

**Cultural heritage impact assessment for the
PROPOSED GROOTPOORT PHOTOVOLTAIC SOLAR ENERGY FACILITY,
NEAR LUCKHOFF, FREE STATE PROVINCE**

**CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED
GROOTPOORT PHOTOVOLTAIC SOLAR ENERGY FACILITY, NEAR
LUCKHOFF, FREE STATE PROVINCE**

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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, for which a fair numeration is charged.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
November 2015

EXECUTIVE SUMMARY

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED GROOTPOORT PHOTOVOLTAIC SOLAR ENERGY FACILITY, NEAR LUCKHOFF, FREE STATE PROVINCE

Pele Green Energy (Pty) Ltd is proposing to develop an 84MW photovoltaic (PV) solar energy facility near Luckhoff situated in the Letsemeng Local Municipality in the Free Province. The project will be known as the proposed Grootpoort Photovoltaic Solar Energy Facility.

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

The cultural landscape qualities of the larger 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.

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development:

- Two localised areas, associated with small outcrops, where thin scatters of MSA tools and flakes were identified.
 - Both areas are located inside the proposed development area and would therefore be impacted on by the development. However, as the density of the scatter is very low, as well as the fact that it is surface material and therefore not in its original context any more, it is viewed to have a low significance and it is judged that the impact would be very low.

Reasoned opinion as to whether the proposed activity should be authorised:

- From a heritage point of view it is recommended that the proposed development be allowed to continue, on condition of acceptance of the proposed mitigation measures.

Conditions for inclusion in the environmental authorisation:

- 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
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November 2015

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TECHNICAL SUMMARY

Property details						
Province	Free State					
Magisterial district	Fauresmith					
Local municipality	Letsemeng					
Topo-cadastral map	2924DC					
Closest town	Luckhoff					
Farm name	Grootpoort 168					
Portions/Holdings	-					
Coordinates	Centre point (approximate)					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	-29.84148	24.66186			

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	No
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

Development	
Description	Development of a solar energy facility
Project name	Grootpoort Photovoltaic Solar Energy Facility

Land use	
Previous land use	Farming (grazing)
Current land use	Farming (grazing)

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. As 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

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED GROOTPOORT PHOTOVOLTAIC SOLAR ENERGY FACILITY, NEAR LUCKHOFF, FREE STATE PROVINCE

1. INTRODUCTION

Pele Green Energy (Pty) Ltd is proposing to develop an 84MW photovoltaic (PV) solar energy facility near Luckhoff situated in the Letsemeng Local Municipality in the Free Province. The project will be known as the proposed Grootpoort Photovoltaic Solar Energy Facility.

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), No. 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 therefore appointed by Environamics to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the extended boundaries of the area where it is planned to develop the photovoltaic solar energy facility.

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) as amended and is intended for submission to the South African Heritage Resources Agency (SAHRA).

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 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 photovoltaic (PV) solar energy facility.

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 investigation has been influenced by the following factors:

- It is assumed that the description of the proposed project, provided by the client, is accurate.
- No information regarding the location of access roads, site offices and construction camps were available during the initial survey. Therefore this report only deals with the site where the solar plant will be developed.
- No subsurface investigation (i.e. excavations or sampling) were undertaken, since a permit from SAHRA is required for such activities.
- It is assumed that the public consultation process undertaken as part of the Environmental Impact Assessment (EIA) is sufficient and that it does not have to be repeated as part of the heritage impact assessment.
- The unpredictability of buried archaeological remains.
- 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 the various Figures.

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.

- 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 farms could not be traced.

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.

4.2.2 Field survey

The area that had to be investigated was identified by Environamics by means of maps. The site was surveyed by walking transects across it. This can be seen in the track log that is presented in Fig.1 below. During the site visit special attention was given to natural features such as outcrops as well as animal burrows in order to get a feeling for the subsurface potential of the site.

As this was end of winter, as well as the fact that the local vegetation is Nama Karoo, which is usually not very high or dense, archaeological visibility was good.

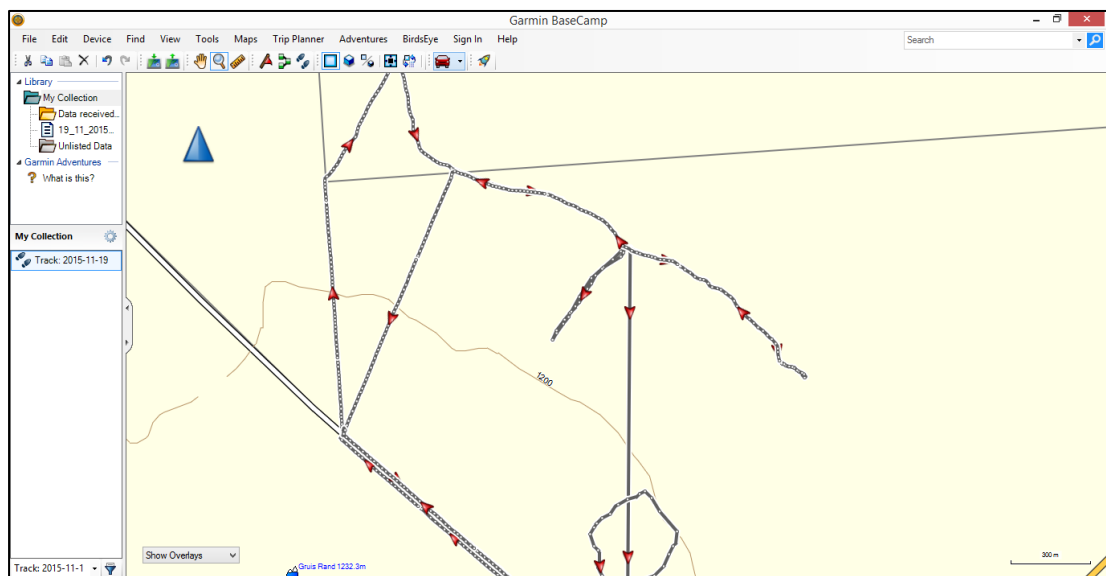


Fig. 1. Track log of the field survey.
(Garmin Oregon 550: BaseCamp)

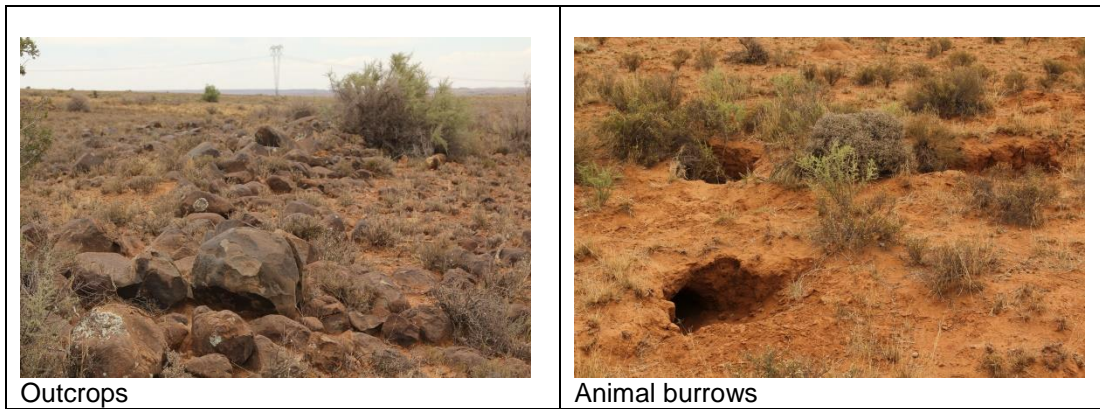


Fig. 2. Natural features in the environment.

5. PROJECT DESCRIPTION

5.1 Site location and description

The study area is located on Portion 1 of the farm Grootpoort 168, Registration Division Fauresmith RD, Free State. The proposed development is located approximately 14km south west of Luckhoff (Fig. 3). For more detail, please see the Technical Summary presented on page iv above.

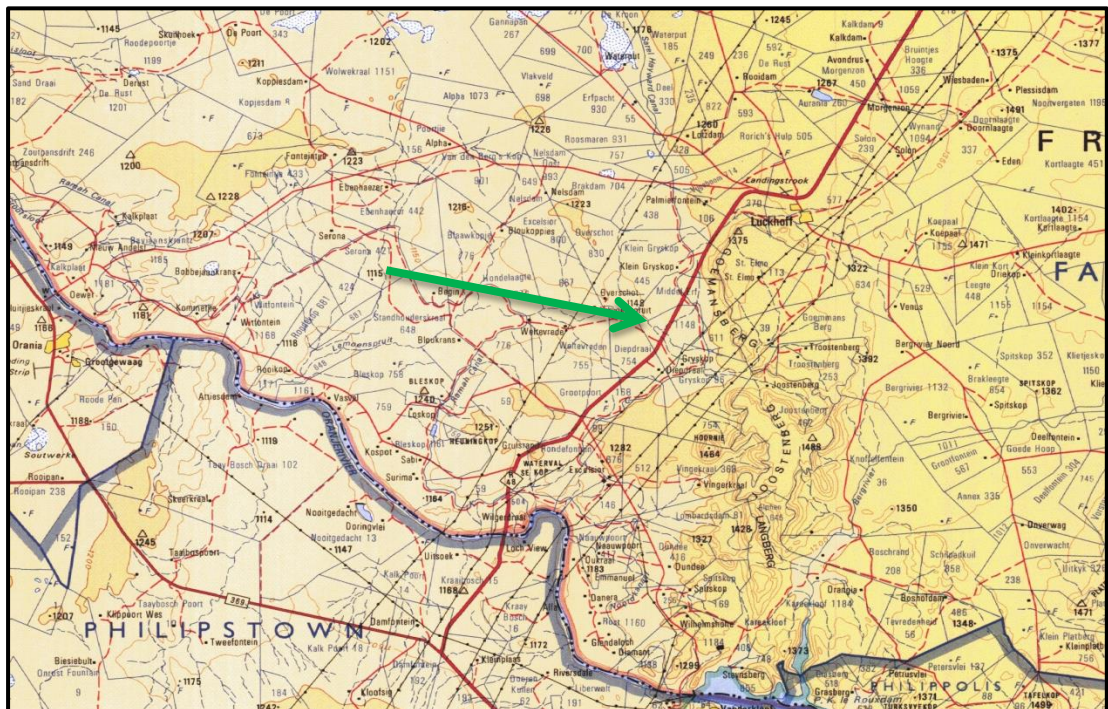


Fig. 3. Location of the study area in regional context. (Map 2924: Chief Surveyor-General)

5.3 Development proposal

The project entails the generation of approximately 84mW electrical power through photovoltaic (PV) panels. The total footprint of the project will be approximately 140 hectares. The key components of the proposed project are:

- PV panel array
- Wiring to Central Inverters
- Connection to the grid
- Supporting Infrastructure
- Roads
- Fencing

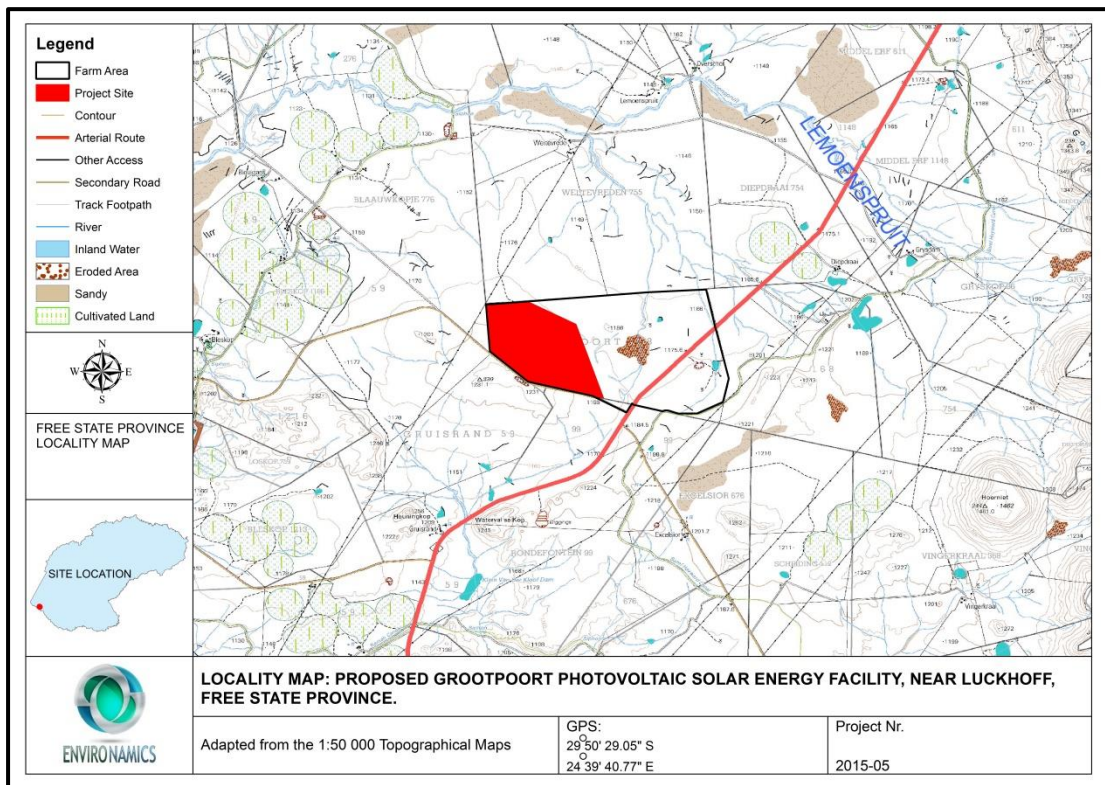


Fig. 4. The development area, shown in red.

6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

6.1 Site description

The geology of the area is made up of dolorite, with shale to the east. The original vegetation is classified as Nama Karoo. The topography is described as lowlands with hills and the Orange River is located approximately 6 km to the south of the site. The study area is currently used for grazing purposes.



Fig. 5. Views over the study area.

6.2 Regional overview

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.

The Orange River and its tributaries are well known for its river gravels, in some places containing large amounts of Early Stone Age tools (Acheullian) (Sampson 1972). The larger region also produced what was to become the Fauresmith industry, first identified by Van Riet Lowe. The Fauresmith is regarded to represent a transitional phase between the ESA and MSA, and have some technological and typological elements of the latter. There is a tendency towards smaller tools and small hand-axes in particular seem to a characteristic feature of the Fauresmith. Assemblages include refined hand-axes, long blades, convergent flakes/points, scrapers and prepared cores used in the manufacture of these tool types. This combination of Modes 2 and 3 makes it a likely transitional industry (Barham & Mitchell 2008:229).

A number of rock engraving sites dating to the Later Stone Age as well as the historic period are known to exist in the larger region, especially in the region on the eastern side of the Riet River. In the latter case, people riding horse are depicted. Many of these engravings from different sites have been removed and are “exhibited” in the town of Koffiefontein.

As yet, no sites dating to the Early Iron Age have been reported from the region and most sites date to the Late Iron Age. A number of stone walled settlement sites, classified by Maggs (1976) as type R ruins, occur north and south of the study area. These sites represent a transitional phase between Khoi herders settling permanently and Iron Age Tswana-speaking people entering the area. These settlements were first described by William Burchell during the first two decades of the 19th century. A large number of graves, located in close vicinity to the Riet River, have been archaeologically investigated (Humphreys 1970, 1997, 2009; Morris 1992; Ouzman 2001).

The town of Luckhoff was established in 1892 and named after the Reverend H J Luckhoff (1842 – 1943). Like Fauresmith, sheep farming is the backbone of the town economy.

The Van der Kloof Dam, originally named the P.K. le Roux Dam, was completed 1977, is located approximately 30km south of the study region.

6.3 Identified heritage sites

The following sites, features and objects of cultural significance have been identified to exist in the study region:

6.3.1 Stone Age

Location		Grootpoort 168	S 29.83426, 24.66112 S 29.84508, 24.65791
Description			
Two localised areas, associated with small outcrops, where thin scatters of MSA tools and flakes were identified. The density of the material is approximately 1 artefact/flake per 10m ² . The material used for the tools are hardened shale and lideanite.			

Significance of site/feature	Low on a regional level – Grade III
-------------------------------------	-------------------------------------

Impact assessment
Both areas are located inside the proposed development area and would therefore be impacted on by the development. However, as the density of the scatter is very low, as well as the fact that it is surface material and therefore not in its original context any more, it is viewed to have a low significance and it is judged that the impact would be very low.

Mitigation
No further action required

Requirements
None

References
1: 50 000 topocadastral map: 2924DC

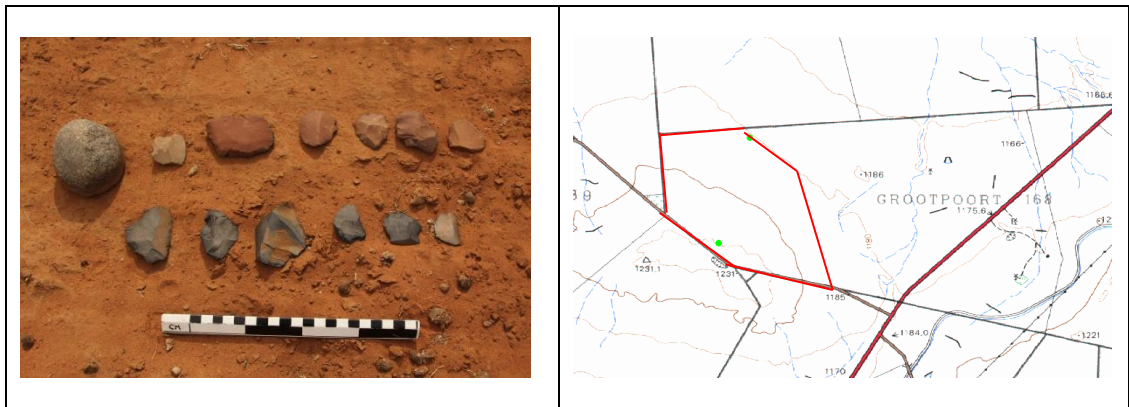


Fig. 6. The stone tools and location of the findspots

6.3.3 Iron Age

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

6.3.3 Historic period

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

7. SITE SIGNIFICANCE AND ASSESSMENT

7.1 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.

7.2 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.

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

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)	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

7.3 Impact assessment

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development:

- Two localised areas, associated with small outcrops, where thin scatters of MSA tools and flakes were identified.
 - Both areas are located inside the proposed development area and would therefore be impacted on by the development. However, as the density of the scatter is very low, as well as the fact that it is surface material and therefore not in its original context any more, it is viewed to have a low significance and it is judged that the impact would be very low.

8. CONCLUSIONS

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

The cultural landscape qualities of the larger 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.

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development:

- Two localised areas, associated with small outcrops, where thin scatters of MSA tools and flakes were identified.
 - Both areas are located inside the proposed development area and would therefore be impacted on by the development. However, as the density of the scatter is very low, as well as the fact that it is surface material and therefore not in its original context any more, it is viewed to have a low significance and it is judged that the impact would be very low.

Reasoned opinion as to whether the proposed activity should be authorised:

- From a heritage point of view it is recommended that the proposed development be allowed to continue, on condition of acceptance of the proposed mitigation measures.

Conditions for inclusion in the environmental authorisation:

- 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.

9. REFERENCES

9.1 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)

9.2 Literature

Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

Barham, L. & Mitchell, P. 2008. *The First Africans. African Archaeology from the Earliest Toolmakers to Most Recent Foragers*. Cambridge: Cambridge World Archaeology.

Beaumont, P.B. & Vogel, J.C. 1984. Spatial patterning of the ceramic Later Stone Age in the Northern Cape Province, South Africa. In Hall, M., Acery, G., Avery, D.M., Wilson, M.L. & Humphreys, A.J.B. *Frontiers: Southern African Archaeology Today*. Cambridge Monographs in African Archaeology 10. BAR International Series 207.

Humphreys, A.J.B. 1973. A report on excavations carried out on a Type R Settlement Unit (Kartoum 1) in the Jacobsdal district, O.F.S. *Annals of the Cape Provincial Museums* 9(8):123-157

Morris, D. 2007. *Mokala National Park: A First Report on Heritage Resources*. Unpublished report. Kimberley: McGregor Museum

Sampson, C.G. 1968. *The Middle Stone Age Industries of the Orange River Scheme Area*. Memoir No. 4. Bloemfontein: National Museum.

Van Jaarsveld, A. 2006. *Hydra-Perseus 765kV Transmission line (260km), Beta-Perseus Transmission Line (12km), Cross-over Alignment Alternatives and Perseus Substation (50 hectares)*. Unpublished report.

9.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2924DC
Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF CULTURAL 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; 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.

APPENDIX 3. SPECIALIST COMPETENCYJohan (Johnny) van Schalkwyk

J A van Schalkwyk, D Litt et Phil, heritage consultant, has been working in the field of heritage management for more than 30 years. Based at the National Museum of Cultural History, Pretoria, he has actively done research in the fields of anthropology, archaeology, museology, tourism and impact assessment. This work was done in Limpopo Province, Gauteng, Mpumalanga, North West Province, Eastern Cape, Northern Cape, Botswana, Zimbabwe, Malawi, Lesotho and Swaziland. Based on this work, he has curated various exhibitions at different museums and has published more than 60 papers, many in scientifically accredited journals. During this period he has done more than 2000 impact assessments (archaeological, anthropological, historical and social) for various government departments and developers. Projects include environmental management frameworks, road-, pipeline-, and power line developments, dams, mining, water purification works, historical landscapes, refuse dumps and urban developments.