

**Heritage scoping assessment for the
PROPOSED 1 GW UPINGTON SOLAR PARK DEVELOPMENT ON PORTIONS
OF THE FARM KLIPKRAAL, GORDONIA MAGISTERIAL DISTRICT,
NORTHERN CAPE PROVINCE**

HERITAGE SCOPING ASSESSMENT FOR THE PROPOSED 1 GW UPINGTON SOLAR PARK DEVELOPMENT ON PORTIONS OF THE FARM KLIPKRAAL, GORDONIA MAGISTERIAL DISTRICT, NORTHERN CAPE PROVINCE

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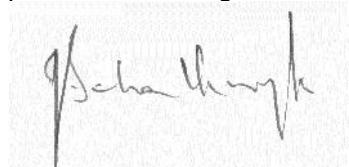
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Declaration:

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.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
January 2014

EXECUTIVE SUMMARY

HERITAGE SCOPING ASSESSMENT FOR THE PROPOSED 1 GW UPINGTON SOLAR PARK DEVELOPMENT ON PORTIONS OF THE FARM KLIPKRAAL, GORDONIA MAGISTERIAL DISTRICT, NORTHERN CAPE PROVINCE

Arup (Pty) Ltd has been appointed by the CEF (SOC) Ltd and the Department of Energy (DOE) (the Clients), to undertake a feasibility study for the 1GW Upington Solar Park for the Phase 2 of the broader 5GW solar corridor programme.

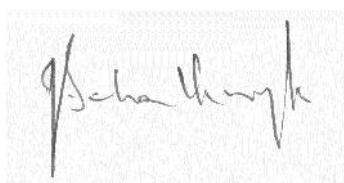
In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by Lidwala Consulting Engineers to conduct a Scoping Assessment to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the solar power facilities and associated infrastructure which might prevent the project from proceeding to the next level of investigation.

The cultural landscape qualities of the region essentially consist of a two components. The first 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. This rural landscape has always been sparsely populated. The second component is an urban one consisting of a number of smaller towns, most of which developed during the last 150 years or less.

The following heritage sites were identified in the larger region:

- A low density of stone tools was identified on the site. It is evaluated to have a very low significance and therefore does not warrant any further action with regards to the proposed development. As no other sites, features or objects of cultural heritage significance were identified in the study area there would be no impact from the proposed development.

Therefore, from a heritage point of view there are no sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the solar power facilities and associated infrastructure which might prevent the project from proceeding to the next level of investigation.



J A van Schalkwyk
Heritage Consultant
January 2014

TECHNICAL SUMMARY

Property details	
Province	Northern Cape
Magisterial district	Gordonia
Local municipality	//Khara Hais
Topo-cadastral map	2821AC, 2821CA
Closest town	Upington
Farm name	Klipkraal 451

Development criteria in terms of Section 38(1) of the NHR Act	Yes/No
Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
Construction of bridge or similar structure exceeding 50m in length	No
Development exceeding 5000 sq m	Yes
Development involving three or more existing erven or subdivisions	Yes
Development involving three or more erven or divisions that have been consolidated within past five years	No
Rezoning of site exceeding 10 000 sq m	Yes
Any other development category, public open space, squares, parks, recreation grounds	No

Land use	
Previous land use	Farming – grazing
Current land use	Farming – grazing

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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 (BP)
Middle Stone Age	150 000 - 30 000 BP
Later 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
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 SCOPING ASSESSMENT FOR THE PROPOSED 1 GW UPINGTON SOLAR PARK DEVELOPMENT ON PORTIONS OF THE FARM KLIPKRAAL, GORDONIA MAGISTERIAL DISTRICT, NORTHERN CAPE PROVINCE

1. INTRODUCTION

Arup (Pty) Ltd has been appointed by the CEF (SOC) Ltd and the Department of Energy (DOE) (the Clients), to undertake a feasibility study for the 1GW Upington Solar Park for the Phase 2 of the broader 5GW solar corridor programme.

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 Lidwala Consulting Engineers to conduct a Scoping Assessment 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 solar power facilities and associated infrastructure which might prevent the project from proceeding to the next level of investigation.

2. TERMS OF REFERENCE

This report does not deal with development projects outside of or even adjacent to the study area as is presented in Section 5 of this report. The same holds true for heritage sites, except in a generalised sense where it is used to create an overview of the heritage potential in the larger region.

2.1 Scope of work

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

- The unpredictability of archaeological remains occurring below the surface.
- This report does not consider the palaeontological potential of the site.

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 identified 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. In this regard, various anthropological, archaeological, historical sources and heritage impact assessment reports were consulted (Couzens 2004; De Beer 1992; De Jong 2010; Dreyer 2010; Lange 2006; Morris 1995; Morris & Beaumont 1991; Parsons 2007; Richardson 2001; Rudner 1953; Rudner & Rudner 1968; Van der Waal-Braaksma & Ferreira 1986).

- Information on the prehistory as well as the history of the area was obtained from these sources. It also produced information on the location of known heritage sites in the larger region.

4.2.1.2 Data bases

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

- Database surveys produced information on a number of heritage sites located in the larger region.

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

The aim of this section is to present an overview of the history of the larger region in order to eventually determine the significance of heritage sites identified in the study area, within the context of their historic, aesthetic, scientific and social value, rarity and representivity – see Section 3.2 and Appendix 1 for more information.

5.1 Site location and description

The property where the development is to take place consists of different portions of the farm Klipkraal 451. It is located to the west of the town of Upington and north of the N14 going towards Keimoes. The locality of the study area can be determined from Figs. 1, 2 and 3 in this report. For more information, please see the Technical Summary presented above.

The study area for the HIA involves a vacant section of land to the west of the town of Upington. The geology is made up of schist, which is a metamorphic rock characterized by strong foliation so that it readily split into thin flakes – in other words, material not suitable for the making of stone tools. The morphology of the region is described dune hills and lowlands. The vegetation is classified as Orange River Broken Veld (ENPAT). A number of streams (mostly dry) cut through the area from west to east.

Local farmers describe the biggest section of the study area as “Hardeveld”, which is basically flat with grass and shrubs and a few small trees. The eastern section is described as “Duineveld”, consisting of a number of parallel dunes (roughly aligned north/south) covered with grass and shrubs, with very little trees.

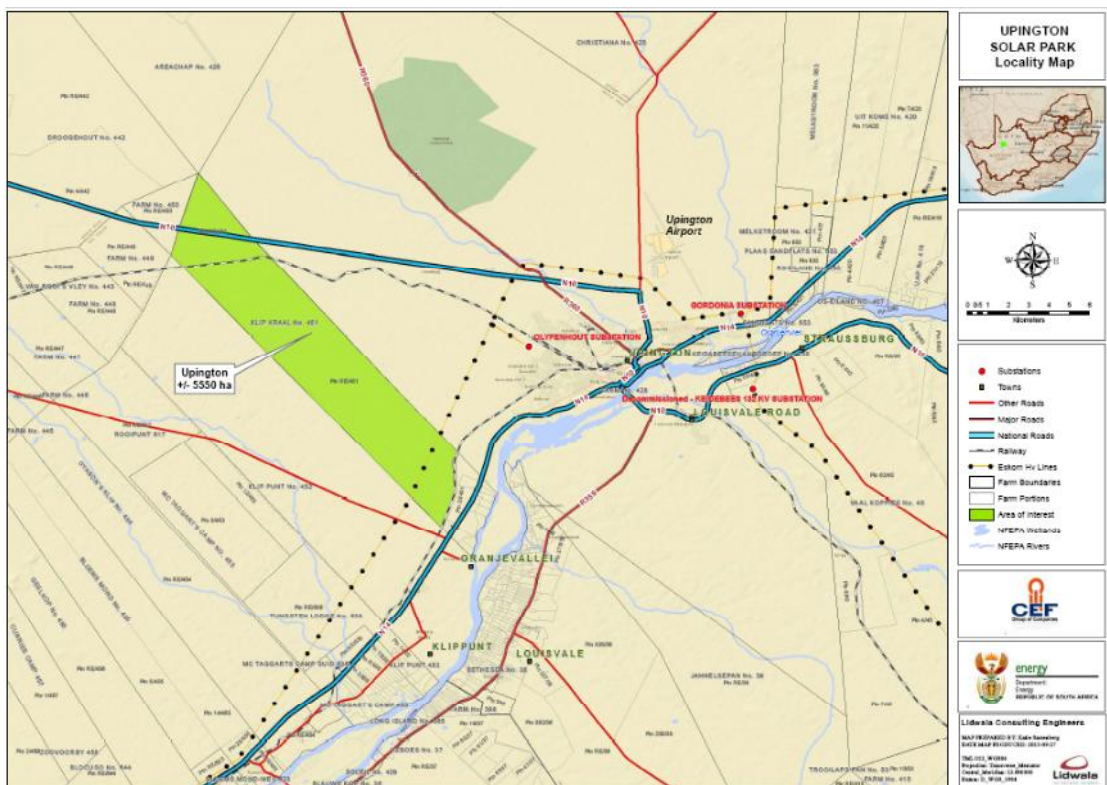


Fig. 1. Location of the study areas in regional context. (Map 2820: Chief Surveyor-General)

5.2 Overview of the region

The cultural landscape qualities of the region essentially consist of two components. The first is a rural area in which the human occupation is made up of a pre-colonial element (Stone Age) as well as a much later colonial (farmer) component. The second component is an urban landscape dating to the colonial period and which can also be linked to the rural colonial landscape.

5.2.2 Rural landscape

The rural landscape has always been sparsely populated and it was only in a few areas such as in the vicinity of sustainable water sources or through the application of specific economic strategies such as the development of irrigation systems, that people succeeded to occupy a section of the region for any length of time.

- Archaeological sites

Very little research has been done on the Stone Age archaeology of the larger region and only a few published papers and studies are available. The most significant contribution is that of P Beaumont and D Morris, both of the McGregor Museum, as well as a number of other researchers e.g. Humphreys, Lange, Rudner & Rudner and Parsons.

NHRA Category	Archaeological and palaeontological sites
Protection status	

General Protection - Section 35: Archaeology, palaeontology and meteorites



Fig. 2. Stone quarry probably dating to MSA times (left).
 The stone tools (right) are not from the region and are only used to illustrate the difference between Early (left), Middle (middle) and Later Stone Age (right) technology.

Archaeological sites in this area predominantly date to the Stone Age as early farmer communities, also referred to as Iron Age communities, did not settle this far west (Humphreys 1976).

Occupation of the larger region took place since the Early Stone Age, with occurrences of Middle Stone Age more frequent than the Early Stone Age. However, it is mostly during the Later Stone Age when population density increased. Later, with the arrival of stock herders this increased even more, resulting in competition for resources such as access to water and shelter. Settlement mostly took place at small hills where rock shelters might occur or in the vicinity of the Orange River.

The type of heritage sites encountered in the region are settlement sites, e.g. those studied by Parsons (2008), burial sites on the banks of the Orange River (Morris 1995), rock paintings and engraving sites south and northwest of Upington (Rudner & Rudner 1986; Lange 2006) and stone quarries (van Schalkwyk 2010).

- 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.

Not many farmsteads occur in the region as most of the original farms were very large, requiring few of these to be developed. However, in the vicinity of the river, with the development of intensive irrigation farming, many farmsteads and other features were developed. These were usually adapted to accommodate the specific farming requirements of the specialised agricultural activities. Others are more transient, belonging to sheep herders who either look after their own small flocks or those of more wealthy farmers who, as is the situation in this particular case, rent large tracts of land.


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

Fig. 3. Sheep herder camp and water point.

- Cemeteries

Apart from the formal cemeteries that occur in municipal areas (towns or villages), some quite informal, i.e. without fencing, can be expected to occur anywhere.

Most of these cemeteries, irrespective of the fact that they are for land owner or farm labourers (with a few exceptions where they were integrated), are family orientated. They 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. 4. Typical informal cemetery, located west of Upington.

5.3.3 Urban landscape

- Upington:

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 and 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.

According to the various databases that were consulted it has approximately 10 buildings and features that are listed as provincial heritage sites or are viewed to be of conservation worthy status. In addition a number of cemeteries are also located in various places around the town.

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

NHRA Category	Graves, cemeteries and burial grounds
Protection status	General Protection - Section 36: Graves or burial grounds

NHRA Category	Buildings, structures, places and equipment of cultural significance
Protection status	General Protection - Section 37: Public Monuments and Memorials

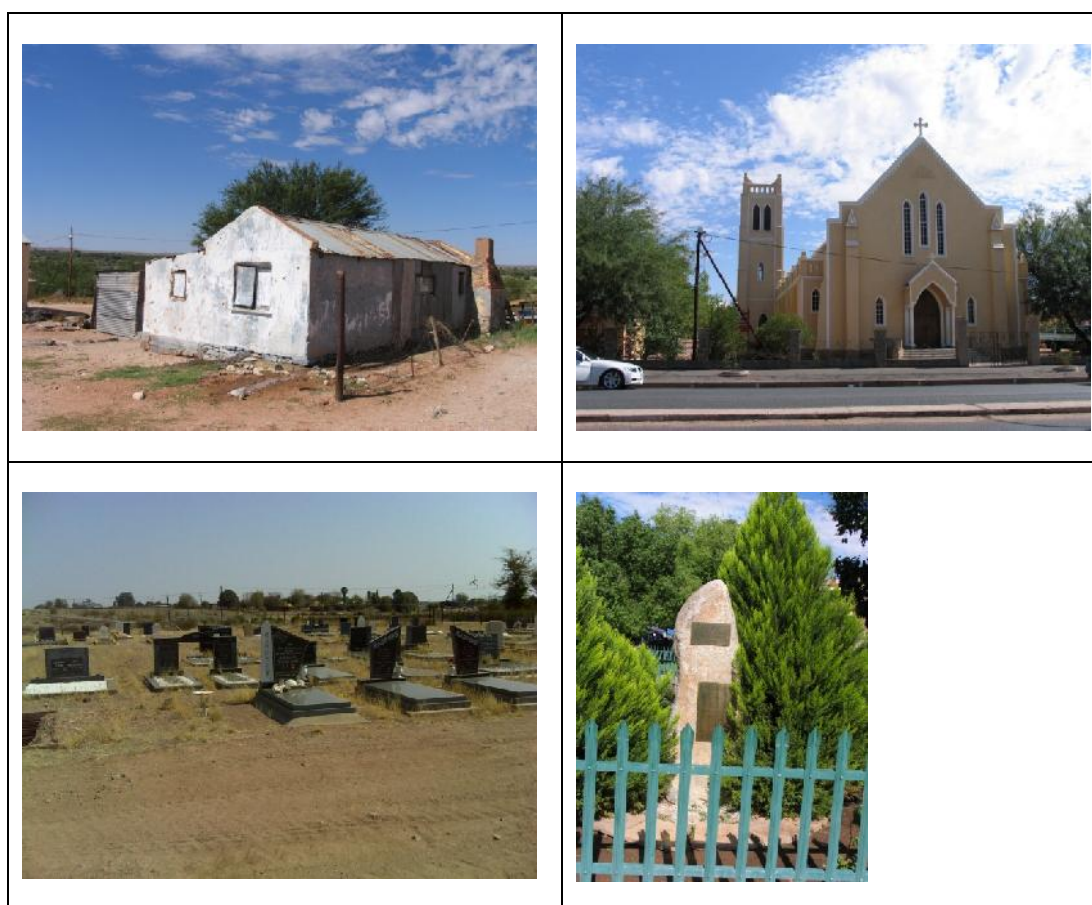


Fig. 5. Heritage elements found in the urban environment.
An old house in one of the townships, a Catholic Church, a cemetery on the southern side of the town and a monument dedicated to one of the founding fathers.

5.3 Identified sites

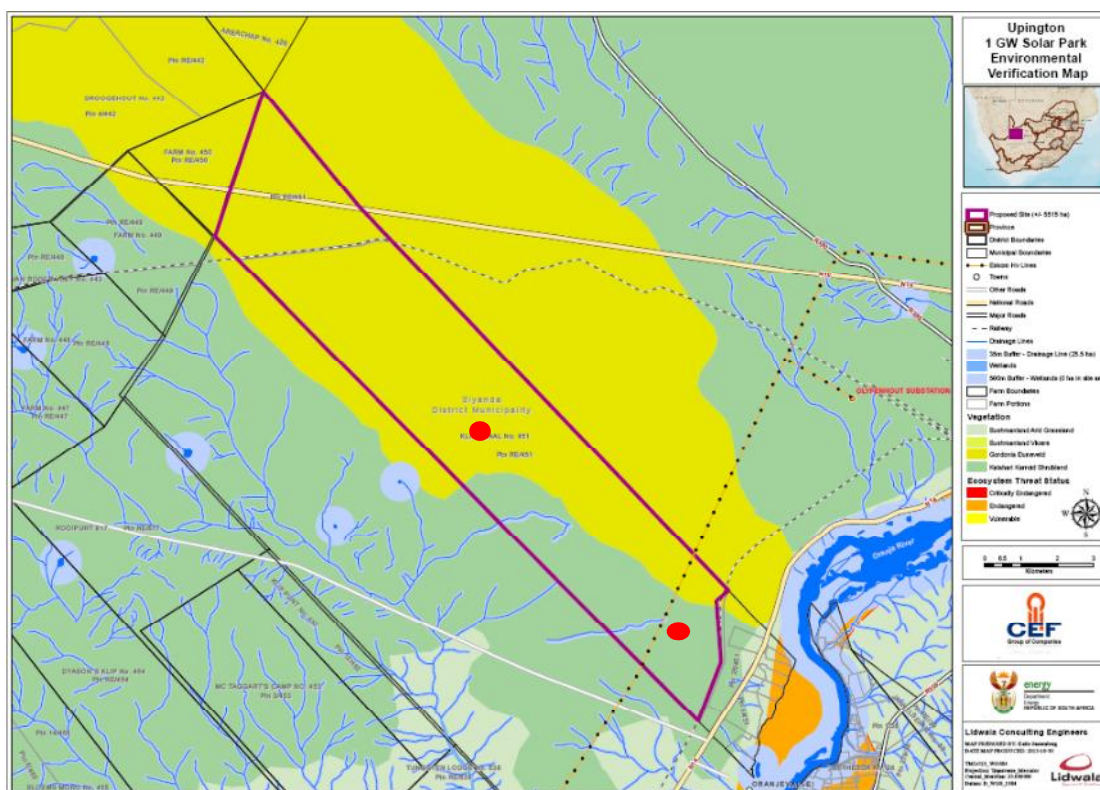


Fig. 6. The study area showing the location of the identified sites.

5.3.1 Stone Age

- Archaeological sites

NHRA Category	Archaeological and palaeontological sites
Protection status	General Protection - Section 35: Archaeology, palaeontology and meteorites

Location	No. 1	S 28.50736	E 21.45792
	No. 2	S 28.15132	E 21.11451
Description	<p>Two pans were identified in the study area. The southern one (No. 1) is quite large, covering an area of at least 100 x 50 metres and is located on a granite outcrop that is being exposed by a non-perennial stream that passes over it. As the rocks help to retain the water, it is possibly the only open water in the region for quite a while after the rains. This would result in people visiting the pan, not only for water but possibly also to hunt game that might come to drink water. The tools identified date to the Later stone and contain cores and flakes. The density of the tools is estimated to be approximately 1/5m².</p> <p>Site No. 2 is located further north. Here there is no outcrop to retain the water, but the streambed probably carries some water in the rainy season, making it attractive for people to visit the area.</p> <p>The identified material consists of three tools dating to the Middle Stone Age and therefore</p>		

the overall density is viewed to be very low, probably less than 1/20m ² . All the tools were made from quartzite.	
Significance	Medium on a regional level – Grade III
Mitigation	
Both of these sites are located in areas that probably would be impacted on by any development that is to take place in the region. However, as the sites are viewed to have low significance on a regional level, no further mitigation action is required.	

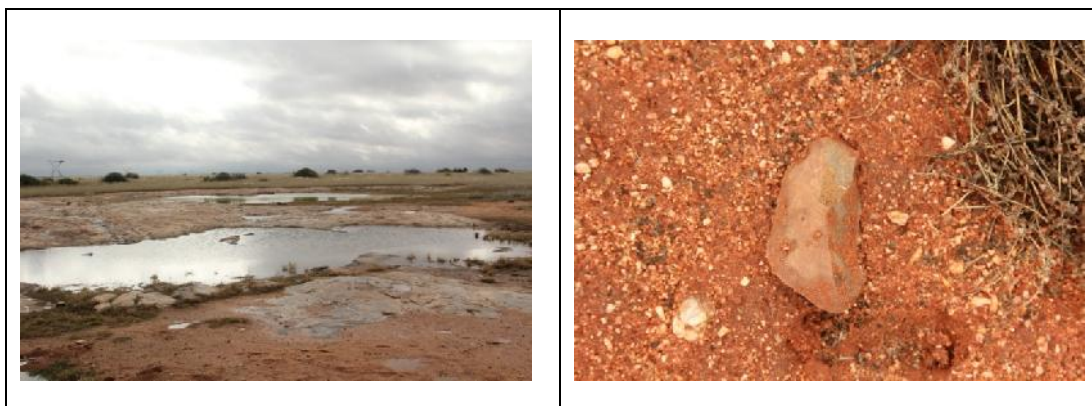


Fig. 7. Examples of type of sites and the flakes found in the study area.

5.3.2 Iron Age

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

5.3.3 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.

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

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)	Low density of scattered surface material
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

7. CONCLUSIONS

The aim of the survey was to evaluate potential heritage resources that would occur within the boundaries of a proposed solar field and to determine if there are any fatal flaws that would prevent the proposed development from taking place.

The cultural landscape qualities of the region essentially consist of a two components. The first 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. This rural landscape has always been sparsely populated. The second component is an urban one consisting of a number of smaller towns, most of which developed during the last 150 years or less.

The following heritage sites were identified in the larger region:

- A low density of stone tools was identified on the site. It is evaluated to have a very low significance and therefore does not warrant any further action with regards to the proposed development. As no other sites, features or objects of cultural heritage significance were identified in the study area there would be no impact from the proposed development.

Therefore, from a heritage point of view there are no sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the solar power facilities and associated infrastructure which might prevent the project from proceeding to the next level of investigation.

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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8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2821AC, 2821CA

Google Earth

8.4 Interviews

Regina Kasper
Hermanus Neels
Jan Freeman
Gert Bezuidenhout
Hendrik Visagie

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 from the Republic any category of archaeological or palaeontological material or object, or any meteorite;
- (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.

APPENDIX 3: ILLUSTRATIONS

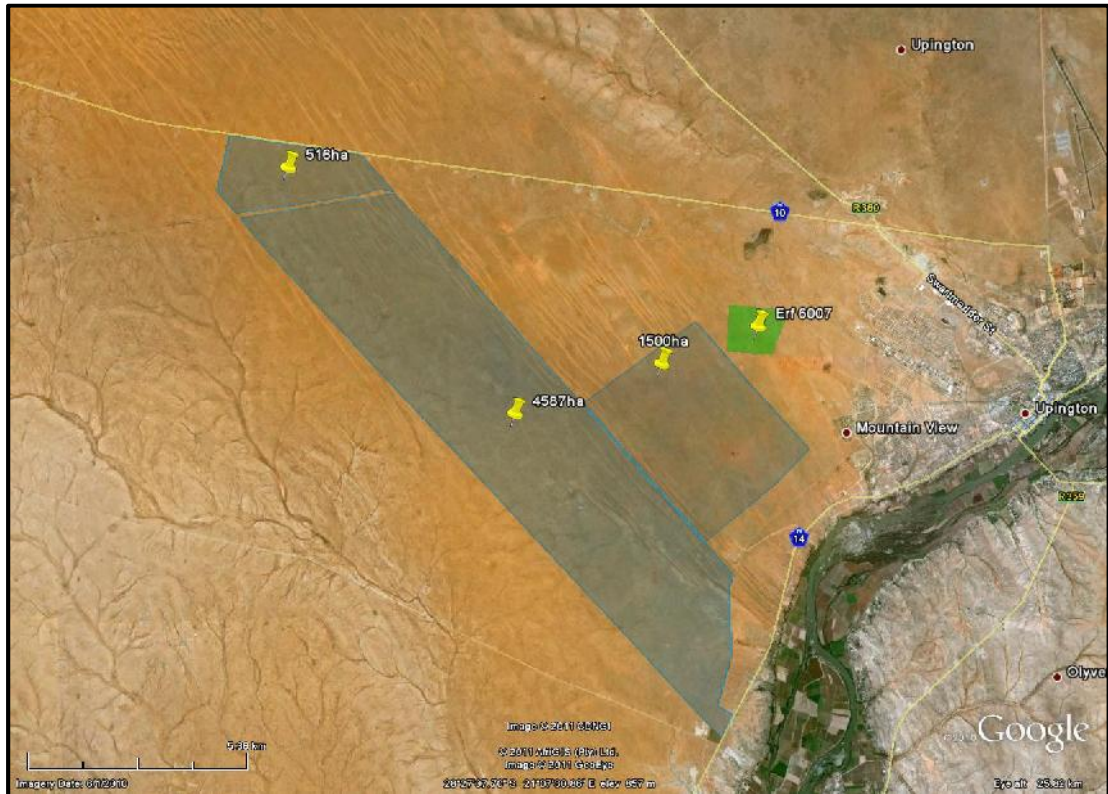


Fig. 8. Aerial view of the study area.
(Photo: Google Earth)



Fig. 9. View over the “hardeveld” region of the study area looking north.



Fig. 10. View over the “duineveld” region of the study area, looking south.