

HERITAGE ASSESSMENT

Proposed 10 MW Solar Photovoltaic farm, Grootvlei Powerstation , Grootvlei, Mpumalanga Province

Version 1.1

15 October 2012

ACKNOWLEDGEMENT OF RECEIPT

CLIENT: Environmental Impact Management Services (Pty) Ltd

CONTACT PERSON: Mr Nicus Durieux

Tel: (011) 789-7170, email: nicus@eims.co.za

LEADING CONSULTANT: PGS - Heritage & Grave Relocation Consultants

CONTACT PERSON: Wouter Fourie, Tel: +27 (0)82 851 3575

Email: wouter@gravesolutions.co.za

SIGNATURE:

Copyright

Copyright in all documents, drawings and records whether manually or electronically produced, which form part of the submission and any subsequent report or project document shall vest in PGS. None of the documents, drawings or records may be used or applied in any manner, nor may they be reproduced or transmitted in any form or by any means whatsoever for or to any other person, without the prior written consent of PGS.

The Client, on acceptance of any submission by PGS and on condition that the Client pays to Professional Grave Solutions(Pty) Ltd the full price for the work as agreed, shall be entitled to use for its own benefit and for the specified project only:

- i. The results of the project;
- ii. The technology described in any report; and,
- iii. The recommendations delivered to the Client.

Declaration of Independence

The report has been compiled by PGS Heritage & Grave Relocation Consultants an appointed Heritage Specialist for Environmental Impact Management Services (Pty) Ltd (EIMS). The views stipulated in this report are purely objective and no other interests are displayed during the decision making processes discussed in the Heritage Assessment Process.

PGS Heritage & Grave Relocation Consultants

PRINCIPAL INVESTIGATOR:	Wouter Fourie
SIGNATURE:	

ARCHAEOLOGICAL CONSULTANT:

Executive Summary

PGS Heritage and Grave Relocation Consultants (PGS) was appointed by Environmental Impact Management Services (Pty) Ltd (EIMS), to undertake a Heritage Assessment for the development of a 14Ha Solar Photo-Voltaic (PV) power generation facility at the Grootvlei Power Station, Grootvlei, Mpumalanga Province. During the survey five point specific heritage sites of varying heritage significance were found. Most of the areas were previously disturbed by industrial activities of the Grootvlei Power Station.

All four alternative sites are acceptable from a heritage perspective. In the case of Area 4, all five structures were identified within its boundaries, however with the recommended mitigation measures for Grootvlei-1, this site will also be suitable from a heritage perspective.

The following management is recommended:

Grootvlei-1

If further investigation during the recommended mitigation measures for heritage structures indicates the presence of grave, the following management measures are recommended:

- 1. Adjust the development layout and demarcate site with at least a 5 meter buffer from the existing steel fence.
- 2. 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.

General recommendation on archaeological work

If during construction any possible finds are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find.

Contents

1.		INTRODUCTION	10
	1.1	Project Background	10
	1.2	Legislative Framework	10
	1.3	Assumptions and Limitations	11
2.		ASSESSMEN METHODOLOGY & APPROACH	11
	2.1	General Approach Error! Bookmark not defi	ined.
	2.2	Evaluation Methods	12
3.	(General Description of the Area Surveyed	14
	3.1	Survey	17
	3.2	Site Descriptions	19
4.		RECOMMENDATIONS	27
5.		LIST OF PREPARES	28
6.		Bibliography	28

APPENDICES

APPENDIX A - LEGISLATIVE PRINCIPLES

APPENDIX B - HERITAGE MAP

TABLE OF FIGURES

Figure 1 - Google earth image showing the broader study area and the 4 proposed development footprint areas -	-
numbered 1-4. Note the various activities taking place in the broader study area —e.g. cooling towers, ash	
dumps, slime dams, coal reserves storage and the location of the Eskom Village	15
Figure 2- Google earth image showing the position of Grootvlei Power Station in relation to the town of Balfour	
north-east	16
Figure 3- Google earth image showing the position of Grootvlei Station in relation to Grootvlei Village in the sout	:h
and N3 Motorway from south-west (note the maroon circles)	16
Figure 4- Eskom cooling towers in area 4	17
Figure 6: General view of Area 1, This is an ash heap with wet and Smokey surface. It is raised by approximately	4 or
more meters from the earth surface '	18
Figure 5 - General view of what Area 2 looks like. Area is has a high raised and flat soil areas. The high raised on	e is
wet in the middle and the flat area is dominated by dirt roads	18
Figure 7- General view of Area 3 – located on the ashdam in the centre of Grootvlei powerstation	18
Figure 9 - Picture showing graves identified graves on Gootvlei-1 - a none municipal formalised cemetery	19
Figure 10 – Picture No. 2 Grootvlie-1	20
Figure 11 - Metal barricade dressed in yellow and black paint	20
Figure 12 - Blue-gum plantation	21
Figure 13 – Location of stone foundations which are mostly covered by sand. This site is located north of Grootvl	ei-1.
	22
Figure 14 - Red clay brick foundations	23
Figure 15 - Red clay brick and cement ruin	24
Figure 16 – Red clay brick structure located in close proximity to Eskom Plant and cooling towers	25
Figure 17 - Front facade of Grootvlei-5. Not the absence of doors and the fence which fences off the site	26
Figure 18 - Eskom helinad located close to Grootylei-5	26

ABREVIATIONS

Acronyms	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
AMAFA	
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
GIS	Geographic Information System
GPS	Global Positioning System
HIA	Heritage Impact Assessment
HWC	Heritage Western Cape
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
NID	Notice of Intent to develop
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

TERMS & DEFINITION

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.

Heritage resources

This means any place or object of cultural significance.

1. INTRODUCTION

PGS Heritage and Grave Relocation Consultants (PGS) was appointed by Environmental Impact Management Services (Pty) Ltd (EIMS), to undertake a Heritage Assessment for the development of a 14Ha Solar Photo-Voltaic (PV) power generation facility at the Grootvlei Power Station, Grootvlei, Mpumalanga Province.

1.1 Project Background

The project is for the proposed construction and operation of a Solar Photo-Voltaic (PV) power generation facility at the Grootvlei Power Station, Grootvlei, Mpumalanga Province. The proposed project will generate approximately 8 Megawatts and will form part of the Grootvlei Power Station infrastructure. The activity footprint is about 14ha. It has not been determined whether it would be single axes tracking or stationery but the footprint should not exceed 14ha.

1.2 Legislative Framework

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 as promulgated in the Regulations:
 - 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. Environmental Management Plan (EMP) Section (34)(b).
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999:
 - a. Protection of Heritage resources Sections 34 to 36,
 - b. Heritage Resources Management Section 38.
- i. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002:
 - a. Section 39(3),
- ii. 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 environmental management plan 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 Association of Southern African Professional Archaeologists (ASAPA) have also been incorporated to ensure that a comprehensive legally compatible AIA report is compiled. The heritage impact assessment criteria are described in more detail in *Appendix A*.

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 in some areas. As such, should any heritage features and/or objects not included in the present inventory be located or observed, an archaeologists 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 as the archaeologist has 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.

2. ASSESSMEN METHODOLOGY & APPROACH

This chapter describes the evaluation criteria to be used for the sites listed below and to be identified during the ground thruthing.

The significance of archaeological 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 Extensive mapping before destruction and preserve section where possible;
- 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:

- The potential environmental impacts that may result from the proposed development activities.
- Natural conditions and conditions inherent in the project design that alleviate (control, moderate, curb)
 impacts. All management actions, which are presently implemented, are considered part of the project
 design and therefore mitigate impacts.

2.1 Evaluation Methods

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 2: 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	-	High / Medium	Mitigation before destruction		

(GP.A)		Significance	
Generally Protected B	-	Medium Significance	Recording before destruction
(GP.B)			
Generally Protected C	-	Low Significance	Destruction
(GP.A)			

Impact Rating

VERY HIGH

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or social) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects. Example: The loss of a species would be viewed by informed society as being of VERY HIGH significance.

Example: The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with a VERY HIGH significance.

HIGH

These impacts will usually result in long term effects on the social and/or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

Example: The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated.

Example: The change to soil conditions will impact the natural system, and the impact on affected parties (in this case people growing crops on the soil) would be HIGH.

MODERATE

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are real but not substantial.

Example: The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant.

Example: The provision of a clinic in a rural area would result in a benefit of MODERATE significance.

LOW

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by the public and/or the specialist as constituting a fairly unimportant and

usually short term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

Example: The temporary change in the water table of a wetland habitat, as these systems is adapted to fluctuating water levels.

Example: The increased earning potential of people employed as a result of a development would only result in benefits of LOW significance to people who live some distance away.

NO SIGNIFICANCE

There are no primary or secondary effects at all that are important to scientists or the public.

Example: A change to the geology of a particular formation may be regarded as severe from a geological perspective, but is of NO significance in the overall context.

Certainty

DEFINITE: More than 90% sure of a particular fact. Substantial supportive data exists to verify the assessment.

PROBABLE: Over 70% certainty of a particular fact, or of the likelihood of an impact occurring.

POSSIBLE: Only over 40% certainty of a particular fact or of the likelihood of an impact occurring.

UNSURE: Less than 40% certainty of a particular fact or likelihood of an impact occurring.

Duration

SHORT TERM: 0 to 5 years

MEDIUM: 6 to 20 years

LONG TERM: more than 20 years

DEMOLISHED: site will be demolished or is already demolished

Example

Evaluation

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	Moderate	Grade GP.B	Possible	Short term	В

3. GENERAL DESCRIPTION OF THE AREA SURVEYED

The area under consideration is one of Eskom Power Stations located near the town of Balfour in Mpumalanga Province, South Africa. The power station approximately 42 year old – according Eskom website this power station was first commission in 1969 as a six unit station. Three of the 6 units were mothballed in 1989 and the rest in 1999 (http://www.eskom.co.za/c/article/26/grootylei-power-station/9/12/2012). This techno-industrial complex consists

of - cooling towers, offices, coal reserves storage, slime dams and Eskom Village. The power station is ensconced between the town of Balfour located approximately 17km north-east of the Station (**Figure 2**), the N3 linking Gauteng and KwaZulu-Natal is found west of the Station and the Town of Grootvlei is located south-west of the Station (

Figure 3).



Figure 1 - Google earth image showing the broader study area and the 4 proposed development footprint areas – numbered 1-4. Note the various activities taking place in the broader study area –e.g. cooling towers, ash dumps, slime dams, coal reserves storage and the location of the Eskom Village

Pistorius (20120) noted the historical age of the Grootvlei mining town and infrastructure to some 6 kilometers to the south of the study area and the possibility of historical farmsteads located in and around the town of Balfour and surrounding farms. Huffman (2007) notes the existence of some Iron Age site some 8 kilometres toward the town of Balfour and low density finds of Early Stone Age material during an Archaeological Impact Assessment conducted in the area.

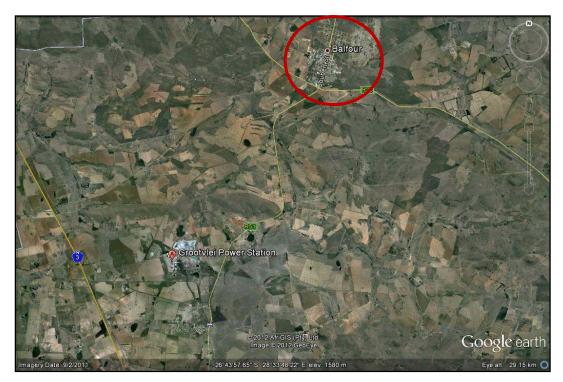


Figure 2- Google earth image showing the position of Grootvlei Power Station in relation to the town of Balfour north-east



Figure 3- Google earth image showing the position of Grootvlei Station in relation to Grootvlei Town in the south and N3 Motorway from south-west.



Figure 4- Eskom cooling towers in area 4

3.1 Survey

The survey covered four proposed development footprints (*Error! Reference source not found.*), namely: (1)Grootvlei Eskom Survey area/Area1; (2) Area 2; (3) Area 3; and (4) Area 4. The only proposed development footprint area that yielded resources such as graves and foundations is Area 4 – five sites were identified. No archaeological and heritage resources where found on Areas 1 -3 (**Figure 5** to **Figure 7**).



Figure 5: General view of Area 1. This is an ash heap with wet and Smokey surface. It is raised by approximately 4 or more meters from the earth surface.



Figure 6 - General view of what Area 2. Area is has a high raised and flat soil areas. The high raised one is wet in the middle and the flat area is dominated by dirt roads.



Figure 7- General view of Area 3. It is located on the ashdam in the centre of Grootvlei powerstation.

3.2 Archaeological and heritage resources sites found in Area 4

Site Name:	Grootvlei-1			
Type/Archaeological Period:	Cemetery			
Density:	Consists approximately 43 graves			
GPS Coordinates:	S26 45 29.6 E28 29 08.8			
Description:	Groot-1 is a municipal formalised cemetery. The cemetery is located less than a			
	kilometre from the Eskom Village and consists of approximately 43 graves. Grave			
	markers include: stone mounds, cement headstones and dressings as well as			
	granite headstones and dressings (Figure 8 to Figure 10). Some of the graves, those			
	that are easily recognisable to people, are fenced off using metal poles forming a			
	fence like barricade (Figure 10). However, a close examination of the cemetery			
	revealed other graves outside the above mentioned barricade. The cemetery is			
	located close to a blue-gum plantation showing some resemblance of a typical road			
	leading to a farmstead in old farms (Figure 10).			
Significance rating:	Graded as 3A – High Local heritage significance			
Mitigation	Keep demarcation with steel fence and additional 5 meter buffer during			
	construction			



Figure 8 - Picture showing graves identified graves on Gootvlei-1 - a none municipal formalised cemetery



Figure 9 – Picture No. 2 Grootvlie-1



Figure 10 - Metal barricade dressed in yellow and black paint



Figure 11 - Blue-gum plantation

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	High	Grade 3A	Unsure	medium	D

Site Name:	Grootlvei-2
Type/Archaeological Period:	Stone foundations
Density:	The foundations cover approximately 30m ² if not more
GPS Coordinates:	S26 45 29.1 E28 29 09.8
Description:	The site Grootvlei-2 is stone foundation that is predominantly covered by soil
	(Figure 12). It is located within a close reach to Grootvlei-1. The sites are probable
	related forming one complex.
Significance rating:	Graded as Generally protected C –Low Local heritage significance
Mitigation	Monitoring during construction, in the event of any cultural material uncovered an
	archaeologist must be contacted to evaluate the finds and make recommendations
	on the way forward.



Figure 12 – Location of stone foundations which are mostly covered by sand. This site is located north of Grootvlei-1. Impact Evaluation:

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	low	Grade GP.C	Unsure	Medium	Α

Site Name:	Grootvlei-3
Туре:	Red clay bricks foundation
Density:	Single structure
GPS Coordinates:	S26 45 33.4 E28 29 15.7
Description:	Grootvlei-3 is a small structure foundation, of approximately 2 x 3m, made of red clay bricks.
	The structure is isolated and no other structures can be found close to it except for rubble
	(Figure 13).
Significance rating:	Graded as Generally protected C –Low Local heritage significance
Mitigation	Monitoring during construction: In the event of any cultural material is uncovered an
	archaeologist must be contacted to evaluate the finds and make recommendations on the
	way forward.



Figure 13 - Red clay brick foundations

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	Low	Grade GP.C	Unsure	Medium	А

Site Name:	Grootvlei-4
Туре:	Red clay brick ruin
Density:	Isolated structure
GPS Coordinates:	S26 45 34.3 E28 29 25.0
Description:	Grootvlei-4 is an isolated ruin made of red clay bricks – it is similar to Grootvlei-3 and is
	of the same size (Figure 14).
Significance rating:	Graded as Generally protected C –Low Local heritage significance
Mitigation	No mitigation required



Figure 14 - Red clay brick and cement ruin

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	Moderate	Grade GP.C	Unsure	Medium	Α

Site Name:	Grootvlei-5		
Туре:	Clay brick building with corrugated iron sheet roof.		
Density:	Isolated building – near Eskom cooling towers		
GPS Coordinates:	S26 45 46.5 E28 29 33.6		
Description:	Grootvlei-5 is a building built using clay bricks – its roof is made of corrugated iron sheet		
	(Figure 15). The building is still structurally sound with few broken windows – some of the		
	doors are missing (Figure 16). This structure is located in closed proximity to Eskom Helipad		
	(Figure 17).		
Significance rating:	Graded as Generally protected C –Low Local heritage significance		
Mitigation	No mitigation required		



Figure 15 – Red clay brick structure located in close proximity to Eskom Plant and cooling towers.



Figure 16 - Front facade of Grootvlei-5. Not the absence of doors and the fence which fences off the site.



Figure 17 - Eskom helipad located close to Grootvlei-5

Impact	Impact Significance	Heritage Significance	Certainty	Duration	Mitigation
Negative	Moderate	Grade GP.C	unsure	Medium	Α

4. RECOMMENDATIONS

During the survey 5 point specific heritage sites of varying heritage significance were found (refer to **Appendix B**). Most of the areas were previously disturbed by industrial activities of the Grootvlei Power Station.

All four alternative sites are acceptable from a heritage perspective. In the case of Area 4, all five structure were identified within its boundaries, however with the recommended mitigation measures for Grootvlei-1, this site will also be suitable from a heritage perspective.

The following management is recommended:

Grootvlei-1

If further investigation during the recommended mitigation measures for heritage structures indicates the presence of grave, the following management measures are recommended:

- 3. Adjust the development layout and demarcate site with at least a 5 meter buffer from the existing steel fence.
- 4. 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.

General recommendation on archaeological work

If during construction any possible finds are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find.

5. LIST OF PREPARES

PGS Heritage and Grave Relocation Consultants have seconded the following specialist to this project:

Team Leader: Wouter Fourie (BA (Hon) Archaeology), Accredited Professional Archaeologist (ASAPA) – CRM Accredited Principal Investigator.

Field Archaeologist: Nkosinati Tomose – MA(Archaeology) Wits

6. BIBLIOGRAPHY

Huffman, T.N. 2007. Archaeological Impact Assessment for the Grootvlei-Balfour powerline., Mpumalanga

Pistorius, J.C.C. 2010. A Phase 1 Heritage Impact Assessment study for a proposed photovoltaic solar power installation (solar plant) at Grootvlei near Balfour in the Mpumalanga Province of South Africa

http://www.eskom.co.za/c/article/26/grootvlei-power-station/

APPENDIX A

LEGISLATIVE PRINCIPLES

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 administrated by a local authority. Graves in the category located inside a formal cemetery administrated 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 B

HERITAGE MAP

