

**Heritage impact assessment for the  
PROPOSED MIXED USE DEVELOPMENT AND SOLAR PARK ON PORTION 1 OF THE  
FARM STEENBOKPAN 295LQ AND THE REMAINDER OF FARM VANGPAN 294LQ IN  
THE LEPHALALE REGION, LIMPOPO PROVINCE**

**HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED MIXED USE DEVELOPMENT AND SOLAR PARK ON PORTION 1 OF THE FARM STEENBOKPAN 295LQ AND THE REMAINDER OF FARM VANGPAN 294LQ IN THE LEPHALALE REGION, LIMPOPO PROVINCE**

**Report No:** 2012/JvS/052  
**Status:** Draft  
**Revision No:** 0  
**Date:** October 2012

**Prepared for:**

Interdesign Landscape Architects  
Project Manager: Ms S Chetty

Postal Address: P O Box 74648, Lynnwood Ridge, 0040  
Tel: 012 348 1922  
Fax: 012 3487154  
E-mail: shalini@ilaweb.co.za

**Prepared by:**

J van Schalkwyk (D Litt et Phil), Heritage Consultant  
ASAPA Registration No.: 168  
Principal Investigator: Iron Age, Colonial Period, Industrial Heritage

Postal Address: 62 Coetzer Avenue, Monument Park, 0181  
Mobile: 076 790 6777  
Fax: 012 347 7270  
E-mail: jvschalkwyk@mweb.co.za

**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  
October 2012

## EXECUTIVE SUMMARY

### **HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED MIXED USE DEVELOPMENT AND SOLAR PARK ON PORTION 1 OF THE FARM STEENBOKPAN 295LQ AND THE REMAINDER OF FARM VANGPAN 294LQ IN THE LEPHALALE REGION, LIMPOPO PROVINCE**

Epembe Investments (Pty) Limited and Piosol Limited Solar Consortium propose to establish a mixed use development as well as a solar park on Portion 1 of the farm Steenbokpan 295LQ and the Remainder of farm Vangpan 294LQ in the Lephalale region of Limpopo Province.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Interdesign Landscape Architects** 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 project.

Three features of cultural heritage significance were identified. Fortunately, according to current understanding of the proposed development, none of these would directly be impacted on by the proposed development. However, in order to safeguard them, the following mitigation measures are recommended:

- A single grave, that of Maria Johanna Caterina Aletta Gelbrecht, who died on 23 March 1923. This grave is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. It is recommended that this feature is formally fenced off with a buffer zone of at least 5 metres from the centre of the grave.
- An informal burial place with 3 marked graves, although there might be more that are not properly marked. These graves are located outside the area of high impact and would therefore not directly be impacted on by the proposed development. It is recommended that this feature is formally fenced off with a buffer zone of at least 20 metres from the centre of the middle grave. This large buffer is necessary to accommodate possible unmarked graves.
- A small memorial dedicated to a person identified as Assie, who died on this spot in an aeroplane crash in 1995. This feature is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. Fortunately, it is already formally fenced and therefore does not require an additional buffer zone to protect it.

From a heritage point of view we therefore recommend that the proposed development can continue, on condition of acceptance of the above mitigation measures. We request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk  
Heritage Consultant  
October 2012

**TECHNICAL SUMMARY**

Property details						
Province	Limpopo Province					
Magisterial district	Ellisras					
Local municipality	Lephalale					
Topo-cadastral map	2327CB					
Closest town	Lephalale					
Farm name	Steenbokpan 295LQ and Vangpan 294LQ					
Portions/Holdings	Portion 1 of Steenbokpan 295LQ; Remainder of Vangpan 294LQ					
Coordinates	Polygon					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S23.66559	E27.30923	2	S23.708613	E27.33357
	3	S23.70997	E27.32950	4	S23.70099	E27.28357
	5	S23.69243	E27.30395	6	S23.67221	E27.28725

<b>Development criteria in terms of Section 38(1) of the NHR Act</b>	<b>Yes/No</b>
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

<b>Development</b>	
Description	Development of commercial facilities and a solar park
Project name	-

<b>Land use</b>	
Previous land use	Agriculture
Current land use	Agriculture

**TABLE OF CONTENTS**

	Page
EXECUTIVE SUMMARY .....	II
TECHNICAL SUMMARY .....	III
TABLE OF CONTENTS .....	IV
LIST OF FIGURES.....	IV
GLOSSARY OF TERMS AND ABBREVIATIONS .....	V
1. INTRODUCTION.....	1
2. TERMS OF REFERENCE .....	1
3. HERITAGE RESOURCES .....	2
4. STUDY APPROACH AND METHODOLOGY .....	3
5. DESCRIPTION OF THE AFFECTED ENVIRONMENT .....	4
6. SITE SIGNIFICANCE AND ASSESSMENT .....	13
7. CONCLUSIONS.....	14
8. REFERENCES.....	16
APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES .....	18
APPENDIX 2. RELEVANT LEGISLATION .....	19
APPENDIX 3. ADDITIONAL ILLUSTRATIONS .....	20

**LIST OF FIGURES**

	Page
Fig. 1. Location of the study area in regional context. ....	5
Fig. 2. Views over the study area.....	5
Fig. 3. Aerial view of the study area.....	6
Fig. 4. Preliminary layout of the proposed development.....	7
Fig. 5. Rock art near the Mokolo River. ....	8
Fig. 6. Examples of farmsteads in the region.....	9
Fig. 7. A family cemetery on a farm. ....	9
Fig. 8. The first mine headgear in the region. ....	10
Fig. 9. The study area showing the location of the identified sites. ....	11
Fig. 10. The informal cemetery. ....	12
Fig. 11. The informal cemetery. ....	12
Fig. 12. The memorial. ....	13
Fig. 13. Section of Jeppe's map of 1899.....	20
Fig. 14. Title Deed for the farm Springbokpan, dated 1909.....	21
Fig. 15. Title Deed for the farm Vangpan, dated 1909.....	22
Fig. 16. Map showing the absence of Bantu-speaking communities in the larger region .....	23

## **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

# HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED MIXED USE DEVELOPMENT AND SOLAR PARK ON PORTION 1 OF THE FARM STEENBOKPAN 295LQ AND THE REMAINDER OF FARM VANGPAN 294LQ IN THE LEPHALALE REGION, LIMPOPO PROVINCE

## 1. INTRODUCTION

Epembe Investments (Pty) Limited and Piosol Limited Solar Consortium propose to establish a mixed use development as well as a solar park on Portion 1 of the farm Steenbokpan 295LQ and the Remainder of farm Vangpan 294LQ in the Lephalale region of Limpopo Province.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, 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 **Interdesign Landscape Architects** 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 project.

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 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

- In some sections the vegetation was very dense, limiting archaeological visibility to some extent.

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

Type of study	Aim	SAHRA involved	SAHRA response
Heritage Impact Assessment	<p>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.</p> <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>	Provincial Heritage Resources Authority	Comments on built environment and decision to approve or not
		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 & 3.

## 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 – Baines 1877; Huffman & Van der Walt 2008; Pistorius 2007; Van Schalkwyk 2005a, 2005b, 2006, 2008, 2009, 2011; Van Warmelo 1935).

- 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 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.

### 4.2.2 Field survey

The area that had to be investigated was identified by **Interdesign Landscape Architects** by means of maps. The site was surveyed by walking two transects across each of the zones of high impact development. Local people were interviewed during the site visit – list of references.

## 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

### 5.1 Site location and description

The project is located on Portion 1 of the farm Steenbokpan 295LQ and the Remainder of the farm Vangpan 294LQ (Fig. 1) west of the town of Lephalale (formerly Ellisras) in the Lephalale Local Municipality of Limpopo Province. For more information, please see the Technical Summary above.

The topography of the region is very flat, with very few features (e.g. hills, outcrops or rock shelters, rivers) that would usually draw people to settle in its vicinity found in the area. Only a few small hills or outcrops occur. All the rivers crossing the area are non-perennial. The biggest river, the Makolo, passes some distance to the east of the study area, flowing from south to north.

The geology is made up of shale, with arenite occurring to the east of the study area. All is overlain by sand, probably aeolic in origin, having being laid down from the west.

The region can be described as typical savannah, with the original vegetation consisting of Mixed Bushveld, with Sweet Bushveld occurring to the east. Although some crop farming took place on some of the farms cattle farming was the main activity and has, in the recent past been replaced by game farming.

Modern farm houses, built within the last 30 years occur on both properties. All of these will remain in use and will not be impacted on by the proposed development.

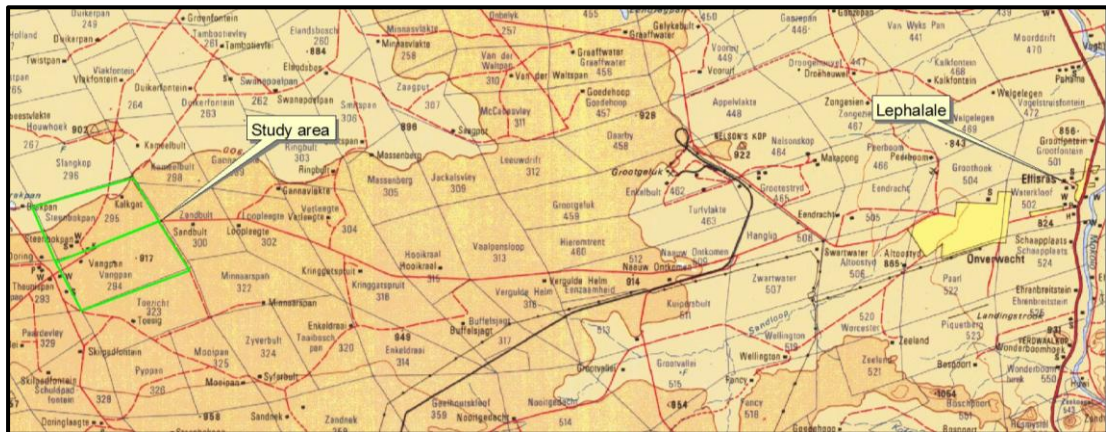


Fig. 1. Location of the study area in regional context.  
(Map 2326: Chief Surveyor-General)



Fig. 2. Views over the study area.  
(Springbokpan above and Vangpan below)



Fig. 3. Aerial view of the study area.  
(Photo: Google Earth)

## 5.2 Project description

The project consists of a proposed mixed use development including a solar farm on Portion 1 of the farm Steenbokpan 295LQ and the Remainder of the farm Vangpan 294LQ (Fig. 4):

- On Portion 1 of the farm Steenbokpan 295LQ the development will involve a 140 ha block on the eastern border of the farm for the development of a 75 MW solar farm and a commercial block on the southern border of the farm, parallel to the existing road (D1675).
- On the Remainder of the farm Vangpan 294LQ the development will involve a 200 ha block on the eastern border of the farm for the development of a 75 MW solar farm and a commercial block on the northern border of the farm, parallel to the existing road (D1675).



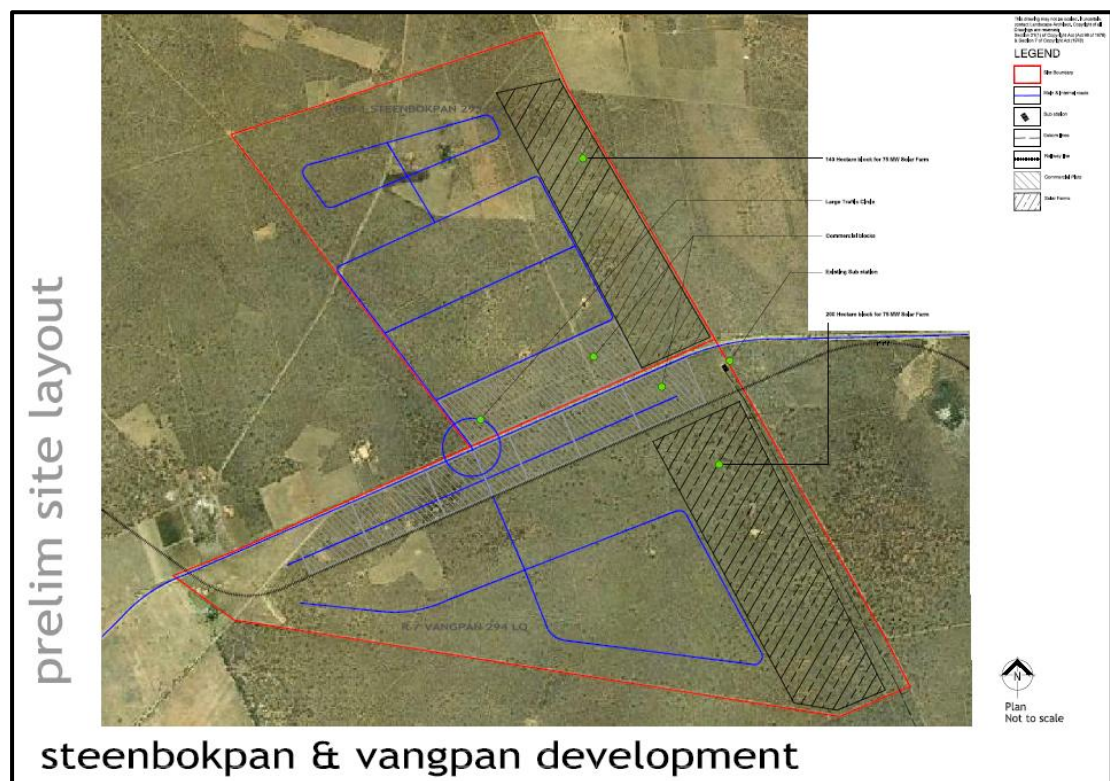


Fig. 4. Preliminary layout of the proposed development.

### 5.3 Regional overview

### 5.3.1 Prehistoric period

Probably because of the somewhat inhospitable environment, being very flat, hot and dry (average rainfall of 436 mm per annum) and with few sources of surface water, people did not settle in large numbers in the area in the past.

In the larger region, in areas where there are outcrops, especially close to rivers, rock art sites have been documented. The ones closest to the study area are located on the farm Grootfontein 501LQ, on the northern outskirts of the town of Lephalale. Other rock art sites are found further away to the south and the east. At Nelson's kop some interesting engravings of animal tracks, cupules and cut marks were identified on the southern face of the hill.

Early and Later Iron Age sites are similarly found to the south and the east, as well as to the north. As these people were agro-pastoralists (and did not have the technology to extract subterranean water), they preferred to settle in areas where such resources were readily available.

- Archaeological sites

Probably because of the somewhat inhospitable environment, being very flat, hot and dry (average rainfall of 436 mm per annum) and with few sources of surface water, people did not settle in large numbers in the area in the past.

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



Fig. 5. Rock art near the Mokolo River.

*The stone tools in the picture to the 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.*

### 5.3.2 Post contact period

The historic period starts off quite late in this part of the country. Probably one of the earliest published sources that refer to the area, in a generalised sense, is that of the explorer Thomas Baines who passed through the area during the early 1870s. Although for other sections of his travels he gives detailed descriptions of the local population, he does not comment on anybody in this particular area. Although his rendering of the various rivers and other topographical features are quite accurate for the time, he seems to imply that there were no communities settled here (Baines 1877).

Similarly, Van Warmelo (1935) in his encyclopaedic work on the distribution of various Bantu-speaking groups show an area largely devoid of communities, with only a few isolated occurrences, all possibly farm-workers. The closest community indicted by him are the Seleka, who reside approximately 50 km to the north. To the south, it seems from his maps that the area also used to be claimed by the Seleka. This is a very Sothoised group of Ndebele whom have also lived amongst the Ngwato in Botswana and their arrival in the area date to late Pre-colonial times.

In the town of Lephalale (Ellisras) there is a cemetery containing the graves of some of the earliest white settlers in the area. The town of Ellisras was only laid out in December 1960, and was named after two of the pioneer families in the area, Ellis and Erasmus. In 2002, the name was changed to Lephalale. This latter name is taken from the Phalala River, which is derived from the Tswana verb 'to flow' or 'one which overflows' (Raper 2004: 86, 204).

With reference to the study area itself, some information has been obtained about the different farms. It seems as if they are part of government land until the early part of the 20<sup>th</sup> century. However, drilling activities undertaken by the "Irrigation Department" in 1920, apparently revealed more than water and the presence of coal and oil bearing shale was established on the farms Grootegeeluk and Hooikraal. This prompted an individual by the name of F.F. Pienaar to peg 50 claims on each of the farms Kringatspruit, Hooikraal, Grootegeeluk and Enkelbult (Reference MM1713/20, 1920; Reference MM2827/20, 1920). What became of all of this is unknown.

- 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.

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



Fig. 6. Examples of farmsteads 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 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 land.

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



Fig. 7. A family cemetery on a farm.

- Infrastructure and industrial heritage

In many cases this aspect of heritage is left out of surveys, largely due to the fact that it is taken for granted. However, the land and its resources could not be accessed and exploited without the development of features such as roads, bridges, railway lines, electricity lines and telephone lines, as well as industries that exploit locally available resources.

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



Fig. 8. The first mine headgear in the region.

#### 5.4 Identified heritage sites

Based on the above sources and the field visit, the following heritage sites, features and objects were identified in the proposed development area (Fig. 9):

##### 5.4.1 Stone Age

No sites, features or objects of cultural significance dating to the Stone Age were identified in the study area.

##### 5.4.2 Iron Age

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



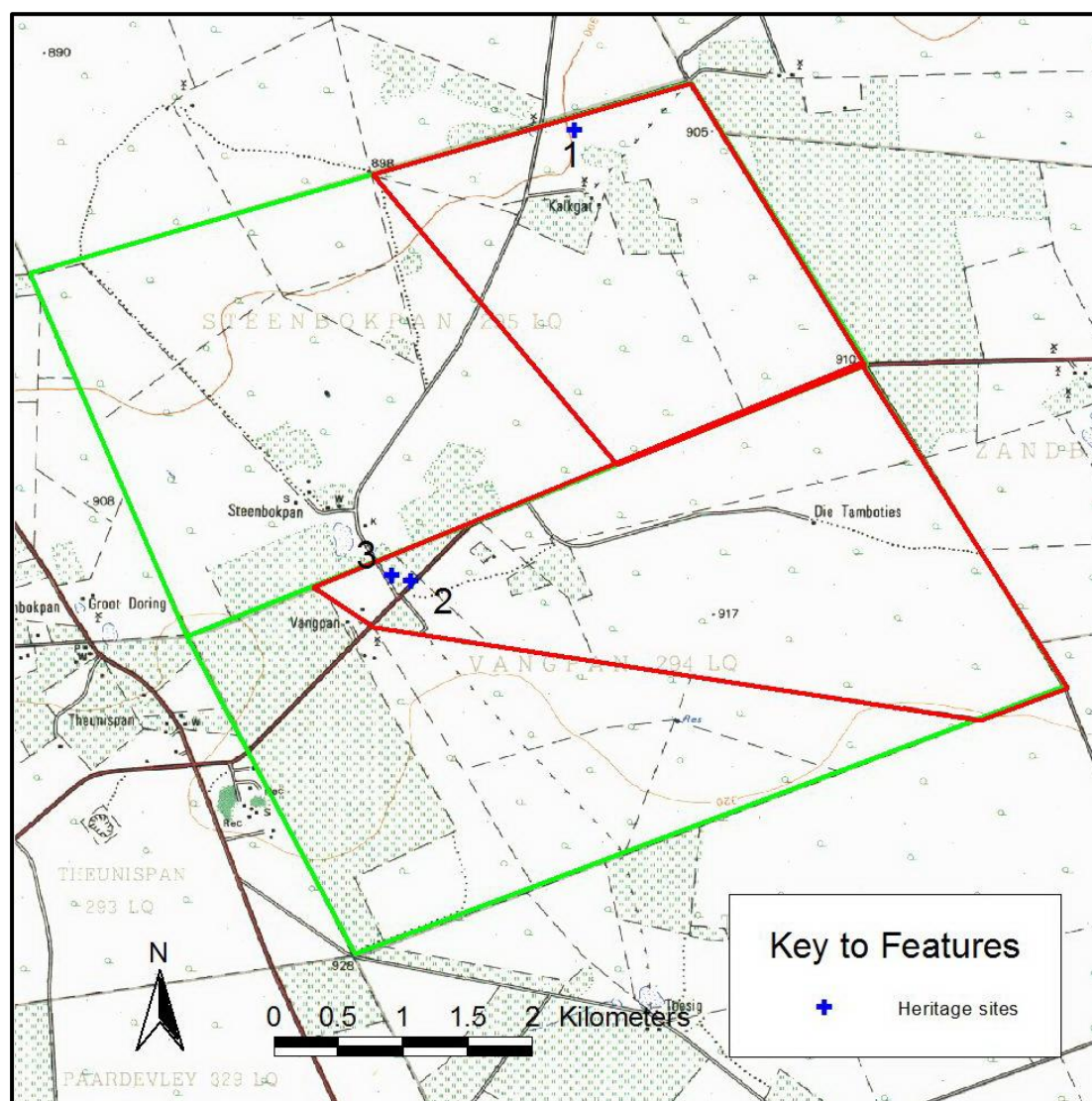


Fig. 9. The study area showing the location of the identified sites.

(Map 2327CB: Chief Surveyor-General)

(Please note that the alignment of Road D1675 was changed at some time in the past to follow the farm boundaries in the western section of the two farms. The alignment as shown on the map does not exist anymore)

#### 5.4.3 Historic period

The following sites, features or objects of cultural significance dating to the historic period were identified in the study area.

<b>Location</b>	No. 1: Steembokpan	-23.66922	27.30136
<b>Description</b>	A single grave, that of Maria Johanna Caterina Aletta Gelbrecht, who died on 23 March 1923. It is probably the grave of the wife of a former land owner.		
<b>Significance</b>	High on a local level – Grade III		
<b>Mitigation</b>	This grave is located outside the area of high impact and would therefore not directly be		

impacted on by the proposed development. However, it is recommended that this feature is formally fenced off with a buffer zone of at least 5 metres from the centre of the grave.



Fig. 10. The informal cemetery.

Location	No. 2: Vangpan	-23.70057	27.29000
Description			
An informal burial place with 3 marked graves, although there might be more that are not properly marked.			
Significance	High on a local level – Grade III		
Mitigation			
These graves are located outside the area of high impact and would therefore not directly be impacted on by the proposed development. However, it is recommended that this feature is formally fenced off with a buffer zone of at least 20 metres from the centre of the middle grave. This large buffer is necessary to accommodate possible unmarked graves.			



Fig. 11. The informal cemetery.

Location	No. 3: Vangpan	-23.70019	27.28873
Description			
A small memorial dedicated to a person identified as Assie, who died on this spot in an aeroplane crash in 1995.			
Significance	High on a local level – Grade III		
Mitigation			
This feature is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. Fortunately, it is already formally fenced and			

therefore does not require an additional buffer zone to protect it.



Fig. 12. The memorial.

## 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

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** and therefore would not prevent the proposed development for continuing after the implementation of the proposed mitigation measures and its acceptance by SAHRA.

### 6.3 Impact Assessment

Three features of cultural heritage significance were identified - see Section 5.4:

- A single grave, that of Maria Johanna Caterina Aletta Gelbrecht, who died on 23 March 1923. This grave is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. However, it is recommended that

this feature is formally fenced off with a buffer zone of at least 5 metres from the centre of the grave.

- An informal burial place with 3 marked graves, although there might be more that are not properly marked. These graves are located outside the area of high impact and would therefore not directly be impacted on by the proposed development. However, it is recommended that this feature is formally fenced off with a buffer zone of at least 20 metres from the centre of the middle grave. This large buffer is necessary to accommodate possible unmarked graves.
- A small memorial dedicated to a person identified as Assie, who died on this spot in an aeroplane crash in 1995. This feature is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. Fortunately, it is already formally fenced and therefore does not require an additional buffer zone to protect it.

Impact and aspect(s)	Mitigation	Objective/target	Responsible party	Timeframes
Destruction of heritage sites	If new sites are uncovered, work must immediately be stopped in order for a heritage practitioner to investigate the finds	Prevent destruction of unknown sites	Developer	During construction

## 7. CONCLUSIONS

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area in which it is proposed to develop a commercial facility and solar park.

Three features of cultural heritage significance were identified. Fortunately, according to current understanding of the proposed development, none of these would directly be impacted on by the proposed development. However, in order to safeguard them, the following mitigation measures are recommended:

- A single grave, that of Maria Johanna Caterina Aletta Gelbrecht, who died on 23 March 1923. This grave is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. It is recommended that this feature is formally fenced off with a buffer zone of at least 5 metres from the centre of the grave.
- An informal burial place with 3 marked graves, although there might be more that are not properly marked. These graves are located outside the area of high impact and would therefore not directly be impacted on by the proposed development. It is recommended that this feature is formally fenced off with a buffer zone of at least 20 metres from the centre of the middle grave. This large buffer is necessary to accommodate possible unmarked graves.
- A small memorial dedicated to a person identified as Assie, who died on this spot in an aeroplane crash in 1995. This feature is located outside the area of high impact and would therefore not directly be impacted on by the proposed development. Fortunately, it

is already formally fenced and therefore does not require an additional buffer zone to protect it.

From a heritage point of view we therefore recommend that the proposed development can continue, on condition of acceptance of the above mitigation measures. We request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant 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

- Depot: SAB, Source MNW, Volume 515, Reference MM1713/20, Date 1920
  - Depot: SAB, Source MNW, Volume 535, Reference MM2827/20, Date 1920
- SAHRA Archaeology and Palaeontology Report Mapping Project (2009)

### 8.2 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.

Baines, T. 1877. *The gold regions south eastern Africa*. London: Edward Stanford.

Holm, S.E. 1966. *Bibliography of South African Pre- and Protohistoric archaeology*. Pretoria: J.L. van Schaik.

Huffman, T.N. & Van der Walt, J. 2008. *Road Construction and Widening Project*. Unpublished report, Archaeological Resources Management. Johannesburg: University of the Witwatersrand.

Jeppe, F. 1899. *Jeppe's map of the Transvaal or South African Republic*. Pretoria: Surveyor General.

Pistorius, J.C.C. 2007. *A Phase 1 heritage impact assessment study for the Eskom Mmamabula-Delta project near Lephalale in the Limpopo Province of South Africa*. Pretoria: Unpublished report.

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

Thackeray, A.I. 1992. The Middle Stone Age south of the Limpopo River. *Journal of World Prehistory* 6(4):385-440.

Van Schalkwyk, J.A. 2005a. *Heritage impact scoping report for the proposed new Matimba B power station, Lephalale district, Limpopo Province*. Unpublished report 2005KH060. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2005b. *Heritage survey report of the Kumba properties at Grootegeluk Mine, Lephalale area, Limpopo Province*. Unpublished report 2005KH090. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2006. *Heritage impact scoping report for the proposed re-alignment of the Steenbokpan road, Matimba B power station, Lephalale district, Limpopo Province*. Unpublished report 2006KH016. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2008. *Heritage survey report for the development of a water reservoir and pipelines for the new Medupi Power Station, Ellisras magisterial district, Limpopo Province*. Unpublished report 2008/JvS/015. Pretoria.

Van Schalkwyk, J.A. 2009. *Heritage scoping assessment for the proposed development of coal mining activities west of Lephalale, Ellisras magisterial district, Limpopo Province*. Unpublished report 2009/JvS/023.

Van Schalkwyk, J.A. 2011. *Heritage impact assessment for the proposed railway siding to be developed for the Sekoko coal mining activities west of Lephalale, Waterberg magisterial district, Limpopo Province*. Unpublished report 2011/JvS/019.

Van Warmelo, N.J. 1935. *A Preliminary survey of the Bantu Tribes of South Africa*. Ethnological Publications No. 5. Pretoria: Government Printer.

### **8.3 Maps and aerial photographs**

1: 50 000 Topocadastral maps: 2327CB  
Google Earth

### **8.4 Interviews**

Mr Tshela Mudau, who has been working on the farm Steenbokpan for the last 30 years.

## 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

<b>1. Historic value</b>			
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			
<b>2. Aesthetic value</b>			
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group			
<b>3. Scientific value</b>			
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			
<b>4. Social value</b>			
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons			
<b>5. Rarity</b>			
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage			
<b>6. Representivity</b>			
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.			
<b>7. Sphere of Significance</b>	High	Medium	Low
International			
National			
Provincial			
Regional			
Local			
Specific community			
<b>8. Significance rating of feature</b>			
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. ADDITIONAL ILLUSTRATIONS

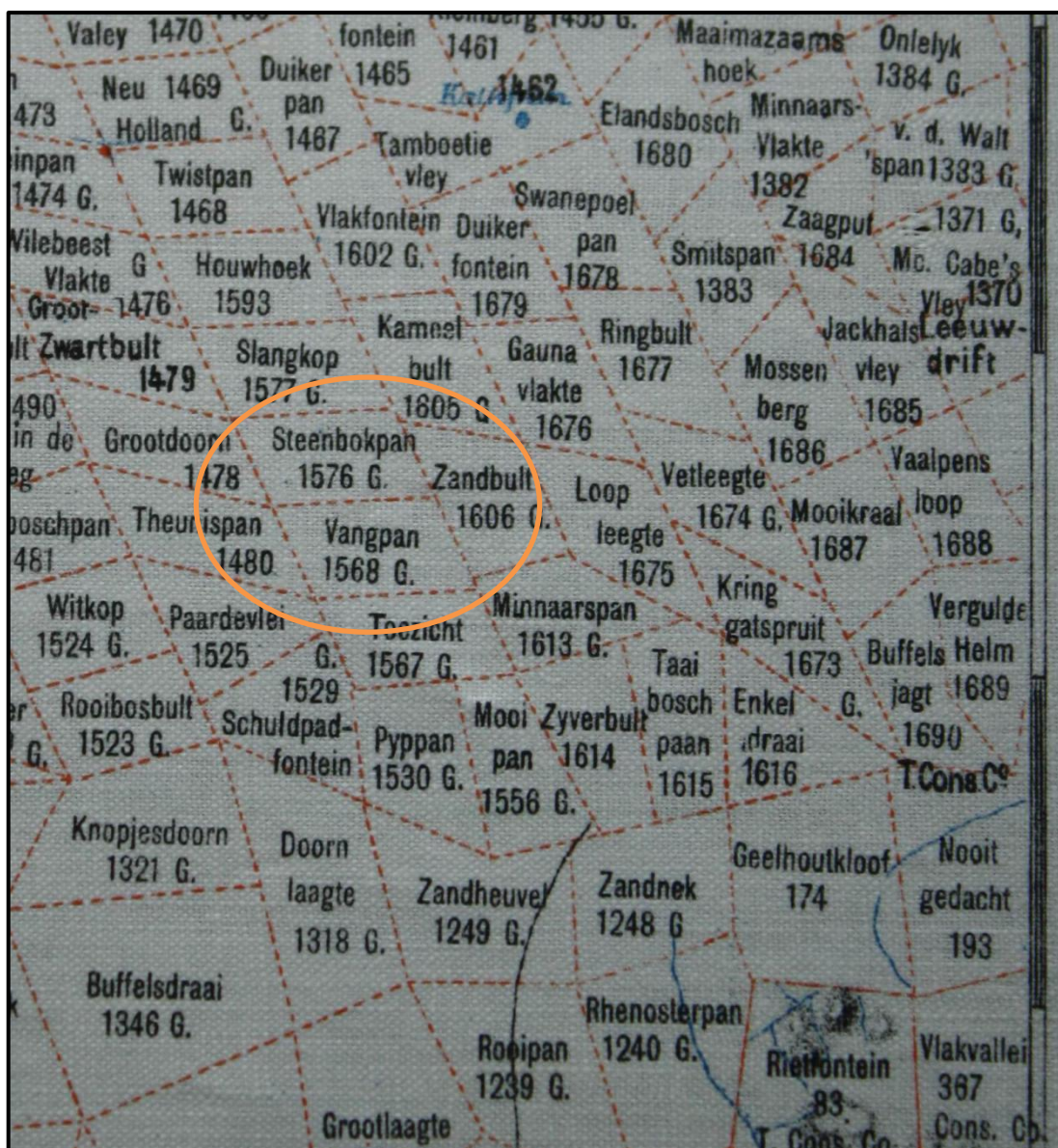


Fig. 13. Section of Jeppe's map of 1899.

Although the farms are indicated, it shows no infrastructure or any other development.

49  
FORM A.

S. G. No. A 3339/103 2161

SIDES.		ANGLES.		(v) CO-ORDINATES (x)	
AB	1237.50	A	86° 5' 50"	A	- 847.27 + 8724.20
BC	117.38	B	94° 36' 40"	B	- 440.15 + 7492.22
CD	553.37	C	188° 8' 50"	C	- 548.28 + 7446.55
DE	1381.65	D	82° 42' 30"	D	- 1022.39 + 7161.19
EA	790.175	E	88° 26' 10"	E	- 1578.93 + 8425.80

The above Figure lettered A B C D E represents the farm  
**STEENBOKPAN N: 1576 622**  
 in extent 1611 Morgen 505 Square Roads of Land, situate in the District of Waterberg  
 Ward Zoutpan Transvaal Colony, and bounded as indicated above.  
 The whole Farm was originally granted to \_\_\_\_\_ by Deed of Grant No. \_\_\_\_\_  
 dated the \_\_\_\_\_ day of \_\_\_\_\_  
 The Beacons were pointed out by Surveyor C C Bateman  
 Due notice of this Survey has been given to all adjoining land owners, and the beacons have been properly erected according to Law.  
 Surveyed on behalf of Government in April - Sept. 1909 by me *C. C. Bateman*  
 Land Surveyor.

No. 06119 Examined. The numerical data of this Diagram are sufficiently consistent.  
*C. C. Bateman*  
 Surveyor-General's Office, Pretoria, Examiner of Diagrams.

No protest, confirmed  
*C. C. Bateman*  
 Surveyor-General's Office, Pretoria.  
 Published in "Government Gazette" No. 454 dated 1. 1909.

W. E. Barnard & Co., Pretoria.  
 1909

Fig. 14. Title Deed for the farm Springbokpan, dated 1909.

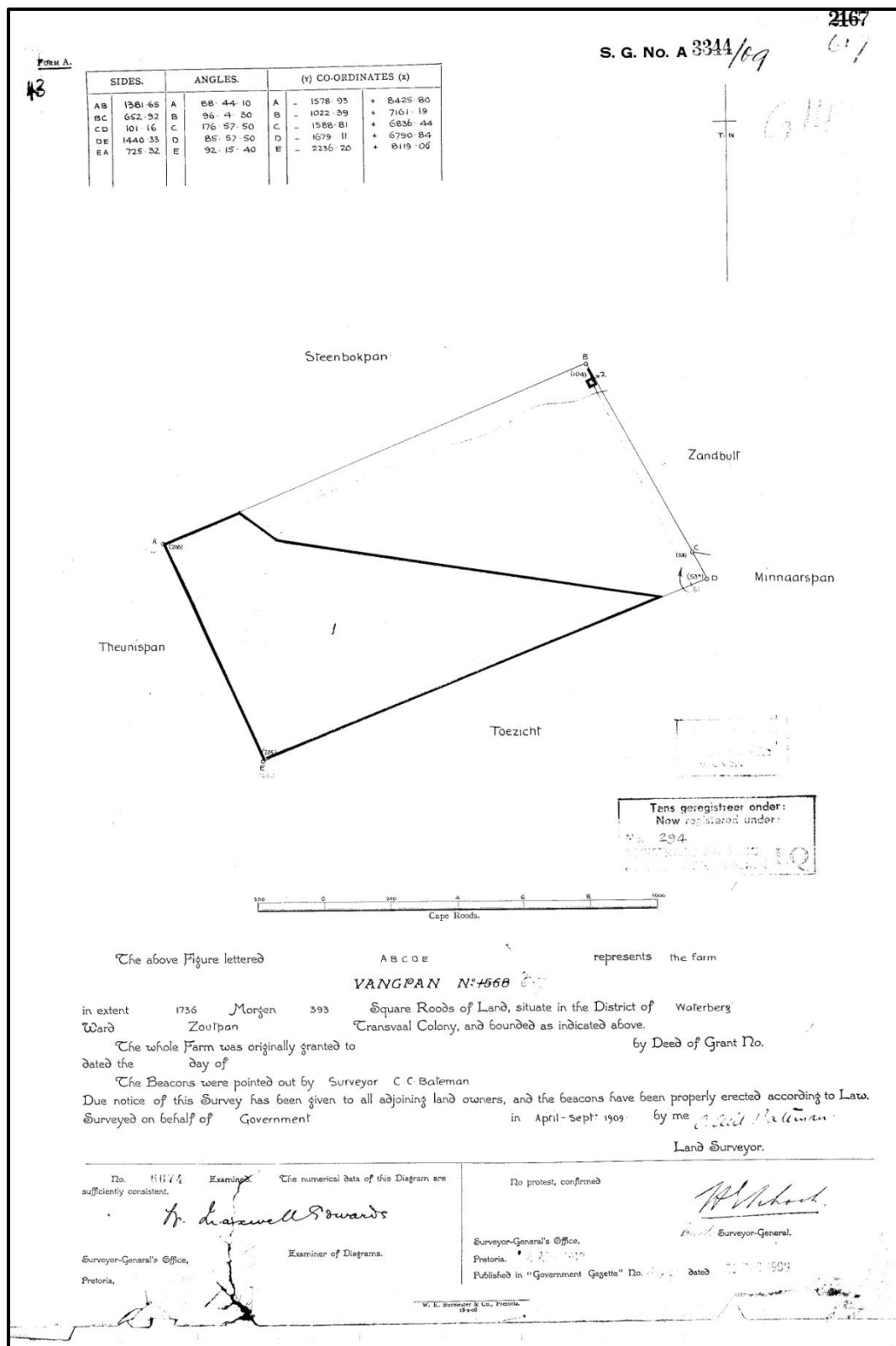


Fig. 15. Title Deed for the farm Vangpan, dated 1909.

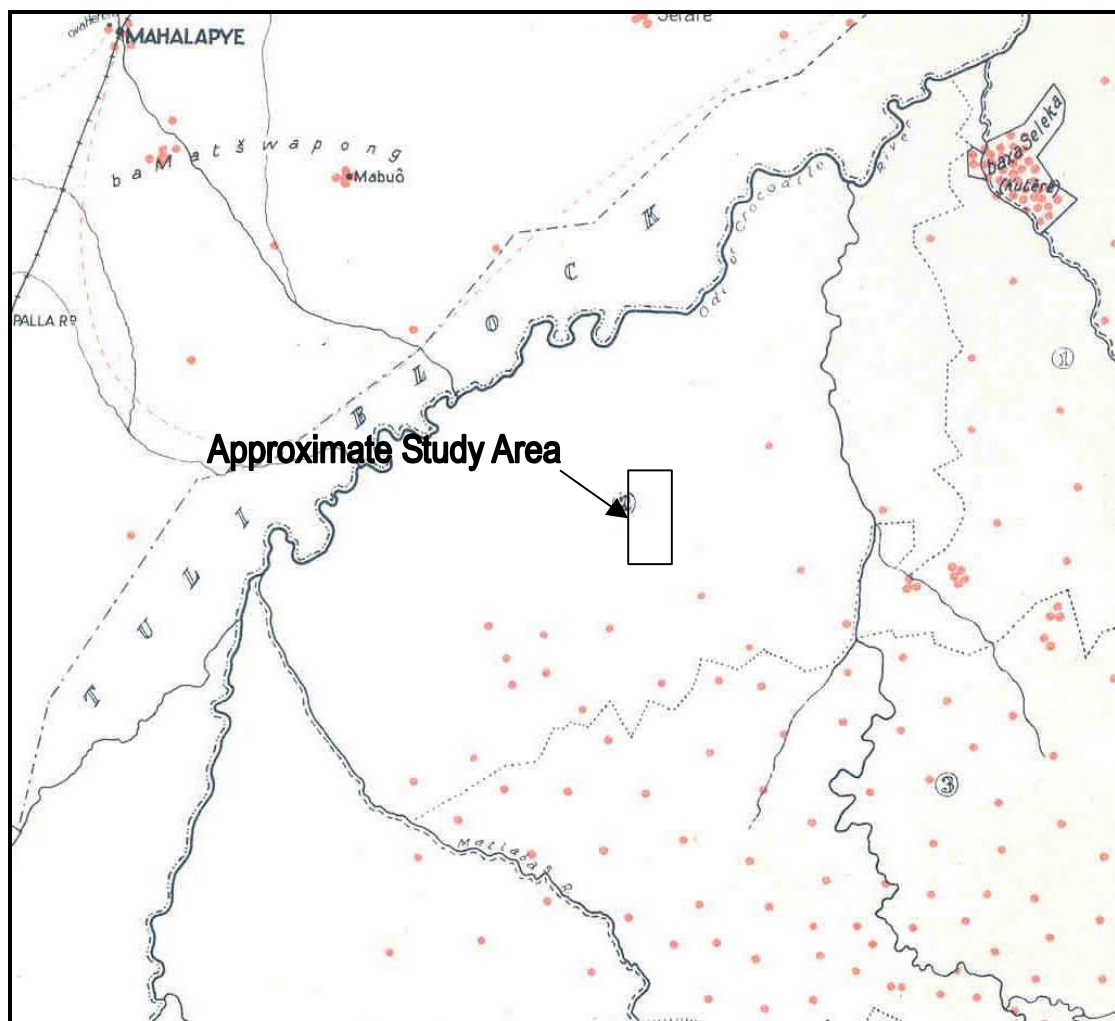


Fig. 16. Map showing the absence of Bantu-speaking communities in the larger region (Van Warmelo 1935 - One orange dot represents 10 individuals, mostly farm workers)