

Heritage Impact Assessment

Heritage Impact Assessment for the Proposed Mafikeng
Solar Park at Mafikeng, North West Province.

Compiled for:

Africa Geo-Environmental Services (AGES)

Survey conducted & Report compiled by:

Marko Hutten

April 2012

Hutten Heritage Consultants
P.O. Box 4209
Louis Trichardt
0920
Tel: +27 76 038 4185
E-mail: marko.hutten@lantic.net

Acknowledgements:

CLIENT: Africa Geo-Environmental Services (AGES)

CONTACT PERSON: Mr. J. Botha
120 Marshall Street
Polokwane
0699
+27 (0) 15 291 1577
jbotha@ages-group.com

CONSULTANT: Hutten Heritage Consultants

CONTACT PERSON: Marko Hutten (BA Hons. Archaeology, UP)
Member of the Association of Southern African
Professional Archaeologists (#057)

REPORT AUTHOR: Marko Hutten

FIELD WORKER: Thomas Mulaudzi

SIGNED OFF BY: MARKO HUTTEN

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Executive Summary

Site name and location: Proposed development of the Mafikeng Solar Park on Portion 5 of the Farm Lanric 59 JO on the eastern outskirts of Mafikeng in the North West Province.

Local Authority: Ngaka Modiri Molema District Municipality.

Developer: Meririte (Pty) Ltd.

Date of field work: 20 April 2012.

Date of report: April 2012.

Findings: One site with significant heritage value was identified during the study. This Late Stone Age site was situated in the north-eastern corner of the proposed property to be developed. The small site consisted of a sparse scatter of lithic artefacts from the Late Stone Age and covered an area of approximately 30m in diameter. This site should be avoided during the development of the solar park. If this deems not to be possible, further mitigation measures as outlined in this report should be performed before any development can commence.

A single grave was also identified during the study. The grave was situated on Portion 50 of the Farm Lanric 59 JO next to and to the east of the study area. The grave was situated near the boundary fence of the two properties and it was felt necessary to mention the grave in this report. The grave will not be directly affected by the proposed development as it falls outside of the area earmarked for development. It is however important to take note of the identified grave and to adhere to the recommendations as outlined in this report to avoid any accidental damage of the grave during the development of the new solar park.

No further site-specific actions or any heritage mitigation measures are recommended as no further heritage resource sites or finds of value or significance were identified in the indicated study area. The proposed development of the solar park and its associated power lines can continue from a heritage point of view if the recommendations as outlined in this report are adhered to.

Disclaimer: *Although all possible care is taken to identify all sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites and/or graves could be overlooked during the study. Hutten Heritage Consultants and its personnel will not be held liable for such oversights or for costs incurred as a result of such oversights.*

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1. Introduction

Hutten Heritage Consultants was contracted by Africa Geo-Environmental Services (AGES) to conduct a Heritage Impact Assessment (HIA) on the proposed development of the Mafikeng Solar Park on Portion 5 of the Farm Lanric 59 JO on the eastern outskirts of Mafikeng in the North West Province.

The aim of the study was to identify all heritage sites, to document and to assess their significance within Local, Provincial and National context. The report outlines the approach and methodology implemented before and during the survey, which includes in Phase 1: Information collection from various sources and social consultations; Phase 2: Physical surveying of the area on foot and by vehicle; and Phase 3: Reporting the outcome of the study.

This HIA forms part of the Environmental Impact Assessment (EIA) as required by various Acts and Laws as described under the next heading and is intended for submission to the provincial South African Heritage Resources Agency (SAHRA) for peer review.

Minimum standards for reports, site documentation and descriptions are set by the Association of Southern African Professional Archaeologists (ASAPA) in collaboration with SAHRA. ASAPA is a legal body representing professional archaeology in the Southern African Development Community (SADC) region. As a member of ASAPA, these standards are tried to be adhered to.

The extent of the proposed development sites were determined as well as the extent of the areas to be affected by secondary activities (access routes, construction camps, etc.) during the development.

2. Legislative Requirements

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

National Environmental Management Act (NEMA) Act 107 of 1998

National Heritage Resources Act (NHRA) Act 25 of 1999

Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002

Development Facilitation Act (DFA) Act 67 of 1995

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

National Environmental Management Act (NEMA) Act 107 of 1998

Basic Environmental Assessment (BEA) – Section (23)(2)(d)

Environmental Scoping Report (ESR) – Section (29)(1)(d)

Environmental Impacts Assessment (EIA) – Section (32)(2)(d)

Environmental Management Plan (EMP) – Section (34)(b)

National Heritage Resources Act (NHRA) Act 25 of 1999

Protection of Heritage resources – Sections 34 to 36; and

Heritage Resources Management – Section 38

Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
Section 39(3)
Development Facilitation Act (DFA) Act 67 of 1995
The GNR.1 of 7 January 2000: Regulations and rules in terms of the Development Facilitation Act, 1995. Section 31.

3. Proposed Project

Meririte (Pty) Ltd has proposed the development of the Mafikeng Solar Park on Portion 5 of the Farm Lanric 59 JO on the eastern outskirts of Mafikeng in the North West Province. This development will mainly be the establishment of a renewable energy generation facility (Photovoltaic Solar Facility). The generated energy (electricity) will be supplied to the existing Eskom or municipal grid.

After bush clearing, construction will concentrate on the erection of Photovoltaic panels which will be mounted on constructed foundations. The proposed facility shall make use of this photovoltaic technology with a total generating capacity of up to 9 MW. The facility will be located on Portion 5 of the Farm Lanric 59 JO which was approximately 25.7ha in size and the total development area for the Solar Park will cover approximately 19.9ha of the proposed property. The required footprint will not include the existing buildings, which will stay in place.

The generated energy will be connected to the Eskom grid. One overhead power line and/or underground cables connecting the Mafikeng Solar Park to a busbay will be commissioned and equipped into the Eskom's MMABATHO BULK 88 kV switching station, located on the Remainder Portion of the Farm Lonely Park 372 JO to the south of the study area (option 1). This line will be approximately 500m in length along a corridor of 22m wide.

Alternatively, the Mafikeng Solar Park may be connected to an Eskom's 88 kV power line (loop-in loop-out connection) running within the Remainder Portion of the Farm Lonely Park 372 JO to the west of the study area (option 2). This line will be approximately 50m in length along a corridor of 22m wide.

Associated engineering infrastructure such as service roads, water and sewerage lines for administrative and accommodation areas and electrical lines will also be installed.

The purpose of the study was to determine if the proposed area was suitable for the development of the Solar Park from a heritage point of view.

The project was tabled during April 2012 and the developer intends to commence as soon as possible after receipt of the ROD from the Department of Environmental Affairs.

4. Project Area Description

The proposed development of the Mafikeng Solar Park will be situated on Portion 5 of the Farm Lanric 59 JO on the eastern outskirts of Mafikeng in the North West Province. The proposed property was approximately 25.7ha in size of which 19.9ha of the area was earmarked for development (photo 1). The required footprint for the development will not include the existing buildings in the south-eastern corner of the property (photo 2), which will stay in place.

The property was situated on the eastern outskirts of Mafikeng town and on the eastern side of Zeerust road. Most parts of this property was previously disturbed and exposed to intensive agricultural activities (see maps). The area was mostly flat with light-brown gravel soil. It was also mostly devoid of any trees and was covered with tall grass (photo 1).

An Eskom 88 kV power line was situated on the western side of the study area (photo 3). The solar park will be connected either to this power line or to the Eskom substation (photo 4) to the south of the study area. A 22m corridor for these proposed connecting lines were also included in the study (photo 5).

The proposed development will be situated on the Mafikeng 2525 DC 1:50 000 topographical map (See Appendix B: Location Maps).

5. Archaeological History of the Area

The examination of archival records, historical data and cartographic resources represents a critical additional tool for locating and identifying heritage resources and in determining the historical and cultural context of the study area. Therefore an internet literature search was conducted using JSTOR and Google Scholar and relevant archaeological and historical texts were also consulted. Relevant topographic maps and satellite imagery were studied. Researching the National Archive records as well as the SAHRA APM Report Mapping Project records, it was determined that two previous archaeological or historical studies had been performed within grid square Mafikeng 2525DC:

Van Vollenhoven, A.C. & Pelsner, A.J., 2008. **A Report on a Cultural Heritage Impact Assessment for the Proposed Development of Marang Estates Located in Mafikeng, Northwest Province.** An unpublished report by Archaetnos CC on file at SAHRA as 2008-SAHRA-0270.

Van Schalkwyk, J.A., 2008. **Heritage Impact Report for the Proposed 88 kV Power Line from Watershed Substation, Lichtenburg, to the Mmabatho Substation, North West Gauteng Province.** An unpublished report by Heritage Consultants on file at SAHRA as 2008-SAHRA-0616.

The historical background and timeframe of the study area and other areas in Southern Africa can be divided into the Stone Age, Iron Age and Historical period. These can be divided as follows:

Stone Age sites

The Stone Age is divided into the Early; Middle and Late Stone Age. The *Early Stone Age* (ESA) includes the period from 2.5 million years B.P. to 250 000 years B.P. and is associated with Australopithecines and early *Homo* species who practiced stone tool industries such as the Oldowan and Acheullian. The *Middle Stone Age* (MSA) covers various tool industries, for example the Howiesons Poort industry, in the period from 250 000 years B.P. to 25 000 years B.P. and is associated with archaic and modern *Homo sapiens*. The *Late Stone Age* (LSA) incorporates the period from 25 000 years B.P. up to the Iron Age and Historical Periods and contact between hunter-gatherers and Iron Age farmers or European colonists. This period is associated with modern humans and characterised by lithic tool industries such as Smithfield and Robberg.

Taung National Heritage Site approximately 300 km to the south of the study area yielded the first *Australopithecus africanus* skull, the Taung Child (Dart 1925). More recent surveys have documented Acheullian industries and continuity between ESA and MSA lithic technologies in the same area (Kuman 2001). Excavations at other well known sites in the wider region attest to further ESA occupation, for example at Makapansgat to the east of the study area which provided evidence of long occupation, initially by *Australopithecus africanus* from approximately 3.3 million years B.P. (Bergh 1999).

The LSA is represented in the area by the site at Thaba Sione (and associated sites) approximately 60 km south-west of Mafikeng which appears to have been created by hunter-gatherers and, more recently, Tswana settlers in the 15th Century and used as a rain making site. The site has a lithic tool industry and 451 boulders engraved with imagery of animals, human figures and geometric shapes and is still used today as an ancestral site by the Zion Christian Church (Ouzman 1995). Another engraving site can be found at Bosworth, a Provincial Heritage Site, near Klerksdorp to the south-east of the study area (SAHRA 2007).

Iron Age

The Iron Age incorporates the arrival and settlement of Bantu speaking people and overlaps the Pre-Historic and Historical Periods. It can be divided into three phases. The *Early Iron Age* includes the majority of the first millennium A.D. and is characterised by traditions such as Happy Rest and Silver Leaves. The *Middle Iron Age* spans the 10th to the 13th Centuries A.D. and includes such well known cultures as those at K2 and Mapungubwe. The *Late Iron Age* is taken to stretch from the 14th Century up to the colonial period and includes traditions such as Icon and Letaba.

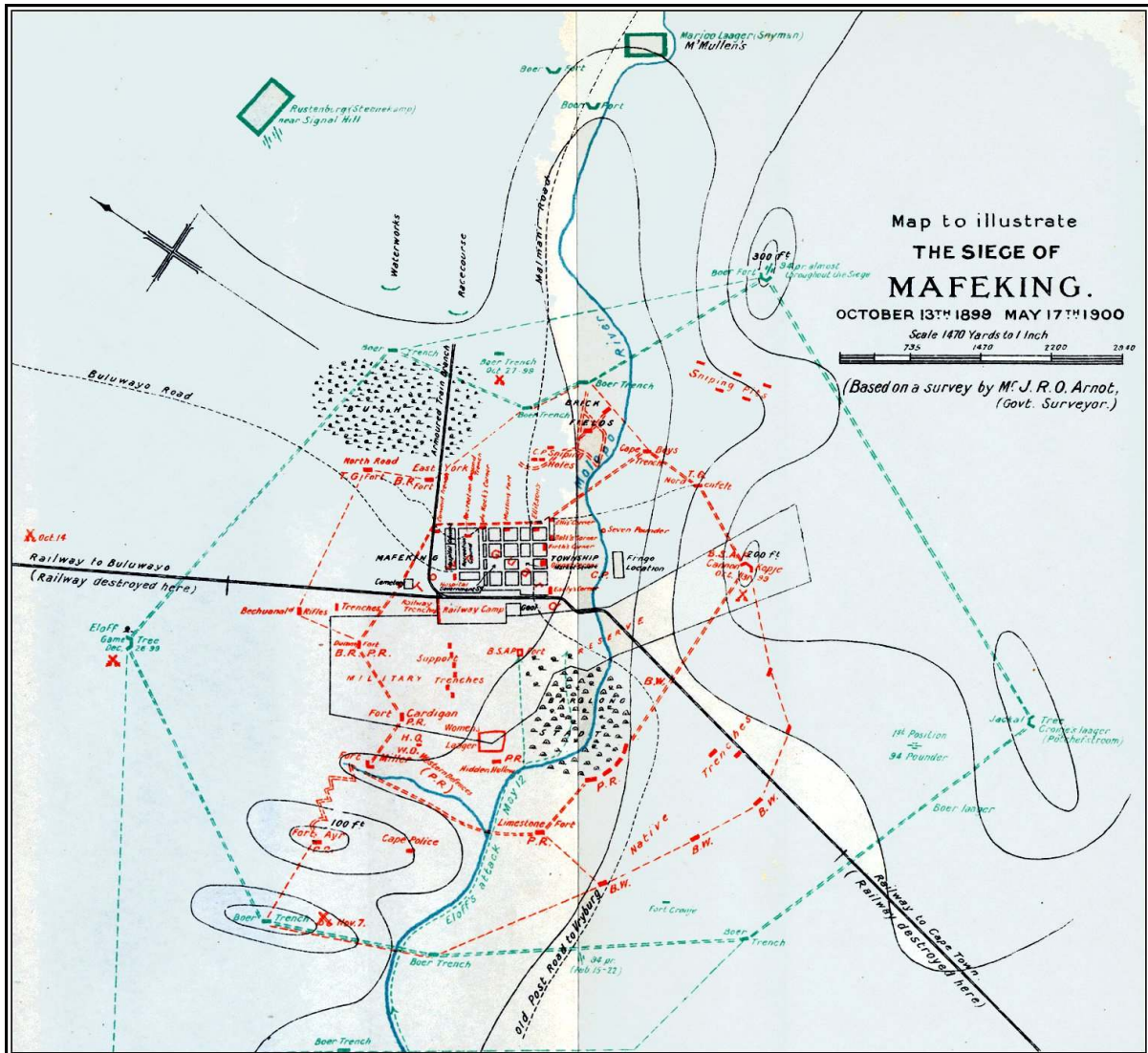
The Early Iron Age is represented in the area by finds at Kruger Cave near Rustenburg and at Broederstroom near the Hartbeespoort Dam, both to the east of the study area and dating to circa 460 A.D. (Mason 1974). A survey of the Groot Marico area to the north-

east of Mafikeng documented more than 100 Late Iron Age sites adding to well known sites such as the stone-walled complexes of Buispoort and Braklaagte, the Mmakgame megasite, the 18th Century capital at Kaditshwene and the copper mines at Dwarsberg in Madikwe Game Reserve. All of these sites are dated to between the 15th and 19th Centuries and record the arrival and development of the Early Moloko Sotho-Tswana speakers, initially characterised by dispersed settlement patterns and later, by the Late Moloko of the 17th Century, characterised by the aggregation of people into towns and the use of stone for building. The capital at Kaditshwene was destroyed during the *Difaqane* and the 1820's invasion by Mzilikazi's Ndebele possibly also saw the adoption of maize as a staple food by the Tswana in the west for the first time (Boeyens 2003).

Historical Period

The beginning of the Historical Period overlaps the demise of the late Stone and Iron Ages and is characterised by the first written accounts of the region from 1600 A.D. Early explorers and missionaries visited or settled in the area, providing modern historians with early written accounts of pre-colonial society, including John Campbell who visited the baHurutshe of Kaditshwene in the 1820s and David Livingstone who established a mission station to the north-east of modern day Mafikeng in 1843 ((Mbenga & Manson no date).

The town of Mafikeng (seTswana for 'place of stones') and its surrounds have a long and intricate history. The town was established in 1857 by Tawana Molema the son of Kgosi Tawana of the Tshidi Barolong. He was an early convert to Christianity, opened a school for the Barolong people and became an important political leader in the face of growing numbers of European settlers. The independence of the Barolong was increasingly threatened by white mercenaries from the Transvaal and led to the first siege of the town by such mercenaries in 1881 (Mbenga & Manson no date). The outbreak of the Anglo-Boer War in 1899 made Mafikeng and Colonel Robert Baden-Powell, who led the defence of the town, world-famous. During the siege Baden-Powell first used boys as 'Scouts' to carry messages and assist in duties around the town and led to his forming the Scout Movement a few years after the war.. The siege lasted 217 days from October 1899 to May 1900 and modern day Mafikeng has a number of famous buildings, forts, cemeteries, sites and monuments such as Cannon Kopje, Warren's Fort and the siege graves (Pakenham 1979). One of South Africa's most famous early black writers and politicians, Solomon Plaatje (later to become the first General Corresponding Secretary of the South African National Native Congress, forerunner to the African National Congress, on its establishment in 1912) was based in Mafikeng during the siege and kept a diary which presented the events from an African perspective (Comaroff 1973). The siege has been described in numerous texts and articles including Thomas Pakenham's 'The Boer War' and was described in newspaper articles (still available) at the time and will not be discussed in further detail. The present study area lies outside and to the east of Baden-Powell's patrolled area.



Map of the siege of Mafikeng (As from Amery 1906).

In September 1904 Lord Roberts unveiled an obelisk at Mafikeng bearing the names of those who fell in defence of the town. The town has a number of other historical sites including the Methodist Church built in 1885, the Kgotla of the Barolong Boo Ratshidi in use since 1850, St John's Anglican Church built in 1902 and the old Town Hall, also built in 1902 and now the Mafikeng Museum (North West Parks and Tourism Board no date). During the Apartheid years Mafikeng became part of Mmabatho, the capital of the Bophuthatswana 'homeland.' With democracy in 1994, the name Mmabatho was replaced by the historical name of Mafikeng and it is the capital of North West Province today.

6. Methodology

Physical Survey

The extent of the proposed development sites were determined as well as the extent of the areas to be affected by secondary activities (access route, construction camp, etc.) during the development.

The physical survey was conducted on foot over the entire area proposed for development. Priority was placed on the undisturbed areas. A systematic inspection of the area on foot along linear transects resulted in the maximum coverage of the proposed area. The survey was conducted on April 20, 2012 and was performed by M. Hutten and field worker T. Mulaudzi.

No sampling was done as no sites or finds of heritage significance were found.

Interviews

Mr. Danie Cordier, the brother-in-law of Mr. R.A. van Niekerk, the owner of the property, was questioned during the survey. Mr. Cordier was staying at this property for over 30 years and was familiar with it. He indicated that he was not aware of any sites of heritage value or significance (such as graves) in the proposed area. He did point out the grave next to the fence on the neighbouring property Portion 50 of Lanric 59 JO.

Restrictions

Vegetation proved the major restriction in accessibility to some of the areas and also contributed to poor surface visibility after the spate of recent good rains.

Documentation

All sites/findspots located during the foot surveys were briefly documented. The documentation included digital photographs and descriptions as to the nature and condition of the site and recovered materials. The sites/findspots were plotted using a Global Positioning System (GPS) (Garmin GPSmap 60CSx) and numbered accordingly.

7. Assessment Criteria

This chapter describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The significance of archaeological and heritage sites were based on the following criteria:

- The unique nature of a site
- The amount/depth of the archaeological deposit and the range of features (stone walls, activity areas etc.)
- The wider historic, archaeological and geographic context of the site
- The preservation condition and integrity of the site
- The potential to answer present research questions.

Site Significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African

Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High Significance	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High Significance	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	Grade 4A	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	Grade 4B	Medium Significance	Recording before destruction
Generally Protected C (GP.C)	Grade 4C	Low Significance	Destruction

Impact Rating:

Low or No Significance:

The constraint is absent, but in instances where present, poses a negligible significance on the proposed development in terms of heritage concerns.

Moderate Significance:

The constraint is present and poses a notable but not major significance on the proposed development in terms of heritage concerns. If the constraint can not be avoided, appropriate mitigation measures must be implemented to minimize the significance.

High Significance:

The constraint is present and poses a high significance on the proposed development in terms of heritage concerns. It is recommended that the constraint be avoided or appropriate mitigation measures must be implemented to minimize the significance.

Certainty

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

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

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

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

Duration

SHORT TERM: 0 – 5 years

MEDIUM: 6 – 20 years

LONG TERM: more than 20 years

DEMOLISHED: site will be demolished or is already demolished

Mitigation

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be classified as follows:

- **A** – No further action necessary
- **B** – Mapping of the site and controlled sampling required
- **C** – Preserve site, or extensive data collection and mapping required; and
- **D** – Preserve site

8. Assessment of Sites and Finds

This section will contain the results of the heritage site/find assessment.

Mafikeng Solar Park

Site MSP 001:

GPS: 25° 50' 13.7" S
25° 40' 48.3" E

The site consisted of a low density surface scatter of lithic artefacts and was situated in the north-eastern corner of the proposed property (photo 6). The artefacts were exposed by the opening and grading of a fireguard along the boundary fences of the property. Subsequent sheet erosion also exposed some of the artefacts in this area. The site was not very big and artefacts were found scattered in an area of approximately 30m in diameter. The artefacts included a variety of Late Stone Age flakes, blades and cores (photo 7). The site probably extended across the boundary fence into the neighbouring properties.

Field Rating:	Generally Protected; Grade 4B
Heritage Significance:	Medium significance
Impact:	Moderate
Certainty:	Probable
Duration:	Demolished
Mitigation:	B – Recording before destruction

Site MSP 002:

GPS: 25° 50' 21.2" S
25° 40' 51.5" E

A single grave was identified at this location (photo 8). The grave was situated approximately 5m from the eastern boundary fence on the adjacent property Portion 50 of the Farm Lanric 59 JO. This location was outside of the proposed area for the development, but the grave is included in this report due to its close proximity to the proposed development and the developer is made aware of the grave to avoid any possible damage to this grave.

Field Rating:	Generally Protected A; Grade 4A
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Possible
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required.

9. Recommendations

The following steps and measures are recommended regarding the investigated area:

Mafikeng Solar Park

Site MSP 001:

The identified site was situated in the north-eastern corner of the proposed property. The following measures are recommended for this site:

It is recommended that the identified site should be avoided.

- Demarcate the site as a no go area.
- The identified site should be avoided during the development of the project.
- The proposed earth-moving/bush clearing activities should be altered and should be planned around this site in order to protect it from any damage or other negative impacts.
- A watching brief performed by a suitable qualified person is recommended during the bush clearing and construction phases of the project. This person should see to it that the site is safe and protected during these phases.

If the above recommendations can not be adhered to, further steps and measures should be taken to mitigate and document the site to accepted archaeological standards. This should only be done as last resort if no other options deem to be possible. The following is then required:

- Mitigation measures which will include mapping of the identified site, controlled sampling of identified artefacts and the identification, analysis and storage of the recovered sample by a qualified Stone Age specialist.
- A permit for the destruction of the site from the South African Heritage Resources Agency will be necessary for the mitigation measures as well as further development on this identified heritage site.

Site MSP 002:

The identified grave fall outside of the area intended for development, but the developer should take note of the location of the grave and also of the recommendations as outlined in this report regarding it.

Graves older than 60 years (or presumed older) and/or not in a municipal graveyard are protected in terms of the National Heritage Act (No. 25 of 1999). Human remains (graves) younger than 60 years may only be handled by a registered undertaker or institution declared under the Human Tissues Act.

The developer is required to follow the process described in the legislation (section 36 of Act No. 25 and its associated regulations) if he wants to develop in or near an area where there are graves present.

It is therefore recommended that the area with the grave should be avoided.

If the developer decides to plan the development around the identified grave and leave it undisturbed, adequate arrangements should be made to protect the grave from the impact of the development. These should include the following:

- It is important to understand that the identified grave could have significant heritage value to the relevant families (if identified) and should therefore be preserved.
 - The relevant families should be identified (if possible) and should be informed about the proposed activities which could possibly affect their grave.
 - It is recommended that the identified grave should be clearly marked with danger tape during the entire duration of the project and especially during earth-moving/bush clearing activities and a 10m buffer zone must be allowed around the grave.
 - A watching brief performed by a suitable qualified person is recommended during the bush clearing and construction phases of the project. This person should see to it that the grave is safe and protected during these phases.
 - The proposed earth-moving/bush clearing activities should be altered and should be planned around the grave in order to protect it from any damage or other negative impacts.
 - Bush clearing crews should be made aware of the grave in order that the grave will not be accidentally damaged during the earth-moving activities.
 - The planning team should **ensure that access to the grave is not limited in any way.**
- A small management plan should be set up to ensure the future safety, access and maintenance of the grave next to the proposed development.

Furthermore for the rest of the project:

- The proposed area to be developed was largely disturbed and was previously used for intensive agricultural activities.
- No further site-specific actions or any further heritage mitigation measures are recommended for the rest of the proposed area as no other sites or finds with heritage value or significance were identified in the indicated study area.
- The proposed development of the solar park and its associated connecting power lines in the indicated areas can continue from a heritage point of view if the recommendations as outlined in this report are adhered to.

10. References

Amery, L.S. (Ed.) 1906. The Siege of Mafeking. The Times History of the South African War. Volume IV. Chapter XVII.

Bergh, J.S. (Ed.), 1999. Geskiedenisatlas van Suid-Afrika: Die Vier Noordelike Provinsies. Pretoria: J.L. van Schaik.

Boeyens, J.C.A., 2003. The Late Iron Age Sequence in the Marico and Early Tswana History. The South African Archaeological Bulletin, Vol. 58, No. 178 (Dec., 2003), pp. 63-78.

Comaroff, J.L. (Ed), 1973. The Boer War Diary of Sol T. Plaatje. An African at Mafeking. London: Macmillan.

Dart, R.A., 1925. Australopithecus africanus: the man-ape of South Africa. Nature 115:195–199.

Kuman, K., 2001. An Acheulean Factory Site with Prepared Core Technology near Taung, South Africa. The South African Archaeological Bulletin, Vol. 56, No. 173/174 (Dec., 2001), pp. 8-22.

Mason, R.J., 1974. Background to the Transvaal Iron Age-new discoveries at Olifantspoort and Broederstroom. Journal of the South African Institute of Mining and Metallurgy. January 1974.

Mbenga, B & Manson A., (Eds), no date. A Historical Encyclopaedia of South Africa's North West Province its People, Places and Events. Available online at: <http://www.nwhist.co.za/index.php?pid=1>. Accessed 27th April 2012.

North West Parks and Tourism Board, no date. Available online at: <http://www.tourismnorthwest.co.za/index.html>. Accessed 27th April 2012.

Ouzman, S., 1995. Spiritual and Political Uses of a Rock Engraving Site and Its Imagery by San and Tswana-Speakers. The South African Archaeological Bulletin, Vol. 50, No. 161 (Jun., 1995), pp. 55-67.

Pakenham, T., 1979. The Boer War. Weidenfeld and Nicolson Limited, London.

South African Heritage Resources Agency, 2007. Heritage Sites and Register Sites. Available online at: <http://www.sahra.org.za/PHS%20and%20Register.pdf>. Accessed 27th April 2012.

South African Heritage Resources Agency, 2009. Archaeology and Palaeontology Report Mapping Project. DVD Version 1.0. Cape Town.

APPENDIX A

Photographs



Photo 1: General view of the proposed site from the north-east.



Photo 2: View of the existing buildings on the property.



Photo 3: View of the existing power lines to the west of the site.



Photo 4: View of the Mmabatho substation.



Photo 5: View of the proposed new connecting power line route.



Photo 6: View of site MSP 001.



Photo 7: View of some of the identified lithic artefacts.

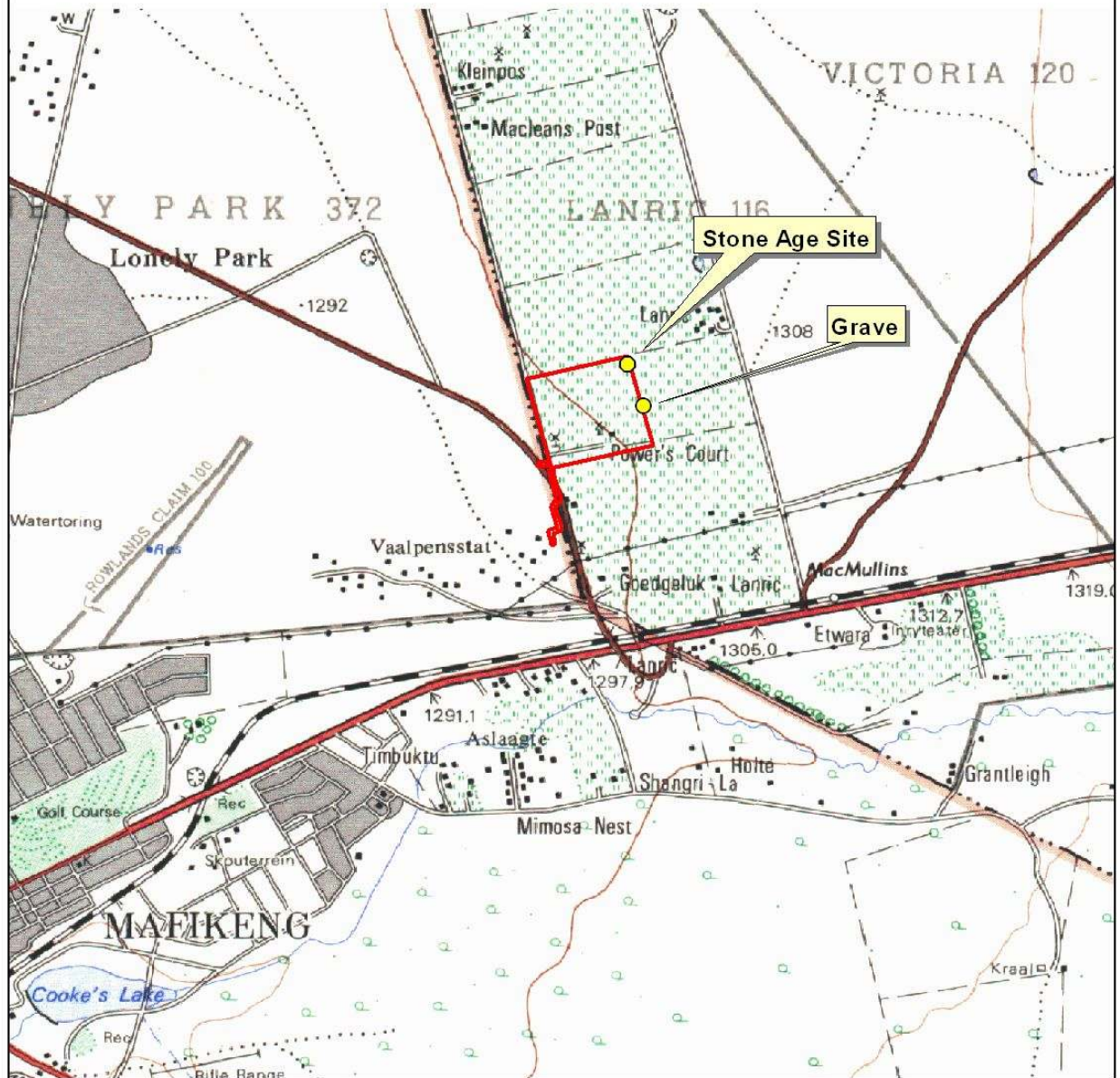


Photo 4: View of the identified grave at site MSP 002.

APPENDIX B

Location Maps

Mafikeng Solar Park



0 2 Kilometers

Scale: 1:20,000



Study area



Heritage Site

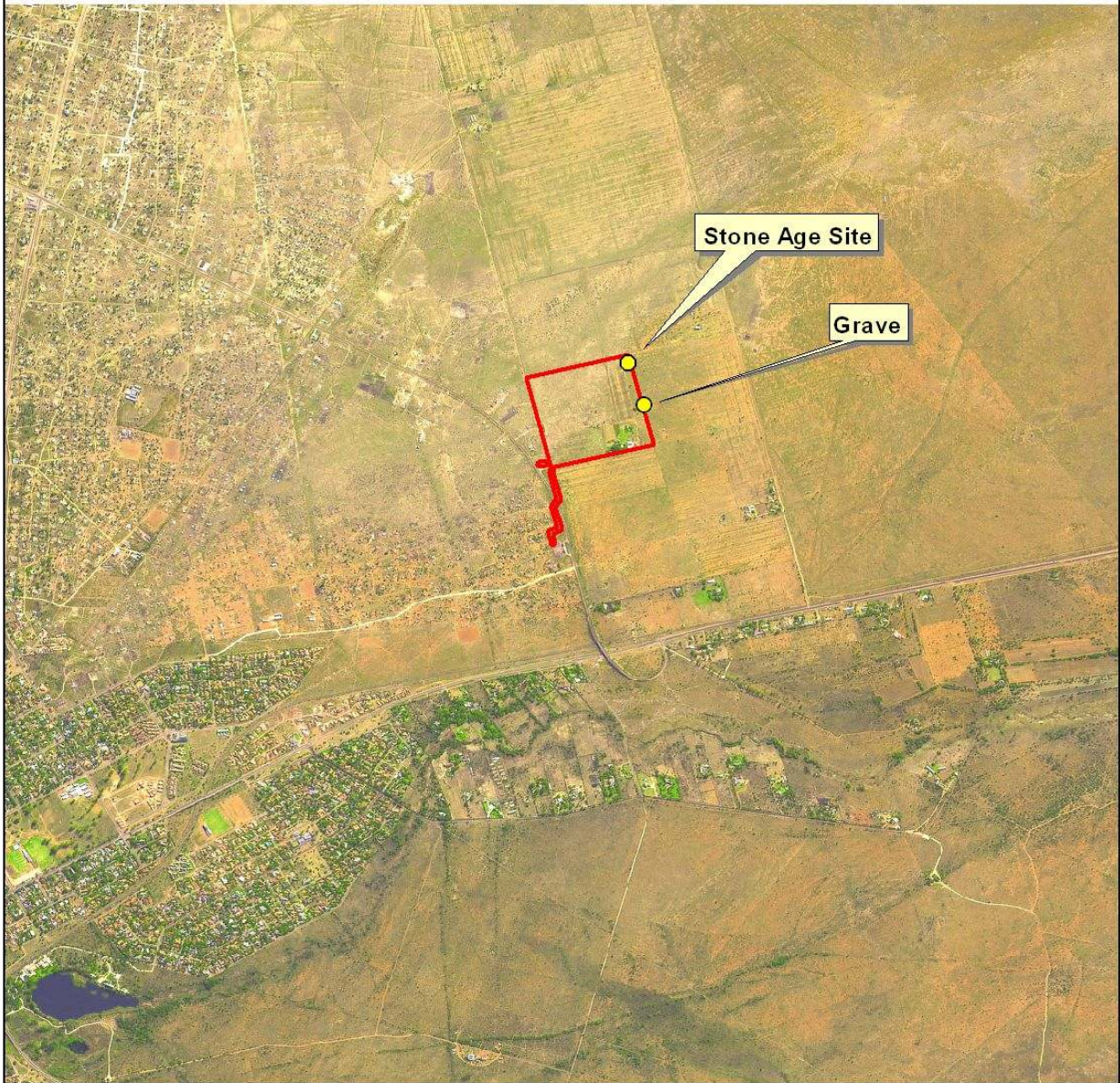
Map: 1:50,000 series Mafikeng 2525 DC

Datum: WGS 84

Property: Portion 5 of the Farm Lanric 59 JO &

Remainder Portion of the farm Lonely Park 372 JO

Mafikeng Solar Park



0 2 Kilometers

Scale: 1:20,000



Study area



Heritage Site

Image: Spot 5 National Mosaic 2525D

Datum: WGS 84

Property: Portion 5 of the Farm Lanric 59 JO &

Remainder Portion of the farm Lonely Park 372 JO

Mafikeng Solar Park



0 0.5 Kilometers

Scale: 1:5,000



Study area



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