
**Archaeological Scoping Report For The Proposed Kison Solar Energy Facility And
Associated Infrastructure, Polokwane, Limpopo Province**

Prepared For

Savannah Environmental (Pty) Ltd

By



HERITAGE

Contracts and Archaeological Consulting

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ACKNOWLEDGEMENT OF RECEIPT

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EXECUTIVE SUMMARY

Site name and location: The Kison Solar Energy Facility is proposed to be developed on portion 19 of the farm Snymansdrift 738, which is approximately 15 km south-west of Polokwane, in the Limpopo Province and within the jurisdiction of Polokwane Local Municipality. The site is bordered by the N1 highway and the R101.

1: 50 000 Topographic Map: 2429 AB

EIA Consultant: Savannah Environmental (Pty) Ltd.

Developer Networx Renewables (Pty) Ltd

Heritage Consultant: Heritage Contracts and Archaeological Consulting CC (HCAC).

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Date of Report: 19 August 2013

Findings of the Assessment:

No sites of archaeological or heritage significance were identified during the desktop study and from an archaeological point of view there is no reason why the development cannot commence work.

A Palaeontological desktop study by Dr John Almond also indicated that the development will have no impact on the fossil record of South Africa.

Disclaimer: *Although all possible care is taken to identify sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. Heritage Contracts and Archaeological Consulting CC 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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- The technology described in any report

Recommendations delivered to the Client.

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Annexure A – Paleontological Desktop Study

ABBREVIATIONS

AIA: Archaeological Impact Assessment
ASAPA: Association of South African Professional Archaeologists
BIA: Basic Impact Assessment
CRM: Cultural Resource Management
ECO: Environmental Control Officer
EIA: Environmental Impact Assessment*
EIA: Early Iron Age*
EIA Practitioner: Environmental Impact Assessment Practitioner
EMP: Environmental Management Plan
ESA: Early Stone Age
GPS: Global Positioning System
HIA: Heritage Impact Assessment
LIA: Late Iron Age
LSA: Late Stone Age
MEC: Member of the Executive Council
MIA: Middle Iron Age
MPRDA: Mineral and Petroleum Resources Development Act
MSA: Middle Stone Age
NEMA: National Environmental Management Act
PRHA: Provincial Heritage Resource Agency
SADC: Southern African Development Community
SAHRA: South African Heritage Resources Agency

**Although EIA refers to both Environmental Impact Assessment and the Early Iron Age both are internationally accepted abbreviations and must be read and interpreted in the context it is used.*

GLOSSARY

Archaeological site (remains of human activity over 100 years old)

Early Stone Age (2 million to 300 000 years ago)

Middle Stone Age (300 000 to 30 000 years ago)

Late Stone Age (30 000 years ago until recent)

Historic (approximately AD 1840 to 1950)

Historic building (over 60 years old)

Lithics: Stone Age artefacts

1. INTRODUCTION

Heritage Contracts and Archaeological Consulting CC was contracted by Savannah (Pty) Ltd to conduct a Heritage Scoping report for the Kison Solar Development.

Networkx Renewables (Pty) Ltd is proposing to construct a commercial photovoltaic (PV) solar energy facility (known as the Kison Solar Energy Facility) with a generating capacity of up to 75 MW, as well as associated infrastructure on a site located approximately 15 km south-west of Polokwane in the Limpopo Province. The heritage scoping report forms part of the EIA for the proposed project.

The aim of the scoping report is to conduct a desktop study to identify possible heritage resources within the project area and to assess their importance within a Local, Provincial and National context. The study furthermore aims to assess the impact of the proposed project on non - renewable heritage resources and to submit appropriate recommendations with regards to the responsible cultural resources management measures that might be required to assist the developer in managing the discovered heritage resources in a responsible manner, in order to protect, preserve and develop them within the framework provided by Heritage legislation.

The report outlines the approach and methodology utilized for the Scoping phase of the project. The report includes information collected from various sources and consultations. Possible impacts are identified and mitigation measures are proposed in the following report. It is important to note that no field work was conducted as part of the scoping phase but will be conducted as part of the Impact Assessment phase of the EIA.

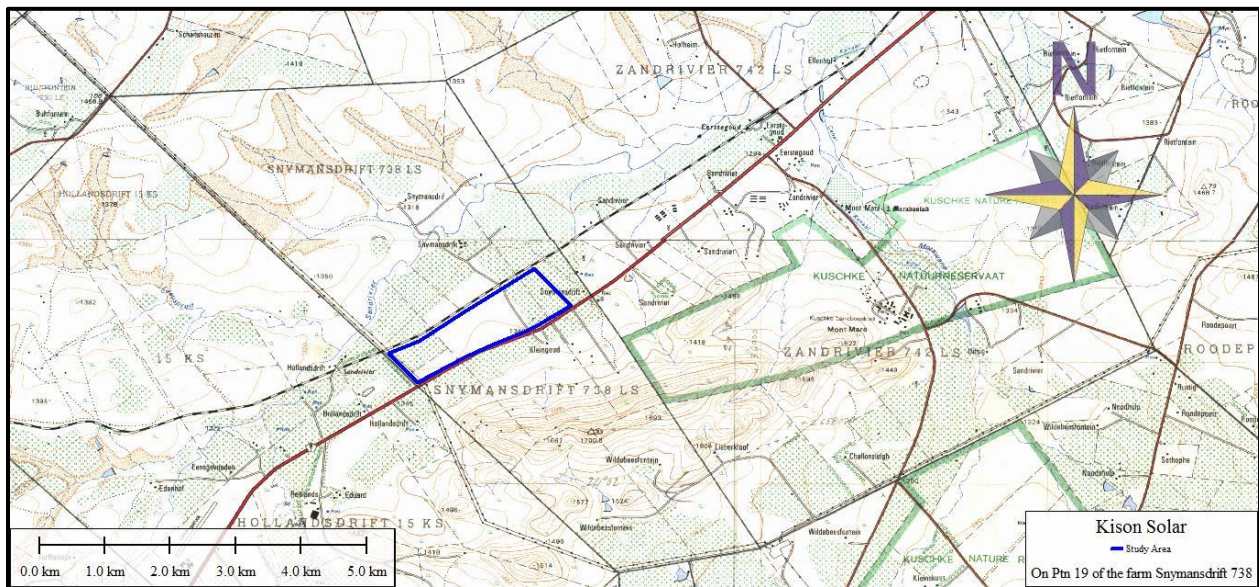


Figure 1: Location Map of the Kison Solar Project.

1.2 Terms of Reference

The main aim of this scoping report is to determine if any known heritage resources occur within the study area and to predict the occurrence of any possible heritage significant sites that might present a fatal flaw to the proposed project. The objectives of the scoping report were to:

- » Conduct a desktop study:
 - * Review available literature, previous heritage studies and other relevant information sources to obtain a thorough understanding of the archaeological and cultural heritage conditions of the area;
 - * Gather data and compile a background history of the area;
 - * Identify known and recorded archaeological and cultural sites;
 - * Determine whether the area is renowned for any cultural and heritage resources, such as Stone Age sites, Iron Age sites, informal graveyards or historical homesteads.
- » Report

The reporting of the scoping component is based on the results and findings of the desk-top study, wherein potential issues associated with the proposed project will be identified, and those issues requiring further investigation through the IA Phase highlighted. Reporting will aim to identify the anticipated impacts, as well as cumulative impacts, of the operational units of the proposed project activity on the identified heritage resources for all 3 development stages of the project, i.e. construction, operation and decommissioning. Reporting will also consider alternatives should any significant sites be impacted on by the proposed project. This is done to assist the developer in managing the discovered heritage resources in a responsible manner, in order to protect, preserve and develop them within the framework provided by Heritage Legislation.

1.3 Nature of the development

The facility is proposed to include several arrays of photovoltaic (PV) solar panels with a generating capacity of up to 75 MW. An area of 125 ha is being considered within which the facility is to be constructed.

Infrastructure associated with the facility will include:

- » Mounting structures to support the PV panels.
- » An on-site inverter to step up the power and a substation to facilitate the connection between the solar energy facility and the Eskom electricity grid.
- » An overhead power line to loop-in and loop out of the existing SAR Geyser – Witkop 132kV power line which traverses the site in the south western boundary.
- » Internal access roads and fencing.
- » Cabling between the projects components, to be laid underground where practical.
- » Workshop area for maintenance and storage.

1.4 The receiving environment

The Kison solar energy facility study area 15 km southwest of Polokwane lies between the R101 tar road to Mokapane and the N1 and railway line, just east of Sandrivier Station. It comprises very flat-lying terrain that is currently largely agricultural land.

The study area falls within the bioregion described by Mucina *et al* (2006) as the Central Bushveld Bioregion with the vegetation described as Polokwane Plateau Bushveld. Land use in the general area is characterized by agriculture, dominated by crops and cattle farming. The study area is characterised by deep sandy to loamy soils.



Figure 2: Google image of the study area.

2. APPROACH AND METHODOLOGY

The assessment is to be undertaken in two phases, a desktop study as part of the Scoping phase and an Archaeological Impact Assessment as part of the Environmental Impact Assessment phase. This report concerns the scoping phase. The aim of the scoping phase is to cover archaeological and cultural heritage data available to compile a background history of the study area. In order to identify possible heritage issues or fatal flaws that should be avoided during development.

This was accomplished by means of the following phases (the results are represented in section 4 of this report):

2.1 Literature search

Utilising data for information gathering stored in the archaeological database at Wits University, published articles on the archaeology and history of the area. The aim of this is to extract data and information on the area in question, looking at archaeological sites, historical sites and graves of the area.

2.2 Information collection

The SAHRA report mapping project (Version 1.0) and SAHRIS was consulted to further collect data from CRM practitioners who undertook work in the area to provide the most comprehensive account of the history of the area where possible.

2.3 Public consultation

No public consultation was conducted during this phase.

2.4 Google Earth and mapping survey

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where archaeological sites might be located.

2.5 Genealogical Society of South Africa

The database of the genealogical society was consulted to collect data on any known graves in the area.

3. LEGISLATION

For this project the National Heritage Resources Act, 1999 (Act No. 25 of 1999) is of importance and the following sites and features are protected:

- a. Archaeological artefacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The national estate that includes the following:

- a. Places, buildings, structures and equipment of cultural significance
- b. Places to which oral traditions are attached or which are associated with living heritage
- c. Historical settlements and townscapes
- d. Landscapes and features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Archaeological and palaeontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

Section 34 (1) of the act deals with structures which is older than 60 years. Section 35(4) of this act deals with archaeology, palaeontology and meteorites. Section 36(3) of the National Heritage Resources Act, deals with human remains older than 60 years. Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

3.1 Heritage Site Significance and Mitigation Measures

The presence and distribution of heritage resources define a Heritage Landscape. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface.

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. National and Provincial Monuments are recognised for conservation purposes. The following interrelated criteria were used to establish site significance:

- » The unique nature of a site;
- » The integrity of the archaeological/cultural heritage deposit;
- » The wider historic, archaeological and geographic context of the site;
- » The location of the site in relation to other similar sites or features;
- » The depth of the archaeological deposit (when it can be determined or is known);
- » The preservation condition of the site;
- » Potential to answer present research questions.

The criteria above will be used to place identified sites with in SAHRA's (2006) system of grading of places and objects which form part of the national estate. This system is approved by ASAPA for the SADC region. The recommendations for each site should be read in conjunction with section 11 of this report.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
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)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C	-	Low significance	Destruction

(GP.C)			
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4. REGIONAL OVERVIEW

4.1 General Information

4.1.1. Literature search

Seventeen previously recorded sites exist with the Archaeological databases at Wits University (referenced 2009) for the 2429 AB Topographical map. These sites consist of MSA, LIA and historic sites. The closest sites to the study area consist of LIA Ndebele sites on the farm Palmietfontein 13.5 km to the east.

4.1.2. Information collection

Several previous heritage studies were conducted in the general study area (SAHRA report mapping project V1.0 and SAHRIS) by Gaigher (2002), F Roodt (2001 & 2007), Murimbika & Mabuda (2005) and van Schalkwyk (2007).

4.1.3. Public consultation

No public consultation was conducted during the scoping phase.

4.1.4. Google Earth and mapping survey

Google Earth and 1:50 000 maps of the area was utilised to identify possible places where archaeological sites might be located.

4.1.5. Genealogical Society of South Africa

No grave sites are indicated within the study area.

4.2 Archaeological and Historical Information Available on the Study Area

Few Afrikaner people visited the Zoutpansberg Region before the first Voortrekker Leaders, Louis Tregardt (1783–1838) and Lang Hans van Rensburg crossed the Pietersburg Plateau during 1836. They were merely travelling through the area and only during 1848 did Andries Hendrik Potgieter (1792-1852) arrive to establish a permanent Afrikaner settlement in this part of the world. This was agreed with Tregardt ten years earlier.

Andries Hendrik Potgieter set up the first Afrikaner settlement in Ohrigstad in 1845, some distance from Pietersburg. Later some Voortrekkers moved with Potgieter late in 1848 and settled in a town they called Zoutpansberg-dorp, about 100 km North West of the current town of Polokwane. This was later changed to Schoemansdal.

“Swart” Barend Vorster and some other families settled to the north of the present town during the winter of 1847 in anticipation to the arrival of Potgieter. Potgieter moved to the Zoutpansberg but many Voortrekkers chose farmland on the plateau. Amongst those were ancestors of present day community leaders, including the Vorster, Duvenhage, Snyman, Vercueil and Grobler-families.

Meanwhile, the Volksraad, acting on a request from Potgieter, founded a town in Makapanspoort called Vredenburg. Later renamed Potgietersrus, it became the neighbour of Pietersburg, a town of similar size some 60km to the south, and part of the ZAR.

The constitution of the Republic excluded Black, Indian and Coloured people from exercising equal rights in both Church and State, and the official language was Dutch. The Transvaal

tended to rely on Holland for guidance in religious and educational matters, and many teachers and ministers migrated to the ZAR from Holland.

Potgieter died in December 1852, and his son Piet Potgieter succeeded him. In 1854 Hermanus Potgieter, brother of Piet, was killed during clashes with Chief Makapaan. Piet mobilised a command and drove Makapaan into hiding in a cave, where he was besieged. Both Makapaan and Piet Potgieter were killed in the episode, and Vredenburg was renamed Pietpotgietersrus in honour of the leader.

Potgieter's widow married Stephanus Schoeman, who became Acting Commandant General of the Zoutpansberg in 1855. He renamed the area Schoemansdal, after himself.

The Venda under Magato challenged the Boers' over grazing and hunting territory and Paul Kruger and his troops were forced to abandon Schoemansdal, which was razed to the ground in 1867.

Many living in Pietpotgietersrus died of malaria, and by April 1870 the town had to be abandoned. They returned in 1890, and made Marabastad, the northernmost point of the ZAR, the seat of the landdrost.

When gold was discovered on the farm Eersteling in 1871, the first gold rush in the Transvaal followed. An influx of uitlanders (foreigners) began to pose a political problem. President Burgers sought to end the isolation of the Transvaal by developing relations with non-English colonial powers, and in 1875 began a round of negotiations with Portugal to secure access to the sea via a rail link to Delagoa Bay.

The British annexed the Transvaal in 1877, rendering the Boers British subjects. The increasingly hostile relations with the Zulu and Pedi became a problem for both the Boers and the British. A bloody war between the Boers, British and Pedi broke out on 28 November 1879, lasting until 2 December of the same year. A white army in alliance with a 12000-strong Swazi contingent defeated the Pedi standing army of 10000, with King Sekhukhune I losing his brothers and sons.

The Boers, unhappy with British domination, rallied and the first Anglo-Boer War broke out from 1880 to 1881. The victory of the Boers, sealed after the Battle of Majuba, led to the granting of self-government – under the suzerainty of the Queen. The victory was celebrated in the Zoutpansberg district on 16 December 1881 initiated a renewed gold rush, with prospectors converging on the village of Marabastad.

With Potgietersrus and Schoemansdal abandoned, the Boers had to decide where to establish a new capital. In 1883 General Petrus Jacobus (Piet) Joubert was appointed to find a site to compensate the Boers who had been forced to leave Schoemansdal 16 years earlier, and the farm Sterkloop was chosen as an appropriate site. Joubert presented his findings to the Executive Council in Pretoria and a land surveyor was appointed to map out the new town, which was called Pietersburg.

The site, the property of BJ Vorster and Gert Emmenis, was bought by the government on 29 January 1884, and land surveyor GR von Wielligh set out 150 plots, 94 of which were given free of charge to people who had lost land in Schoemansdal. The remainder was sold for six pounds each.

According to most records Pietersburg was named after a well-known General, Petrus (Piet) Jacobus Joubert. According to www.sahistory.co.za, however the town was named after of a respected pioneer and elder, one P.J.L. (Pieter) Venter (1811–1894). He was appointed

the first Elder of the Hervormde Church, the then State Church of the Z.A.R., in the Ward Zoutpansberg, two years before the Church inaugurated him.

The secretary to the Executive recorded that the new town was to be called Pietersburg, and wrote in the records that it was the Commandant General who had been honoured in this way. Up to today the official records still claim Piet Joubert to be the one whose name was given to this frontier town.

Regarding names of the area and settlement, some more information is available - On the banks of the Sand River, about eight kilometers west of the present day town, the Pedi people practiced an initiation school, named Polokwane. When ox wagons started moving along the Sand River regularly as from 1848, this institution was moved to maintain the required cloistral placement, but the name for the area was kept alive up to the present day. In February 2002, the city was renamed Polokwane – the Northern Sotho word which means "Place of Safety." (http://www.polokwane.gov.za/index.php?view_page+493)

The name Upsala (from *Opsaal*, meaning "Saddle Up") was also used, due to the fact that, just north of the present day town on the banks of the Sand River the farm Doornkraal was used as gathering point for the Commando when they were needed for military operations. Fred Jeppe, the Government cartographer, wrote in the Journal of the Royal Geographic Society that this place was formerly called Upsala by a landowner who was of Swedish descent. This might have been a reflection on the well-known Oscar Dahl, who originated from Scandinavia, Upsala being a well-known Swedish university town. However, the name Pietersburg was given and as such the village became a town and grew to a city, at present the capital of the Limpopo Province (www.sahistory.co.za).

On the 31st of July 1886 Landdros (Magistrate) Dietlof Siegfred Mare wrote his first official letter from the magistrate's court and the town was officially recognized. The main street through the city centre is known as " Landdros Mare Street" to this day (www.polokwane.gov.za). He died during 1890 and was laid to rest on his nearby farm at Marabastad. His descendants still farm here. The very next day G.G. Munnik, the later Senator, was named his successor but was only inaugurated on 30 May 1892 *inter alia* as a result of the remoteness of the northern region of the old Transvaal.

By 1888, the railway from Pietersburg to Pretoria was completed.

The inhabitants of New Smitsdorp moved en masse to Pietersburg in 1888, and the population began to increase at a faster rate. In 1889 there were 200 whites, and by 1893 the white population quadrupled to 800.

Of the 52 male land owners in the new town of Pietersburg during 1889, many successors still fill important positions in the present day city. Anderson was a painter, Basson a farmer, De Bont a land surveyor, Van der Burg a carpenter, Celliers, a teacher, Devenish the land surveyor, Erlank the postmaster, Groenewald a baker and butcher, Jorisson the magistrate clerk, Maré the magistrate, Van der Merwe the policeman, De Waal, a storekeeper as well as Byleveld, Hattingh, Prinsloo, Schuster, Viljoen and De Villiers.

Most of the original inhabitants of the new town came from the Afrikaner Cultural Community, but due to the finding of gold at Eersteling, and the influx of gold diggers and traders, a substantial portion of Pietersburgers were English speaking before the end of the century. Even so music evenings and dance parties, debating and picnics became popular within the Afrikaner community. The Review Circulating Library, founded during the first ten years, was the forerunner of the present day public library.

To many Voortrekkers the Statenbijbel, the old High Dutch version of the Bible, was not only their compass in life, but also the only means to become literate. Therefore, to the people of Pietersburg the education of their children was paramount. After the evacuation of Schoemansdal, the reverend Van Warmelo appointed Mr. Cornelius van Boeschoten as full time teacher.

This gentleman had to teach without pay for many months, as the community was too poor to remunerate him. Various schools came into being and during 1889 the Dutch (Afrikaans) school in the new town already had 50 scholars, with ward schools at Kalkbank, Marabastad, Rhenosterpoort, Nooitgedacht and Houtboschdorp.

The organised religious life of the Afrikaner had a definite influence on the development of Pietersburg, as in most towns in South Africa where the church played a major role in their establishment. The official church in the Transvaal had been the Hervormde Church, which founded a formal congregation at Schoemansdal in 1853. When the town was evacuated, the then reverend, Reverend Van Warmelo evacuated the church as the community moved south. A corrugated iron church was later erected at Marabastad, some ten kilometers west of where Pietersburg is situated at present. The Cape based Dutch Reformed Church sent a missionary to the north, Stephanus Johannes Gerhardus Hofmeyr (1839-1905). He started working amongst the Buys people, but soon delivered sermons to the Afrikaner people as well (www.sahistory.co.za)

The leadership of these two sister churches rubbed shoulders from the start. The Hervormers being strict Calvinists, were closely linked to the Hervormde Church in the Netherlands. The Dutch Reformed Church had the same origin, but was influenced by the Scottish preachers due to the British annexation of the Cape Colony in 1806. At the time of the establishment of the new town, a movement was launched to unify the Church throughout South Africa. This unification was driven by ministers from the Cape based Dutch Reformed Church and was strongly opposed by many Hervormers.

In Pietersburg this nearly led to bloodshed as the United faction (the NG people) under leadership of Commandant "Swart" Barend Vorster, wanted the corrugated iron church to be moved to the new town for their use, but the Hervormers with the magistrates clerk Jorrisen in the lead, refused to let go of their property and threatened to protect same with firearms if the need arose. Due to the discord, the Reverend L.G.F. Biccard, who succeeded Reverend N.J. van Warmelo resigned and became Mine Commissioner, initially in the digger's town of Nuwe Smitsdorp, and as from 1892 in Pietersburg.

A tense ceasefire was upheld until, following various court cases and discussions, the corrugated iron church was re-erected by the Hervormers in the new town and Reverend M.J. Goddefroy opened the new church for the Hervormers during 1891, situated in Church Street. During 1889 Reverend P.J.J. Boshoff became the first full-time minister of the Dutch Reformed Church, and the congregation built their own church which, today, serves as the photographic museum of the town.

Travelling to Pietersburg and the Zoutpansberg region was a time consuming activity. From Pretoria to the new town by ox wagon could take up to two weeks. Thus the trade was slow and development suffered accordingly. To assist with development and upgrade roads, a district council was formed in 1884, taxing all male citizens 2/6 (twenty five cents) per year Road Tax. In this council people such as P.J. du Preez, J.F. Grobler and Joao Albasini served.

During March 1889, stage coaches came to town. These 18 passenger coaches then took over the weekly postal delivery from the ox wagon from Pretoria. George Heys and the Zeederberg brothers operated the two competing stage lines. A journey by stage coach took

two days, from two in the morning till ten at night. During 1891 the need was identified for a railroad to be built. The next year it was reported in the local newspaper that an average of twelve fully laden ox wagons arrived in town daily. "Klein" Barend Vorster, the local Member of the Volksraad (Parliament) supported this new development and on 30 October 1895 the tender of H.J. Schoeman was accepted.

As the new town developed, so did organised sport. The magistrate G.G. Munnik (later to be senator) chaired the Zoutpansberg Turf Club founded in 1892. The same year a billiard club was founded, as well as the Pietersburg Wanderers Club promoting athletics and cycling. Tug of War was also a popular sport. Cricket was played since 1892 and during 1894 the tennis club was founded. On 12 May 1895 the Pietersburg Football Club played its first game of soccer. (<http://www.sahistory.org.za/polokwane/afrikaans-community-1883-1899?page=8>)

The Pretoria-Pietersburg Railway Company was founded on 13 May 1896 in London, and on 31 May 1899 the official opening of the railroad was celebrated as the first locomotive steamed into the newly developed Pietersburg Station. Daily service, leaving Pietersburg at 6:50 every morning to arrive at Pretoria at 17:50 the afternoon was installed on 2 June and became so popular that on 13 October the same year the Company declared that they were profitable.

The discovery of gold on the Witwatersrand proved to be the undoing of the Boer Republic. It intensified the influx of uitlanders and the subsequent political problems of the Republic. The homogeneity of the Boers was destroyed by the influx, and British influence increased, not least with the influx of foreign capital and a new class of British capitalists. President Kruger was greatly threatened by this development, and refused to make concessions to the British in his midst. The Volksraad tightened the franchise qualifications to limit the number of British voters, while the British Colonial Office began to sponsor the uitlanders, the tensions resulting in the abortive Jameson Raid in 1895.

The development of rail links to Cape Town, Durban and Delagoa Bay also saw a heightening of tensions, bringing tariff and customs rivalries.

When Alfred Milner met Kruger at a June 1899 conference in Bloemfontein, his terms were so uncompromising that no agreement could be reached, and war became inevitable. The South African War broke out in October 1899. Sadly, the outbreak of the Anglo Boer War brought to an end the first chapter of the history of the bastion of the north, the frontier town, Pietersburg. The British built a concentration camp at Pietersburg during the Boer War to house almost 4,000 Boer women and children.

The capitulation of the Boers came on 31 May 1902. Sixty representatives of the two Boer states had met to discuss the terms of surrender offered by Britain. <http://www.sahistory.org.za/pietersburg/colonial-history-polokwane>

5. Archaeological Background

5.1 Palaeontology

5.1.1. Palaeontological Assessment

The paleontological importance of the study area was assessed by Dr John Almond (2013) and he concluded the following:

"The proposed Kison solar energy facility near Polokwane, Limpopo, is underlain by unfossiliferous Precambrian gneisses as well as superficial sediments (gravels, soils *etc*) of low palaeontological sensitivity. The impact significance of the development on local fossil heritage resources is considered to be Low. It is therefore recommended that exemption from further specialist palaeontological studies is granted for the proposed Kison solar energy facility near Polokwane.

Any substantial fossil remains (*e.g.* fossil shells, petrified wood or plant remains, vertebrate bones, teeth) encountered during excavation should be reported to SAHRA for possible mitigation by a professional palaeontologist."

The palaeontological study is included as Annexure A.

5.2 Earlier Stone Age

Hominids began to make stone tools about 2.6 million years ago. Known as the Oldowan industry, most of the earliest tools were rough cobble cores and simple flakes. The flakes were used for such activities as skinning and cutting meat from scavenged animals. These early artefacts are difficult to recognize and have so far only been found in rock shelters such as the Sterkfontein Caves (Kuman, 1998); they are unlikely to occur in the study area.

At about 1.4 million years ago hominids started producing more recognizable stone artefacts such as hand axes, cleavers and core tools (Deacon & Deacon, 1999). Among other things these Acheulian tools were probably used to butcher large animals such as elephants, rhinoceros and hippopotamus that had died from natural causes. Acheulian artefacts are usually found near the raw material from where they were quarried, at butchering sites, or as isolated finds. However, isolated finds have little value. Therefore, the project is unlikely to disturb a significant site. The presence and significance of finds can be determined by a field investigation.

5.3 Middle Stone Age

By the beginning of the Middle Stone Age (MSA), tool kits included prepared cores, parallel-sided blades and triangular points hafted to make spears (Volman, 1984). MSA people had become accomplished hunters by this time, especially of large grazing animals such as wildebeest, hartebeest and eland.

These hunters are classified as early humans, but by 100,000 years ago, they were anatomically fully modern. The oldest evidence for this change has been found in South Africa, and it is an important point in debates about the origins of modern humanity. In particular, the degree to which behaviour was fully modern is still a matter of debate. The repeated use of caves indicates that MSA people had developed the concept of a home base and that they could make fire. These were two important steps in cultural evolution (Deacon & Deacon, 1999). As there are no caves in the study area, there is a low possibility of finding sites of high significance in the area.

5.4 Later Stone Age

By the beginning of the Later Stone Age (LSA), human behaviour was undoubtedly modern. Uniquely human traits, such as rock art and purposeful burials with ornaments, became a regular practice. These people were the ancestors of the San (or Bushmen).

San rock art has a well-earned reputation for aesthetic appeal and symbolic complexity (Lewis-Williams, 1981). In addition to art, LSA sites contain diagnostic artefacts, including

microlithic scrapers and segments made from very fine-grained rock (Wadley, 1987). Spear hunting probably continued, but LSA people also hunted small game with bows and poisoned arrows. Important LSA deposits have been excavated in Oliboompoort Cave (Mason, 1962) and other sites in the Waterberg to the north west (Van der Ryst, 1998). According to Bergh (1999) no Stone Age sites or occurrences are known in the direct area, although some MSA sites, including rock paintings, are known in the larger geographical area around Polokwane (Bergh 1999:4-5). This includes a site called Grace Dieu and another called Mwulu's Cave. Sites in the open are usually poorly preserved and therefore have less value than sites in caves or rock shelters. As there are no caves in the study area, there is a low possibility of finding sites of high significance in the area.

5.5 The Iron Age (AD 400 to 1840)

Bantu-speaking people moved into Eastern and Southern Africa about 2,000 years ago (Mitchell, 2002). These people cultivated sorghum and millets, herded cattle and small stock and manufactured iron tools and copper ornaments. Because metalworking represents a new technology, archaeologists call this period the Iron Age. Characteristic ceramic styles help archaeologists to separate the sites into different groups and time periods. The first 1,000 years is called the Early Iron Age.

As mixed farmers, Iron Age people usually lived in semi-permanent settlements consisting of pole-and-daga (mud mixed with dung) houses and grain bins arranged around a central area for cattle (Huffman, 1982). Usually, these settlements with the 'Central Cattle Pattern' (CCP) were sited near water and good soils that could be cultivated with an iron hoe. For the project area, archaeological sites such as these may occur.

According to the most recent archaeological cultural distribution sequences by Huffman (2007), the study area falls within the distribution area of various cultural groupings originating out of both the Urewe Tradition (eastern stream of migration) and the Kalundu Tradition (western stream of migration). The facies that may be present are:

This could include the Mzonjani facies of the Urewe Tradition, dating to between AD450 and AD750 (Huffman 2007); the Doornkop facies of the Kalundu Tradition (AD750 to AD1000); the Eiland facies of the same tradition dating between AD1000 and AD1300; the Icon facies of the Urewe Tradition (AD1300-1500), as well as the Letaba facies of Kalundu, dating to between AD1600 – AD1840. Most notably for the area is the LIA Ndebele walling (Loubser 1991) just to the east of the project area.

6 PROBABILITY OF OCCURRENCE OF SITES

Based on the above information, it is possible to determine the probability of finding archaeological and cultural heritage sites within the study area to a certain degree. For the purposes of this section of the report the following terms are used – low, medium and high probability. Low indicates that no known occurrences of sites have been found previously in the general study area, medium probability indicates some known occurrences in the general study area are documented and can therefore be expected in the study area and a high probability indicates that occurrences have been documented close to or in the study area and that the environment of the study area has a high degree of probability having sites.

» Palaeontological landscape

Fossil remains. Such resources are typically found in specific geographical areas, e.g. the Karoo and are embedded in ancient rock and limestone/calcrete formations exposed by road cuttings and quarry excavation: *Low -medium*.

» Archaeological And Cultural Heritage Landscape

NOTE: *Archaeology is the study of human material and remains (by definition) and is not restricted in any formal way as being below the ground surface.*

Archaeological remains dating to the following periods can be expected within the study area:

» Stone Age finds

ESA: *Low-Medium Probability*
 MSA: *Low-Medium Probability*
 LSA: *Low-Medium Probability*
 LSA –Herder: *Low Probability*

» Iron Age finds

EIA: *Low-Medium Probability*
 MIA: *Low Probability*
 LIA: *Low-Medium Probability*

» Historical finds

Historical period: *Low-Medium Probability*
 Historical dumps: *Low-Medium Probability*
 Structural remains: *Low-Medium Probability*
 Cultural Landscape: *low probability*

» Living Heritage

For example rainmaking sites: *Low Probability*

» Burial/Cemeteries

Burials over 100 years: *Low-Medium Probability*
 Burials younger than 60 years: *Medium Probability*

Subsurface excavations including ground levelling, landscaping, and foundation preparation can expose any number of these.

7. ASSUMPTIONS AND LIMITATIONS

The study area was not subjected to a field survey as this will be done in the EIA phase. It is assumed that information obtained for the wider area is applicable to the study area.

8. FINDINGS

The heritage scoping study revealed that the following heritage sites, features and objects that can be expected within the study area.

8.1. Palaeontological

Any construction activities for this site would not impact severely on the fossil record of South Africa.

8.2. Archaeology

8.2.1 Archaeological finds

There is a low -medium likelihood of finding MSA sites scattered over the study area. Iron Age sites in the region is characterised by Decorated pottery belonging to stylistic facies known as *Eiland and Letaba facies* with extensive stone walled settlements associated with a Ndebele occupation.

Other studies in the area (Roodt (2001; 2007) , Murimbika & Mabuda (2005), van Schalkwyk (2007) to name a few did not record any sites close to the current study and it is not anticipated that there will be any red flags for this development.

8.2.2 Nature of Impact

The construction phase of the project could directly impact on surface and subsurface archaeological sites.

8.2.3 Extent of impact

The project could have a low to medium impact on a local scale.

8.3. Historical period

8.3.1 Historical finds: I

Historical finds include middens, structural remains and cultural landscape. The study area has been used extensively for agricultural purposes in the past and features dating to this period associated with farming can occur.

8.3.2 Nature of Impact

The construction of the project can directly impact on both the visual context and sense of place of historical sites. There are few structures identified in the study area

8.3.3 Extent of impact

The construction of the project could have a low impact on a local scale.

8.4. Burials and Cemeteries

8.4.1 Burials and Cemeteries

Graves and informal cemeteries can be expected anywhere on the landscape.

8.4.2 Nature of Impact

The construction and operation of the proposed project could directly impact on marked and unmarked graves.

8.4.3 Extent of impact

The project could have a low to medium impact on a local scale.

9. POTENTIAL SIGNIFICANCE OF HERITAGE RESOURCES

Based on the current information obtained for the area at a desktop level it is anticipated that any sites that occur within the proposed development area will have a Generally Protected B (GP.B) field rating and all sites should be mitigatable and no red flags are identified.

10. CONCLUSIONS AND RECOMMENDATIONS

This scoping study revealed that a range of heritage sites occur in the larger region and similar sites can be expected within the study area. Every site is relevant to the Heritage Landscape, but it is anticipated that no site in the study area could have conservation value. The following conclusions are applicable to the following sites:

» Archaeological sites

All sites could be mitigated either in the form of conservation of the sites with in the development or by a Phase 2 study where the sites will be recorded and sampled before the client can apply for a destruction permit for these sites prior to development.

» Historical finds and Cultural landscape

It is not anticipated that the built environment will be severely impacted upon as no structures occur within the study area (based on Google Earth). This assumption will how ever have to be verified in the field.

» Burials and cemeteries

Formal and informal cemeteries as well as pre-colonial graves occur widely across Southern Africa. It is generally recommended that these sites are preserved with in a development. These sites can how ever be relocated if conservation is not possible, but this option must be seen as a last resort and is not advisable. The presence of any grave sites must be confirmed during the field survey and the public consultation process.

» General

It is recommended that as part of the public consultation process the presence of graves, archaeological and historical sites should be determined.

11. PLAN OF STUDY

In order to comply with the National Heritage Resources Act (Act 25 of 1999) a Phase 1 Archaeological Impact Assessment must be undertaken. During this study sites of archaeological, historical or places of cultural interest must be located, identified, recorded, photographed and described. During this study the levels of significance of recorded heritage resources must be determined and mitigation proposed should any significant sites be impacted upon, ensuring that all the requirements of SAHRA are met.

Dr John Almond assessed the study area at a desktop level for paleontological resources, he concluded that no further paleontological work will be required during the EIA phase. If SAHRA concurs with his assessment, no further paleontological work will be needed for this project. His letter is included as Annexure A.

12. LIST OF PREPARERS

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13. STATEMENT OF COMPETENCY

The author of the report is a member of the Association of Southern African Professional Archaeologists and is also accredited in the following fields of the Cultural Resource Management (CRM) Section, member number 159: Iron Age Archaeology, Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation. Jaco is also an accredited CRM Archaeologist with SAHRA and AMAFA.

Jaco has been involved in research and contract work in South Africa, Botswana, Mozambique, Zimbabwe, Tanzania and the DRC and conducted well over 300 AIAs since he started his career in CRM in 2000. This involved several mining operations, Eskom transmission and distribution projects and infrastructure developments. The results of several of these projects were presented at international and local conferences.

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