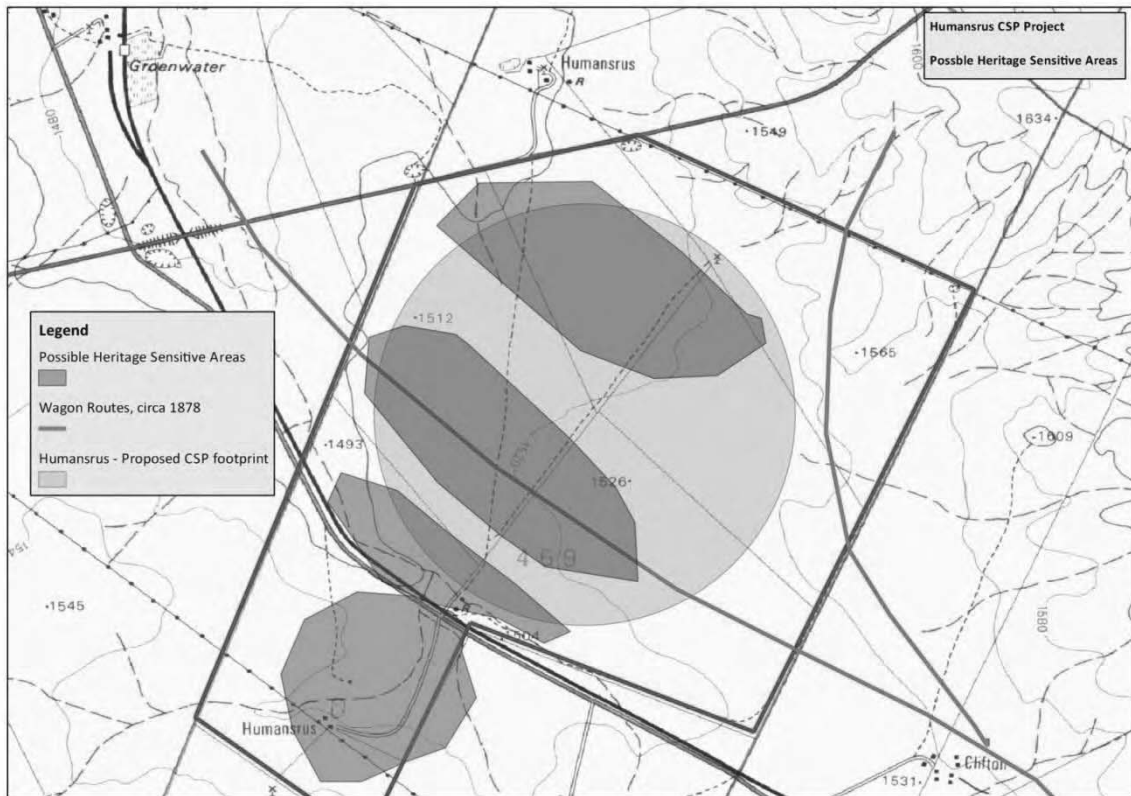


Figure 12 – Heritage Sensitivity Map

4.1.3 Field work findings

A follow up visit to the study area was conducted in August 2011 with the aim of conducting an archaeological survey of the development area and giving particular attention to the areas identified during the Scoping phase as being potentially sensitive. Due to the size of the total study area field work focused on the areas identified in **Figure 12** as the footprint areas of the development.

The footprint area for this project covers approximately 820 hectares in total. Due to the nature of cultural remains, with the majority of artefacts occurring below surface, a controlled-exclusive surface survey was conducted over a period of 4 days on foot by an archaeologist of PGS

4.1.4 Heritage sites

The first sites discussed were identified during a survey conducted in November 2010 by the Archaeological Contracts Office (Webley, 2010) and confirmed during the field survey by PGS

in August 2011. Together with the field survey of August 2011 revealed the following further sites:

Stone Age Find spots

Coordinates:

Site Number	GPS Co-ordinates	Type	Description	Heritage Significance
PGS01	S28 17 46.2 E23 22 05.9	Stone artefacts	Low density scatter of MSA artefacts in pebble layer	Low
PGS02	S28 17 50.6 E23 21 15.3	Stone artefacts	Two large ESA cores	Low
PGS03	S28 18 52.9 E23 22 17.4	Stone artefacts	Low density scatter of MSA artefacts in pebble layer	Low
PGS04	S28 18 12.9 E23 22 04.8	Stone artefacts	Low density scatter of MSA artefacts in pebble layer	Low
PGS05	S28 18 06.4 E23 21 58.4	Stone artefacts	Low density scatter of MSA artefacts in pebble layer	Low
PGS07	S28 18 21.5 E23 21 23.2	Stone artefacts	Low density scatter of MSA artefacts in pebble layer	Low
ACO03	S28 19 16.7 E23 21 01.4	Stone artefacts	Miscellaneous scatter of ESA and LSA stone tools at the water seepage behind the house.	Low
ACO017	S28 18 52.4 E23 21 32.6	Stone artefacts around pan	Mix of ESA and MSA stone artefacts around a shallow pan	Low
ACO018	S28 18 55.9 E23 21 42.9	Stone artefacts along stream bed	MSA artefacts along banks of dry stream bed	Low
ACO019	S28 17 52.0 E23 22 16.7	Stone artefacts around pan	Mainly weathered MSA stone around the margins of a large pan	Low

The field work identified numerous areas where low density scatters of Middel and Later Stone Age lithics were present (**Figure 13**). Most of these scatters were found where pebble layers were exposed. This mostly occurred along dry river beds and pans that occur in the study area. As no context and in situ preservation were identified these sites were grade as of low heritage significance and rated as **Generally Protected C**.

Evaluating the possible impact of the development on the site the heritage significance must be considered as part of the evaluation, and thus the cost of mitigation or possible mitigation that will then have an implication on the severity of the impact.



PHS01

PGS02

Figure 13 – MSA flakes(PGS01) and ESA cores (PGS02) found during the survey

Specific Impact	Heritage Signif	Status	No Mitigation					With Mitigation						
			Extent	Duration	Probability	Intensity	Significance	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Significance
Destruction of site	GP.C	-	1	4	3	1	-9	GP.C	-	1	4	3	1	-9

Mitigation:

Documentation of these finds as listed in the report is seen as sufficient and no further mitigation is required.

Site PGS06

Coordinates: S28 18 19.0 E23 21 24.6

The site is situated on a low rise on the western side of the CSP foot print(*Figure 14*). The site is situated in a clearing between the shrub and grass land that characterises the rocky ridges in the western section of the study area. A medium density of MSA flakes ,cores and waste are present in situ. A small scan of a 1m² produced between 20-40 flakes and cores.

Site size: Approximately 5m x 5m.



Figure 14 – View of site from north



Figure 15 – Collection of lithics from site

The site is situated away from dry river beds and pans and points to a localised Stone Age site with indications of napping (production of lithics), the position of the site points to a possible hunting/lookout base. Heritage significance of the site is seen as of Medium significance and rated as **Generally Protected B**.

Specific Impact	Heritage Signif	Status	No Mitigation					With Mitigation					
			Extent	Duration	Probability	Intensity	Significance	Status	Extent	Duration	Probability	Intensity	Significance
Destruction of site	GP.B	-	1	4	4	3	-12	-	1	4	3	1	-9

Mitigation:

Due to the fact that a large number of low significance lithic scatters occur through-out the impact area, the documentation of one of the more significant site will aid in the preservation of the lithic assemblage data found in the study area.

It is thus recommended that the site (**PGS06**) be documented through a surface collection and test excavation to determine the extent of the site. This will include mapping of the lithic distribution as well as analysis of the lithic assemblage.

Cemeteries

During the field work 3 sites with stone cairns were identified as possible graves. . All three is aligned east west, which is the general alignment of graves buried as part of a Christian burial practice.

Site Number	GPS Co-ordinates	Type	Description	Heritage Significance
ACO012	S28 19 24.3 E23 21 07.4	Stone Cairn	Artificial mound of stone. It may be a grave?	If grave - High
ACO014	S28 19 25.0 E23 21 14.2	Stone Cairn	Artificial mound of stone. It may be a grave?	If grave - High
ACO015	S28 19 22.1 E23 21 16.1	Stone Cairn	Artificial mound of stone, with 3 ceramic fragments on the top.	If grave – High

Up to such time as it can be confirmed otherwise these sites must be considered as possible graves and handled as such. These 3 sites receive a provisional **heritage significance grading of 3B**. All 3 sites fall in or close to the area earmarked for a PV development in the project and the possible negative impact without mitigation is seen as **Negative High**.

Specific Impact	No Mitigation							With Mitigation						
	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Significance	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Significance
Destruction of possible grave	3B	-	1	4	4	3	-12	3B	-	1	4	3	1	-9

Mitigation:

- Adjust the development layout and demarcate site with at least a 10 meter buffer.
- In the event that the sites cannot be excluded from the development foot print a grave relocation process as described in Section 5 of this reports needs to be implemented.

ACO2 – PGS09

Coordinates: S28 19 18.2 E23 21 03.4

A small informal partially fenced cemetery with 5 graves (**Figure 16**) was identified at this location. The graves were stoned packed and placed in a two lines and all dressings had an east to west orientation.

The graves are associated with the farmstead of which the cemetery forms part of. A single headstone (**Figure 17**) dating from 1913 was found on site.

Site size: Approximately 10m x 10m.



Figure 16 – Graves in between cactus growth



Figure 17 – Headstone in farmstead cemetery

Although a PV development has been proposed in close proximity to the cemetery a direct impact on the cemetery is not foreseen. Heritage significance of the site is seen as of High significance and rated as **Grade 3B**.

Specific Impact	No Mitigation							With Mitigation						
	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif
Impact on cemetery outside PV area	3B	-	1	4	2	4	-11	3B	-	1	4	2	2	-10

Mitigation:

- Currently no mitigation will be required as the development plan does not foresee any activity in the direct vicinity of the cemetery.
- It is recommended that the cemetery be fenced with a 10 meter buffer and access controlled.

Site PGS14

Coordinates: S28 19 07.2 E23 20 58.0

A small informal cemetery with 4 graves (**Figure 18**) was identified at this location. The graves were situated in disturbed rocky grassland. The graves were arranged in a single line all with an east to west orientation.

Site size: Approximately 10m x 10m.



Figure 18 – View of cemetery

A PV development has been proposed in the area where cemetery is situated. Heritage significance of the site is seen as of High significance and rated as **Grade 3B** with a high negative impact probability.

Specific Impact	No Mitigation							With Mitigation						
	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif
Destruction of cemetery inside PV impact area	3B	-	1	4	4	4	-13	3B	-	1	4	2	1	-8

Mitigation:

- Adjust the development layout and demarcate site with at least a 10 meter buffer.
- In the event that the sites cannot be excluded from the development foot print a grave relocation process as described in Section 5 of this reports needs to be implemented.

Historical Structures

Site Number	GPS Co-ordinates	Type	Description	Significance
PGS10	S28 19 14.8 E23 21 07.4	Stone circle	Single row stone lined circle. Part of homestead – probably horse training ring	Low
PGS11	S28 19 10.1 E23 21 06.3	Single dwelling	Concrete foundation of 2 room structure with associated midden	Low – Possible infant burials
PGS12	S28 19 08.5 E23 21 10.4	Stone structure	Remains of square stone structure	Low - Possible infant burials
PGS13	S28 19 08.8 E23 21 03.9	Single dwelling	Clay brick constructed ruin of house and associated midden	Low - Possible infant burials
PGS15	S28 19 08.4 E23 20 59.9	Midden and historic remains	Midden consisting of recent historic remains including car parts	Low
ACO02	S28 19 18.2 E23 21 03.2	Humansrus homestead	This includes the ruined house, shed, old dam/kraal	Low
ACO04	S28 19 23.8 E23 21 05.4	Stone kraal	A circular stone kraal beneath the transmission lines and close to the homestead	Low
ACO013	S28 19 26.2 E23 21 11.4	3 stone features	3 stone features comprising rectangular stone structures, possibly the outlines of	Low - Possible infant burials

			workers' cottages from early 20 th century.	
ACO016	S28 19 20.0 E23 21 16.9	Stone Kraal	Rectangular stone kraal, measuring 20 m x 37 m.	Low

The sites identified as being part of the historical background of the development area all probably date back to the past 100 years with the single headstone in PGS09 indicating a date of around 1913 for the farm to have been inhabited.

It must be noted that most of the historical architectural structures has a **heritage significance rating of Generally Protected GP.C.**

Most of these sites will be impacted to some lesser manor by the proposed PV developments in the south-western corner of the development area. The impacts of the proposed development on these sites are rated as **negative Low.**

An exception is the possibility of infant burials at the farm worker sites of **PGS11-13** and **ACO13**

Site size: Approximately 30m x 30m.

Specific Impact	No Mitigation							With Mitigation						
	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif
Destruction of site	GP.C	-	1	4	3	4	-12	GP.C	-	1	4	4	2	-10
Possible infant burials	3B	-	1	4	2	4	-11	3B	-	1	4	1	2	-8

Mitigation:

- **PGS11-13** and **ACO13** mitigation in the form of a watching brief and monitoring at these sites during construction.
- However best practice would be to do test excavations to ascertain the presence of possible infant burials at each of these sites.

4.2 Environmental Issues and Potential Impacts

Issue	Specific Impact	No Mitigation							With Mitigation						
		Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif	Heritage Signif	Status	Extent	Duration	Probability	Intensity	Impact Signif
Heritage	Destruction of site with low heritage significance	GP.C	-	1	4	3	1	-9	GP.C	-	1	4	3	1	-9
	Destruction of site with medium heritage significance	GP.B	-	1	4	4	3	-12	-	1	4	3	1	-9	GP.B
	Destruction of possible graves	3B	-	1	4	4	3	-12	3B	-	1	4	3	1	-9
	Impact on cemetery outside PV area	3B	-	1	4	2	4	-11	3B	-	1	4	2	2	-10
	Destruction of cemetery inside PV impact area	3B	-	1	4	4	4	-13	3B	-	1	4	2	1	-8
	Destruction of historical sites	GP.C	-	1	4	3	4	-12	GP.C	-	1	4	4	2	-10
	Possible infant burials	3B	-	1	4	2	4	-11	3B	-	1	4	1	2	-8

5 CONCLUSIONS AND RECOMMENDATIONS

The Heritage Scoping Report, that forms part of the HIA, has shown that the area between Postmasburg and Daniëlskuil generally referred to as the Ghaap plato has a rich history of occupation from the Stone Age with hunter gatherers to the Thlaping and Thlaro during the Iron Age period. The 1800's saw the rise of the Griqua people in the area and their loss of sovereignty after 1880 to Cape rule.

The field work that feeds into the Heritage Impact has utilised the findings of the Scoping report to guide this work. The field work identified a total of 25 heritage sites of which the following will require further mitigation:

Archaeological Sites

PGS06 –The sites needs to be documented through a surface collection and test excavation to determine the extent of the site. This wil include mapping of the lithic distribution as well as analysis of the lithic assemblage.

Cemeteries

AC02 - PGS09 and PGS13

It is recommended that the development layout be adjusted to accommodate the cemeteries and that the cemeteries be fenced with a 10 meter buffer.

It is further recommended that in the event that the cemeteries cannot be incorporated in to the development the graves be relocated after a full grave relocation process that includes comprehensive social consultation. The grave relocation process must include:

- A detailed social consultation process, that will trace the next-of-kin and obtain their consent for the relocation of the graves, that will be at least 60 days in length;
- Site notices indicating the intent of the relocation
- Newspaper Notice indicating the intent of the relocation
- A permit from the local authority;
- A permit from the Provincial Department of health;
- A permit from the South African Heritage Resources Agency if the graves are older than 60 years or unidentified and thus presumed older than 60 years;
- An exhumation process that keeps the dignity of the remains and family intact;
- An exhumation process that will safeguard the legal implications towards the developer;
- The whole process must be done by a reputable company that are well versed in relocations;
- The process must be conducted in such a manner as to safeguard the legal rights of the families as well as that of the development company.

Possible infant burials at **AC0013, PGS11-13** needs to be monitored during construction. However best practice would be to do test excavations to ascertain the presence of possible infant burials at each of these sites.

Further to these recommendations the general Heritage Management Guideline in Sections 6 needs to be incorporated in to the EMP for the project.

The overall impact of the development on heritage resources is seen as acceptably low and can impacts can be mitigated to acceptable levels.

6 HERITAGE MANAGEMENT GUIDELINES

6.1 General Management Guidelines

1. The National Heritage Resources Act (Act 25 of 1999) states that, any person who intends to undertake a development categorised as-
 - (a) the construction of a road, wall, transmission line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50m in length;
 - (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

In the event that an area previously not included in an archaeological or cultural resources survey is to be disturbed, the South African Heritage Resources Agency (SAHRA) needs to be contacted. An enquiry must be lodged with them into the necessity for a Heritage Impact Assessment.

2. In the event that a further heritage assessment is required it is advisable to utilise a qualified heritage practitioner preferably registered with the Cultural Resources Management Section (CRM) of the Association of Southern African Professional Archaeologists (ASAPA).

This survey and evaluation must include:

- (a) The identification and mapping of all heritage resources in the area affected;

- (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6 (2) or prescribed under section 7 of the National Cultural Resources Act;
 - (c) An assessment of the impact of the development on such heritage resources;
 - (d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
 - (e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
 - (f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
 - (g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.
3. It is advisable that an information section on cultural resources be included in the SHEQ training given to contractors involved in surface earthmoving activities. These sections must include basic information on:
- a. Heritage;
 - b. Graves;
 - c. Archaeological finds; and
 - d. Historical Structures.
- This module must be tailor made to include all possible finds that could be expected in that area of construction.
4. In the event that a possible find is discovered during construction, all activities must be halted in the area of the discovery and a qualified archaeologist contacted.
5. The archaeologist needs to evaluate the finds on site and make recommendations towards possible mitigation measures.
6. If mitigation is necessary, an application for a rescue permit must be lodged with SAHRA.
7. After mitigation an application must be lodged with SAHRA for a destruction permit. This application must be supported by the mitigation report generated during the rescue excavation. Only after the permit is issued may such a site be destroyed.
8. If during the initial survey sites of cultural significance is discovered, it will be necessary to develop a management plan for the preservation, documentation or destruction of such a site. Such a program must include an

archaeological/palaeontological monitoring programme, timeframe and agreed upon schedule of actions between the company and the archaeologist.

9. In the event that human remains are uncovered or previously unknown graves are discovered a qualified archaeologist needs to be contacted and an evaluation of the finds made.
10. If the remains are to be exhumed and relocated, the relocation procedures as accepted by SAHRA needs to be followed. This includes an extensive social consultation process.

The definition of an archaeological/palaeontological monitoring programme is a formal program of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

The purpose of an archaeological/palaeontological monitoring programme is:

- To allow, within the resources available, the preservation by record of archaeological/palaeontological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works
- To provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological/palaeontological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.
- A monitoring is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.
- The objective of the monitoring is to establish and make available information about the archaeological resource existing on a site.

PGS can be contacted on the way forward in this regard.

Table 8: Roles and responsibilities of archaeological and heritage management

ROLE	RESPONSIBILITY	IMPLEMENTATION
A responsible specialist needs to be allocated and should sit in at all relevant meetings, especially when changes in design are discussed, and liaise with SAHRA.	The client	Archaeologist and a competent archaeology supportive team
If chance finds and/or graves or burial grounds are identified during construction or operational phases, a specialist must be contacted in due course for evaluation.	The client	Archaeologist and a competent archaeology supportive team
Comply with defined national and local cultural heritage regulations on management plans for identified sites.	The client	Environmental Consultancy and the Archaeologist
Consult the managers, local communities and other key stakeholders on mitigation of archaeological sites.	The client	Environmental Consultancy and the Archaeologist
Implement additional programs, as appropriate, to promote the safeguarding of our cultural heritage. (i.e. integrate the archaeological components into employee induction course).	The client	Environmental Consultancy and the Archaeologist,
If required, conservation or relocation of burial grounds and/or graves according to the applicable regulations and legislation.	The client	Archaeologist, and/or competent authority for relocation services
Ensure that recommendations made in the Heritage Report are adhered to.	The client	The client
Provision of services and activities related to the management and monitoring of significant archaeological sites.	The client	Environmental Consultancy and the Archaeologist
After the specialist/archaeologist has been appointed, comprehensive feedback reports should be submitted to relevant authorities during each phase of development.	Client and Archaeologist	Archaeologist

6.2 All phases of the project

6.2.1 Archaeology

Based on the findings of the HIA, all stakeholders and key personnel should undergo an archaeological induction course during this phase. Induction courses generally form part of the employees' overall training and the archaeological component can easily be integrated into these training sessions. Two courses should be organised – one aimed more at managers and supervisors, highlighting the value of this exercise and the appropriate communication channels that should be followed after chance finds, and the second targeting the actual workers and getting them to recognize artefacts, features and significant sites. This needs to be supervised by a qualified archaeologist. This course should be reinforced by posters reminding operators of the possibility of finding archaeological/palaeontological sites.

The project will encompass a range of activities during the construction phase, including ground clearance, establishment of construction camps area and small scale infrastructure development associated with the project.

It is possible that cultural material will be exposed during operations and may be recoverable, but this is the high-cost front of the operation, and so any delays should be minimised. Development surrounding infrastructure and construction of facilities results in significant disturbance, but construction trenches do offer a window into the past and it thus may be possible to rescue some of the data and materials. It is also possible that substantial alterations will be implemented during this phase of the project and these must be catered for. Temporary infrastructure is often changed or added to the subsequent history of the project. In general these are low impact developments as they are superficial, resulting in little alteration of the land surface, but still need to be catered for.

During the construction phase, it is important to recognize any significant material being unearthed, making and to make the correct judgment on which actions should be taken. A responsible archaeologist/palaeontologist must be appointed for this commission. This person does not have to be a permanent employee, but needs to sit in at relevant meetings, for example when changes in design are discussed, and notify SAHRA of these changes. The

archaeologist would inspect the site and any development recurrently, with more frequent visits to the actual workforce and operational areas.

In addition, feedback reports can be submitted by the archaeologist to the client and SAHRA to ensure effective monitoring. This archaeological monitoring and feedback strategy should be incorporated into the Environmental Management Plan (EMP) of the project. Should an archaeological/palaeontological site or cultural material be discovered during construction (or operation), such as burials or grave sites, the project needs to be able to call on a qualified expert to make a decision on what is required and if it is necessary to carry out emergency recovery. SAHRA would need to be informed and may give advice on procedure. The developers therefore should have some sort of contingency plan so that operations could move elsewhere temporarily while the material and data are recovered. The project thus needs to have an archaeologist/palaeontologist available to do such work. This provision can be made in an archaeological/palaeontological monitoring programme.

6.2.2 *Graves*

In the case where a grave is identified during construction the following measures must be taken.

Mitigation of graves will require a fence around the cemetery with a buffer of at least 20 meters.

If graves are accidentally discovered during construction, activities must cease in the area and a qualified archaeologist be contacted to evaluate the find. To remove the remains a rescue permit must be applied for with SAHRA and the local South African Police Services must be notified of the find.

Where it is then recommended that the graves be relocated a full grave relocation process that includes comprehensive social consultation must be followed.

The grave relocation process must include:

- i. A detailed social consultation process, that will trace the next-of-kin and obtain their consent for the relocation of the graves, that will be at least 60 days in length;
- ii. Site notices indicating the intent of the relocation
- iii. Newspaper Notice indicating the intent of the relocation

- iv. A permit from the local authority;
- v. A permit from the Provincial Department of health;
- vi. A permit from the South African Heritage Resources Agency if the graves are older than 60 years or unidentified and thus presumed older than 60 years;
- vii. An exhumation process that keeps the dignity of the remains intact;
- viii. An exhumation process that will safeguard the legal implications towards the developing company;
- ix. The whole process must be done by a reputable company that are well versed in relocations;
- x. The process must be conducted in such a manner as to safeguard the legal rights of the families as well as that of the developing company.

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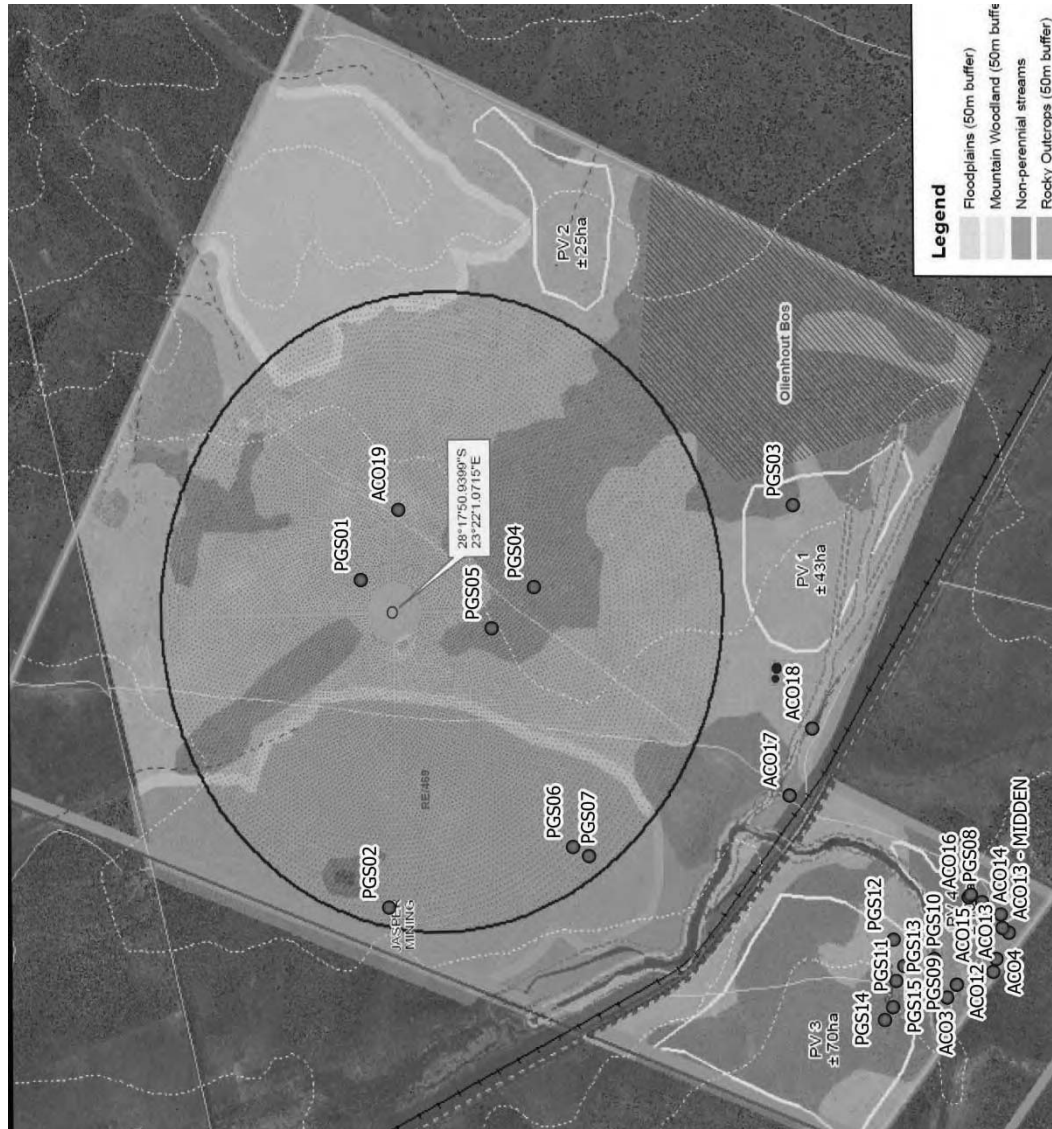
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Appendix A
 HERITAGE SITE DISTRIBUTION MAP



LEGISLATIVE REQUIREMENTS – TERMINOLOGY AND ASSESSMENT CRITERIA**3.1 General principles**

In areas where there has not yet been a systematic survey to identify conservation worthy places, a permit is required to alter or demolish any structure older than 60 years. This will apply until a survey has been done and identified heritage resources are formally protected.

Archaeological and palaeontological sites, materials, and meteorites are the source of our understanding of the evolution of the earth, life on earth and the history of people. In the new legislation, permits are required to damage, destroy, alter, or disturb them. People who already possess material are required to register it. The management of heritage resources are integrated with environmental resources and this means that before development takes place heritage resources are assessed and, if necessary, rescued.

In addition to the formal protection of culturally significant graves, all graves, which are older than 60 years and are not in a cemetery (such as ancestral graves in rural areas), are protected. The legislation protects the interests of communities that have interest in the graves: they may be consulted before any disturbance takes place. The graves of victims of conflict and those associated with the liberation struggle will be identified, cared for, protected and memorials erected in their honour.

Anyone who intends to undertake a development must notify the heritage resource authority and if there is reason to believe that heritage resources will be affected, an impact assessment report must be compiled at the construction company's cost. Thus, the construction company will be able to proceed without uncertainty about whether work will have to be stopped if an archaeological or heritage resource is discovered.

According to the National Heritage Act (Act 25 of 1999 section 32) it is stated that:

An object or collection of objects, or a type of object or a list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including –

- objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;
- visual art objects;
- military objects;
- numismatic objects;
- objects of cultural and historical significance;
- objects to which oral traditions are attached and which are associated with living heritage;
- objects of scientific or technological interest;
- books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1 (xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives; and
- any other prescribed category.

Under the National Heritage Resources Act (Act No. 25 of 1999), provisions are made that deal with, and offer protection, to all historic and pre-historic cultural remains, including graves and human remains.

3.2 Graves and cemeteries

Graves younger than 60 years fall under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the Office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning, or in some cases the MEC for Housing and Welfare. Authorisation for exhumation and reinterment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and

regional provisions, laws and by-laws must also be adhered to. In order to handle and transport human remains the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the South African Heritage Resource Agency (SAHRA). The procedure for Consultation Regarding Burial Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administered by a local authority. Graves in the category located inside a formal cemetery administered by a local authority will also require the same authorisation as set out for graves younger than 60 years over and above SAHRA authorisation.

If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authority must be adhered to.

Appendix E

Visual Impact Assessment