

**Heritage impact assessment report for the
PROPOSED ESTABLISHMENT OF THE AFRICAN RAINBOW ENERGY UPINGTON
PV POWER PLANT, //KHARA HUIS LOCAL MUNICIPALITY,
NORTHERN CAPE PROVINCE**

**HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED
ESTABLISHMENT OF THE AFRICAN RAINBOW UPINGTON PV POWER PLANT,
//KHARA HAIS LOCAL MUNICIPALITY, NORTHERN CAPE PROVINCE**

Report No: 2011/JvS/076
Status: Draft
Revision No: 0
Date: September 2011

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Declaration:

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services.



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Heritage Consultant
September 2011

EXECUTIVE SUMMARY

HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED ESTABLISHMENT OF THE AFRICAN RAINBOW ENERGY UPINGTON PV POWER PLANT, //KHARA HAIS LOCAL MUNICIPALITY, NORTHERN CAPE PROVINCE

African Rainbow (Pty) Ltd proposes to develop a renewable energy facility consisting of a photovoltaic (PV) solar energy component, as well as the associated infrastructure on the Farm UAP 418, approximately 10km north-east of Upington in the Northern Cape Province.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Savannah Environmental** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the photovoltaic plant and associated infrastructure.

The aim of this survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area of the proposed development, to assess the significance thereof and to consider alternatives and plans for the mitigation of any adverse impacts.

- Power Line Alternative 3 was not investigated during the site visit as it was only added later.

A number of stone tools, all dating to the Middle Stone Age were identified to occur in the PV area. These tools occur mostly in the region of dry streambeds. As the stone tools have a low density and as they are surface finds, i.e. outside their original context, they are viewed as having a low significance.

It seems as if neither of the power line alternative routes would have an impact on heritage sites and features, although it would probably be better to use Alternative 1 as it follows the existing N14 road and power line routes which are already compromised.

- As no sites, features or objects of cultural heritage significance were identified in the study area there would be no impact from the proposed development. No mitigation is therefore required.

Therefore, from a heritage point of view it is recommended that the proposed development be allowed to continue. However, it is requested that should archaeological sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk
Heritage Consultant
September 2011

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GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 & 2.

Stone Age: The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

Early Stone Age	2 000 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Late Stone Age	30 000 - until c. AD 200

Iron Age: Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. These people, according to archaeological evidence, spoke early variations of the Bantu Language. Because they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 900
Middle Iron Age	AD 900 - AD 1300
Late Iron Age	AD 1300 - AD 1830

Historical Period: Since the arrival of the white settlers - c. AD 1840 - in this part of the country

ABBREVIATIONS

ADRC	Archaeological Data Recording Centre
ASAPA	Association of Southern African Professional Archaeologists
BP	Before Present
CS-G	Chief Surveyor-General
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Later Stone Age
HIA	Heritage Impact Assessment
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED ESTABLISHMENT OF THE MEDENERGY UPINGTON PV POWER PLANT, //KHARA HAIS LOCAL MUNICIPALITY, NORTHERN CAPE PROVINCE

1. INTRODUCTION

African Rainbow (Pty) Ltd proposes to develop a renewable energy facility consisting of a photovoltaic (PV) solar energy component, as well as the associated infrastructure on the Farm UAP 418, approximately 10km north-east of Upington in the Northern Cape Province.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. According to Section 27(18) of the National Heritage Resources Act (NHRA), Act 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Savannah Environmental** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the photovoltaic plant and associated infrastructure.

This HIA report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and is intended for submission to the South African Heritage Resources Agency (SAHRA).

2. TERMS OF REFERENCE

2.1 Scope of work

The aim of this HIA, broadly speaking, is to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the transmission line.

The scope of work for this study consisted of:

- Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied.
- A visit to the proposed development area.

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;

- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

2.2 Limitations

- It must be kept in mind that by its very nature, archaeological sites occur below ground surface, making its detection in some cases difficult.
- Power Line Alternative 3 was not investigated during the site visit as it was only added later.

Table 1: Applicable category of heritage impact assessment study and report.

Type of study	Aim	SAHRA involved	SAHRA response
Heritage Impact Assessment	The aim of a full HIA investigation is to provide an informed heritage-related opinion about the proposed development by an appropriate heritage specialist. The objectives are to identify heritage resources (involving site inspections, existing heritage data and additional heritage specialists if necessary); assess their significances; assess alternatives in order to promote heritage conservation issues; and to assess the acceptability of the proposed development from a heritage perspective.	Provincial Heritage Resources Authority	Comments on built environment and decision to approve or not
	<p>The result of this investigation is a heritage impact assessment report indicating the presence/ absence of heritage resources and how to manage them in the context of the proposed development.</p> <p>Depending on SAHRA's acceptance of this report, the developer will receive permission to proceed with the proposed development, on condition of successful implementation of proposed mitigation measures.</p>	SAHRA Archaeology, Palaeontology and Meteorites Unit	Comments and decision to approve or not

3. HERITAGE RESOURCES

3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;

- graves and burial grounds, including-
 - ancestral graves;
 - royal graves and graves of traditional leaders;
 - graves of victims of conflict;
 - graves of individuals designated by the Minister by notice in the Gazette;
 - historical graves and cemeteries; and
 - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
 - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - objects to which oral traditions are attached or which are associated with living heritage;
 - ethnographic art and objects;
 - military objects;
 - objects of decorative or fine art;
 - objects of scientific or technological interest; and
 - books, records, documents, photographic positives and negatives, graphic, film or video material 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).

3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

A matrix was developed whereby the above criteria were applied for the determination of the significance of each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar sites.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment covers the area as presented in Section 5 and as illustrated in Figures 1 - 2.

4.2 Methodology

4.2.1 Preliminary investigation

4.2.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. Some surveys done in nearby areas exist, but could not be accessed from SAHRA in the time available (Beaumont 2006a, 2006b, 2006c, 2006d). The following sources were consulted – Rudner 1953, Humphreys 1976, Morris 1995, Couzens 2004, Raper 2006, De Jong 2010.

- Information on events, sites and features in the larger region were obtained from these sources.

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General (CS-G)* and the *National Archives of South Africa (NASA)* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development. The original Title Deed for the farm was accessed.

4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature was obtained from these sources.

5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location and description

The study area is an irregular shaped section of land located to the north east of the town of Upington in the Northern Cape Province (Fig. 1 & 2). It consists of Portions of the Farm UAP 418.

The geology is made up of schist, with some dolerite intrusions to the west of the study area. The original vegetation is classified as Karroid Kalahari Bushveld in the north, changing to Orange River Nama Karoo in the south of the study area. The topography is classified as gently rolling plains.

The current land use is farming, with the largest area used for grazing.

As a result of the above environmental factors the following aspects can be seen to dominate in the environment:

- Plains which make up the largest section of the study area. Water sources and potential shelter is limited.
- A number of small streambeds cross through the area, all carrying water only during the rainy season.
- This landscape has always been sparsely populated, largely due to the lack of open water. The Orange River is approximately 5 km to the east of the study area.

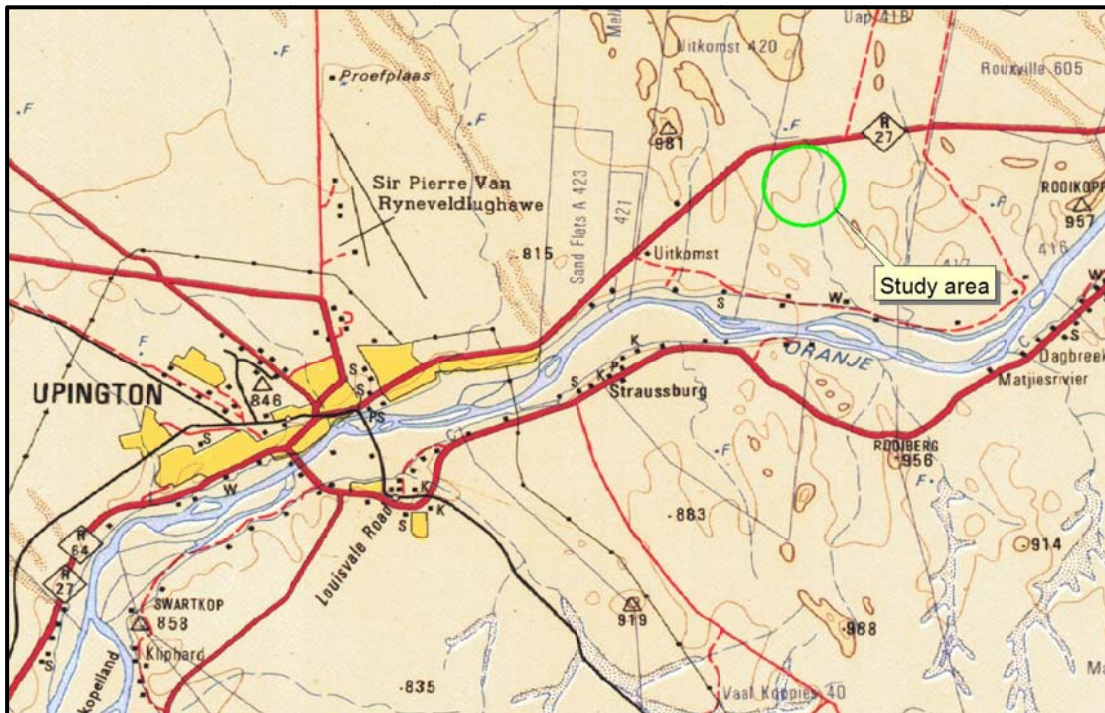


Fig. 1. Location of the study area in regional context.
(Maps 2820: Chief Surveyor-General)



Fig. 2. Views over the study area.

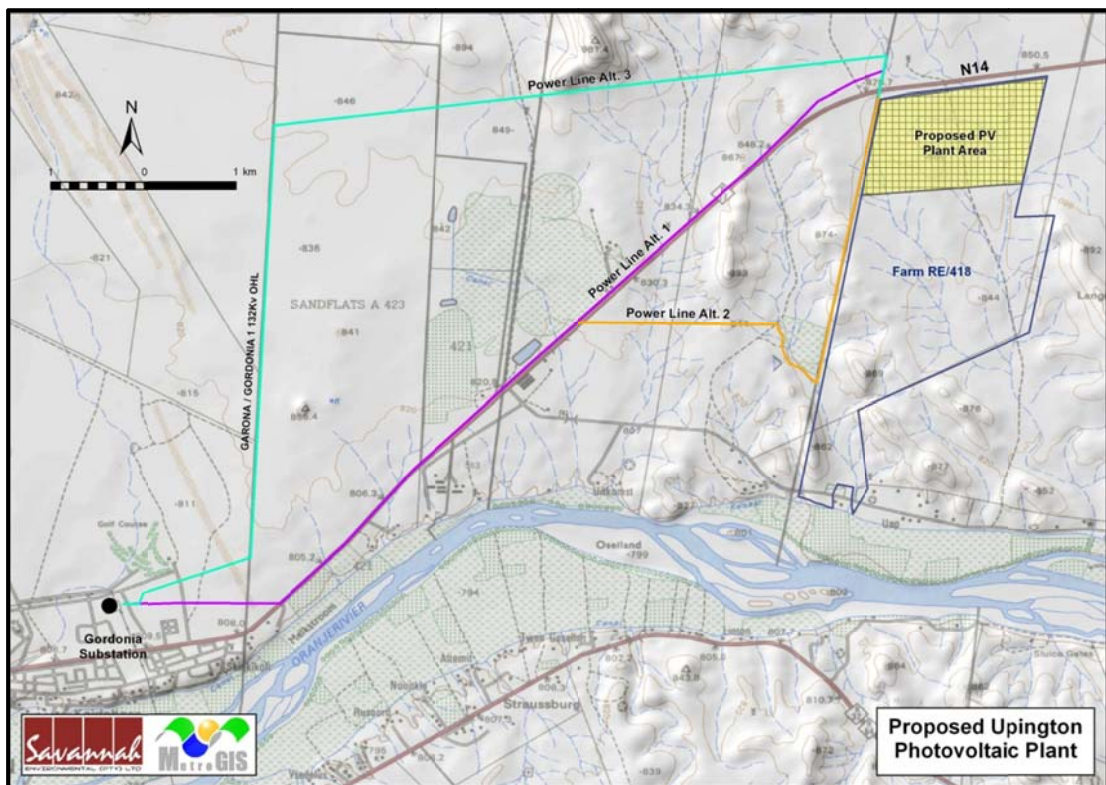


Fig. 3. Location of the study area and layout of the proposed development.

5.2 Development overview

It is proposed to develop a renewable energy facility that would consist of the following elements:

- The area where it is proposed to develop the photovoltaic plant;
- The power line from the PV plant to the substation, for which three alternatives have been identified.

5.3 Regional overview

The cultural landscape qualities of the larger region essentially consist of a single component, which is a rural area in which the human occupation is made up of a pre-colonial (Stone Age) occupation and a much later colonial (farmer) component.

Stone Age

Surveys done for example by Sampson (1985) to the south-east of the study area indicated a rich legacy in Stone Age sites in the Karoo. However, the region of the study area seems to have been a bit more marginal as no major sites or traditions have been identified in the region.

Occupation by early humans would probably date to the Middle Stone Age and would consist of open sites in the vicinity of stream beds or hills and outcrops. Population density might have increased during the Later Stone Age and people would have occupied rock shelters where available as well as open sites. During this later period they also produced rock engravings, although none are known from the immediate region.

Historic period

The town of Upington, originally known as Olijvenhoutsdrift, was founded in 1871 as part of a mission station by the German missionary Rev Schröder. The town was renamed in 1884 after Sir Thomas Upington, who was the Prime Minister of the Cape Colony and who visited the town in 1884.

An irrigation canal was started by Rev Schröder in 1883. It was completed in 1885. By 1884 there were already 77 irrigation farms. Nowadays, it is disputed that Schröder was the original builder of the canal, and it is claimed that he only carried on with an idea that was started by a local inhabitant by the name of Abraham September.

The Title Deed of that farm UAP 418 dates to March 1892 and was in favour of one Abraham September.

- Farmsteads

Farmsteads are complex features in the landscape, being made up of different yet interconnected elements. Typically these consist of a main house, gardens, outbuildings, sheds and barns, with some distance from that labourer housing and various cemeteries. In addition roads and tracks, stock pens and wind mills complete the setup. An impact on one element therefore impacts on the whole.

NHRA Category	Buildings, structures, places and equipment of cultural significance
Protection status	General Protection - Section 34: Structures older than 60 years



Fig. 4. Examples of farmsteads and farming related features in the region.

- Cemeteries

Apart from the formal cemeteries that occur in municipal areas (towns or villages), a number of these, some quite informal, i.e. without fencing, is expected to occur sporadically all over, but probably in the vicinity of the various farmsteads. Many might also have been forgotten, making it very difficult to trace the descendants in a case where the graves are to be relocated.

Most of these cemeteries, irrespective of the fact that they are for land owners or farm labourers (with a few exceptions where they were integrated), are family orientated. They are therefore serve as important 'documents' linking people directly by name to the land.

NHRA Category	Graves, cemeteries and burial grounds
Protection status	

General Protection - Section 36: Graves or burial grounds



Fig. 5. Example of a cemetery identified in the region.

5.4 Identified sites

The following sites, features and objects of cultural significance have been identified on the development site.

5.4.1 Stone Age

- Archaeological sites

NHRA Category	Archaeological and palaeontological sites		
Protection status	General Protection - Section 35: Archaeology, palaeontology and meteorites		
Location			
Description	A number of stone tools, all dating to the Middle Stone Age were identified to occur in the PV area. The material is mostly banded iron stone, but a few made from quartzite also occur. These tools occur mostly in the region of dry streambeds. In contrast to the rest of the study area where no stone tools were identified, in this area it has a density of approximately 1 object per 100 m ² .		
Significance	Low on a regional level – Grade III		
Mitigation	No further action necessary		

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Fig. 6. The stone tools that were identified.

5.4.2 Iron Age

- No sites, features or objects dating to the Iron Age were identified in the study area.

5.4.3 Historic period

- No sites, features or objects dating to the historic period were identified in the study areas.

6. SITE SIGNIFICANCE AND ASSESSMENT

6.1 Heritage assessment criteria and grading

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the applicable of mitigation measures would allow the development activities to continue.

6.2 Statement of significance

A matrix was developed whereby the above criteria, as set out in Sections 3(3) and 7 of the NHRA, No. 25 of 1999, were applied for each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar sites. Three categories of significance are recognized: low, medium and high. In terms of Section 7 of the NHRA, all

the sites currently known or which are expected to occur in the study area are evaluated to have a grading as identified in the table below.

Identified heritage resources	
<i>Category, according to NHRA</i>	<i>Identification/Description</i>
Formal protections (NHRA)	
National heritage site (Section 27)	None
Provincial heritage site (Section 27)	None
Provisional protection (Section 29)	None
Place listed in heritage register (Section 30)	None
General protections (NHRA)	
structures older than 60 years (Section 34)	None
archaeological site or material (Section 35)	Yes
palaeontological site or material (Section 35)	None
graves or burial grounds (Section 36)	None
public monuments or memorials (Section 37)	None
Other	
Any other heritage resources (describe)	None

Table 2. Summary of identified heritage resources in the study area.

- As the stone tools have a low density and as they are surface finds, i.e. outside their original context, they are viewed as having a low significance.

6.3 Impact assessment

Based on current information regarding sites in the surrounding area, all sites expected to occur in the study region are judged to have Grade III significance.

- As the identified tools are viewed as having a low significance, there would be no impact from the proposed development. No mitigation is therefore required.

Nature: The potential impact of the construction of the PV panels on above and below ground archaeology.		
	Without Mitigation	With Mitigation
Extent	Local (1)	Local (1)
Duration	Permanent (5)	Permanent (5)
Magnitude	Minor (2)	Minor (2)
Probability	Unlikely (2)	Unlikely (2)
Significance	Low < 30	Low < 30
Status (positive or negative)	Negative	Neutral
Reversibility	No	No
Irreplaceable loss of resources?	No, but in some cases, yes	No

Can impacts be mitigated?	Yes	
<p>Mitigation</p> <p>No mitigation is proposed before construction starts because the archaeological remains (if any) are of low significance (excluding human remains). However, if concentrations of archaeological materials are exposed then all work must stop for an archaeologist to investigate (see below).</p> <p>If any human remains (or any other concentrations of archaeological heritage material) are exposed during construction, all work must cease and it must be reported immediately to the nearest museum/archaeologist or to the South African Heritage Resources Agency, so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to investigate and to remove/collect such material. Recommendations will follow from the investigation.</p>		
Cumulative impacts: N/A		
Residual impacts: N/A		

7. CONCLUSIONS

The aim of this survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area of the proposed development, to assess the significance thereof and to consider alternatives and plans for the mitigation of any adverse impacts.

- Power Line Alternative 3 was not investigated during the site visit as it was only added later.

A number of stone tools, all dating to the Middle Stone Age were identified to occur in the PV area. These tools occur mostly in the region of dry streambeds. As the stone tools have a low density and as they are surface finds, i.e. outside their original context, they are viewed as having a low significance.

It seems as if neither of the power line alternative routes would have an impact on heritage sites and features, although it would probably be better to use Alternative 1 as it follows the existing N14 road and power line routes which are already compromised.

- As no sites, features or objects of cultural heritage significance were identified in the study area there would be no impact from the proposed development. No mitigation is therefore required.

Therefore, from a heritage point of view it is recommended that the proposed development be allowed to continue. However, it is requested that should archaeological sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

8. REFERENCES

8.1 Data bases

Chief Surveyor General
Environmental Potential Atlas, Department of Environmental Affairs and Tourism.
Heritage Atlas Database, Pretoria.
National Archives of South Africa
SAHRA Archaeology and Palaeontology Report Mapping Project (2009)

8.2 Literature

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Raper, P.E. 2004. *South African place names*. Johannesburg: Jonathan Ball Publishers.

Rudner, I. 1953. Decorated ostrich egg-shell and stone implements from the Upington area. *South African Archaeological Bulletin*. 8(31): 82-84.

8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2821AD
Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES

Significance

According to the NHRA, Section 2(vi) the **significance** of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

1. Historic value				
Is it important in the community, or pattern of history				
Does it have strong or special association with the life or work of a person, group or organisation of importance in history				
Does it have significance relating to the history of slavery				
2. Aesthetic value				
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group				
3. Scientific value				
Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage				
Is it important in demonstrating a high degree of creative or technical achievement at a particular period				
4. Social value				
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons				
5. Rarity				
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage				
6. Representivity				
Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects				
Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class				
Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.				
7. Sphere of Significance		High	Medium	Low
International				
National				
Provincial				
Regional				
Local				
Specific community				
8. Significance rating of feature				
1.	Low			
2.	Medium			
3.	High			

APPENDIX 2. RELEVANT LEGISLATION

All archaeological and palaeontological sites, and meteorites are protected by the National Heritage Resources Act (Act no 25 of 1999) as stated in Section 35:

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA.

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) No person may, without a permit issued by the responsible heritage resources authority-

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export to the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of cemeteries and graves the following (Section 36):

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

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

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

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

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