
**Archaeological Scoping Report for the Proposed Kgabalatsane Solar Facility
(50MW), North-West Province**

Prepared For

Savannah Environmental (Pty) Ltd

By



HERITAGE
Contracts and Archaeological Consulting

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EXECUTIVE SUMMARY

Site name and location: The proposed Kgabalatsane PV Solar Facility will have a maximum generating capacity of 50MW on the farm Syferfontein 430 JQ. The study area is located south of the Odi Aerodrome near Kgabalatsane in the North-West Province.

1: 50 000 Topographic Map: 2527 DB

EIA Consultant: Savannah Environmental (Pty) Ltd.

Developer: Built Environment Africa Energy Services (Pty) Ltd

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

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Date of Report: 26 April 2013

Findings of the Assessment:

This report attempted to give a brief account of the history of the Farm Syferfontein 430JQ and general surrounds. By consulting various databases, maps, archival and a field visit, it was possible to compile a brief history regarding human settlement in the area. It seems that the Bakwena-ba-Magopa tribe owned the farm and also several other farms in the area from at least the late 1800's. Prospecting and mining of iron ore commenced on the farm during the 1950's. The land was first leased to a Minerals Engineering Company South Africa Pty Ltd and subsequently to the Transvaal Vanadium Co Pty Ltd. The farm became part of the Bophuthatswana homeland in the late 1970's. Site visits to the area revealed no heritage resources as the area was cultivated in the past. A Palaeontological desktop study by (Bamford 2012) also indicated that the development will have no impact on the fossil record of South Africa.

Every site is relevant to the Heritage Landscape, but based on the current information obtained for the area at a desktop level and brief site visit it is anticipated that few if any sites occur within the study area or has conservation value, therefore not fatal flaws are expected.

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Recommendations delivered to the Client.

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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 as part of the EIA process for the Kgalabatsane Solar Development.

Built Environment Africa Energy Services (Pty) Ltd is proposing to develop a 50 MW facility on the farm Syferfontein, located south of the Odi Aerodrome near Kgalabatsane in the North-West Province. The proposed project is to expand the facility such that the total facility capacity is 50MW. The proposed facility is located approximately 18 km north-east of Brits in the North West Province.

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 a plan of study are proposed in the following report. It is important to note that the study area was not subjected to a thorough survey as part of the scoping phase but will be conducted as part of the Impact Assessment phase of the EIA.

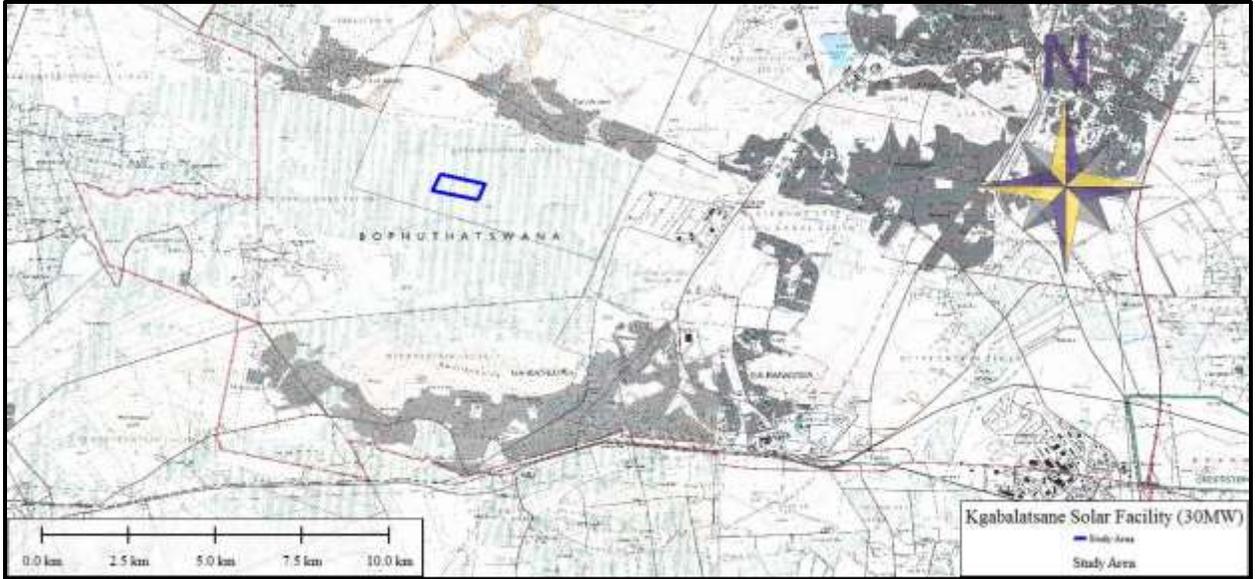


Figure 1: Location map



Figure 2: Study area in relation to approved area in red

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 solar energy facility is proposed to comprise the following infrastructure:

- » Photovoltaic (PV) panels
- » Proposed on-site substation to evacuate the power from the facility via a new 132kV power line into the Garankuwa substation. The proposed 132kV power line will be ~16km in length. Alternatively, the power would be excavated via the new onsite substation via a loop in loop out to the existing power line which is approximately 3km from the onsite substation.
- » Mounting structures to be either rammed steel piles or piles with pre-manufactured concrete footings to support the PV panels.
- » Cabling between the project components, to be lain underground where practical.
- » Internal access roads and fencing.
- » Workshop area for maintenance, storage, and offices.

The overall aim of the design and layout of the facility is to maximise electricity production through **exposure to the solar radiation**, while minimising infrastructure, operation and maintenance costs, as well as **social and environmental impacts**. The use of solar energy for power generation can be described as a non-consumptive use of natural resources which emits zero greenhouse gas emissions. The generation of renewable energy contributes to South Africa's electricity generating market which has been dominated by coal-based power generation.

1.4 The receiving environment

The proposed solar facility is located on the farm Syferfontein 430 JQ which is situated approximately 18 km north east of Brits in the North West Province. North of the site is the Odi Aerodrome that is no longer used as an airport. The study area is considered to be highly desirable for the establishment of a solar facility based on several key factors such as solar resource, climatic conditions, extent of the site, orographic conditions, availability of land, and grid connection.

The topography of the area is relatively flat and was used for agricultural purposes in the past. The study area falls within the bioregion described by Mucina *et al* (2006) as the Central Bushveld Bioregion with the vegetation described as Marikana thornveld. Land use in the general area is characterized by subsistence agriculture, dominated by crops and cattle farming. The study area is characterised by deep sandy to loamy soils.

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) 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.

Furthermore, The National Heritage Resources Act (Act No 25 of 1999, Sec 3) distinguishes nine criteria for places and objects to qualify as 'part of the national estate' if they have cultural significance or other special value. These criteria are:

- » Its importance in/to 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;
- » Sites of significance, relating to the history of slavery in South Africa.

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 (GP.C) | - | Low significance | Destruction |

4. REGIONAL OVERVIEW

4.1 General Information

4.1.1. Literature search

Thirty seven previously recorded sites are on record for the 2527 DB topographic map at the Wits database. These sites all consist of MSA, LSA, Rock paintings and LIA Moloko stonewalled sites (referenced 2009). None of these sites are in close proximity to the study area.

4.1.2. Information collection

The SAHRA Report Mapping project (version 1) does not have any surveys on record close to the study area (in a radius of 1.6km). Several unpublished CRM projects were conducted to the south east (van der Walt 2008 & 2012, Pelser 2007, Kusel 2003, Van Schalkwyk. & Moifatswane 2003 and van Vollenhoven 1992).

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.

5. Archaeological Background

5.1 Palaeontology

A Palaeontological desktop study by Prof Marion Bamford (2012) on the farm Syferfontein 430 JQ for the previously authorised Kgabalatsane 2 x 10MW PV facilities indicated that the development will have no impact on the fossil record of South Africa. She concluded the following "Geologically it is in the Bushveld Complex and close to established platinum mines that are exploiting the Merensky reef. The underlying rocks are part of the western limb of the Rustenburg Layered Suite which comprises a complete differentiation sequence for a basic magma. These intrusive rocks have a noritic marginal zone and gabbronoritic main zone. More specifically the site has the Upper Zone of the Rustenburg Layered suite: the Pyramid gabbro/norite and the underlying Main Zone: the Bierkraal magnetite and gabbro. These igneous rocks are around 2070 million years old (Cawthorn et al., 2006). The rocks are igneous and intrusive with large crystals from slow cooling, rich in a number of platinum group elements, but do not contain fossils. Furthermore they are too old for any recognizable forms of fossils; only bacteria and algae were present at this stage of Earth history (Taylor et al., 2009)".

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 stratified deposits are mainly been found in rock shelters such as the Sterkfontein Caves (Kuman, 1998); there are no shelters in the study area and it is unlikely to find stratified deposits in the study area although some isolated finds can occur.

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.

No Acheulian sites are on record near the project area, but isolated finds are possible. 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). Accordingly caves may be sites of archaeological significance but no caves occur in the study area.

Isolated MSA artefacts especially in erosion dongas are expected but it is not anticipated that these finds will have conservation value.

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. Sites in the open are usually poorly preserved and therefore have less value than sites in caves or rock shelters. Since there are no caves in the study area no LSA sites of significance is expected.

5.5. Iron Age

5.5.1. Iron Age (general)

The Iron Age as a whole represents the spread of Bantu speaking people and includes both the pre-Historic and Historic periods. It can be divided into three distinct periods:

The Early Iron Age: Most of the first millennium AD.

The Middle Iron Age: 10th to 13th centuries AD

The Late Iron Age: 14th century to colonial period.

The Iron Age is characterised by the ability of these early people to manipulate and work Iron ore into implements that assisted them in creating a favourable environment to make a better living.

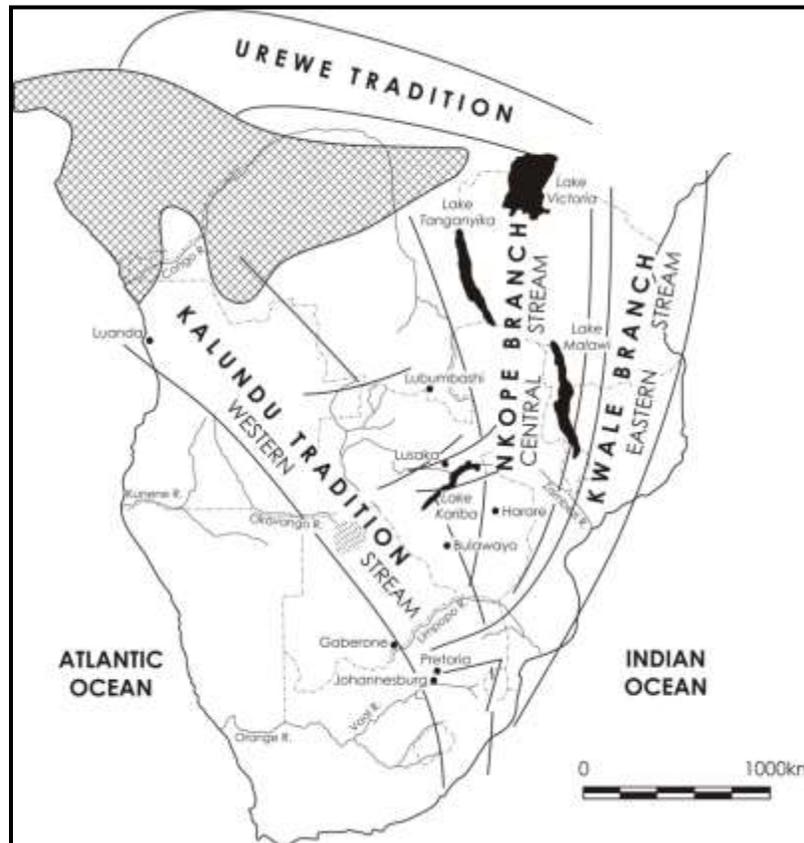


Figure 3: *Movement of Bantu speaking farmers (Huffman 2007)*

5.5.2 Early Iron Age

Early in the first millennium AD, there seem to be a significant change in the archaeological record of the greater part of eastern and southern Africa lying between the equator and Natal. This change is marked by the appearance of a characteristic ceramic style that belongs to a single stylistic tradition. These Early Iron Age people practised a mixed farming economy and had the technology to work metals like iron and copper. A meaningful interpretation of the Early Iron Age has been hampered by the uneven distribution of

research conducted so far; this can be partly attributed to the poor preservation of these early sites.

Sites belonging to the EIA consisting of *Happy Rest and Mzonjani facies* have been recorded close to the project area. Happy Rest and Mzonjani pottery form part of two traditions (Kalundu and Urewe) that represent the spread of mixed farmers into southern Africa during the Early Iron Age (See Figure 1). This find is important as it provides evidence for early interaction between these groups. Later, by the 8th and 9th centuries, the two merged to form a new facies, *Doornkop*.

5.5.3 Middle Iron Age

No sites dating to this period are on record close to the study area.

5.5.4. Late Iron Age

For the area in question the history and archaeology of the Sotho Tswana are of interest. The ceramic sequence for the Sotho Tswana is referred to as Moloko and consists of different facies with origins in either the Icon facies or a different branch associated with Nguni speakers. Several sites belonging to the Madikwe and Olifantspoort facies (from Icon) have been recorded close to the project area. These sites date to between AD 1500 and 1700 and predate stone walling ascribed to Sotho-Tswana speakers.

What is of interest here is the Swartkoppies mountain range that extends into the southern part of the study area this area is renowned for its LIA stone walled settlements. A detailed survey of the mountain range on the farm Hoekfontein (located to the west of the current study area) identified 470 individual archaeological sites (Kusel 2003) covering an area of about 1000 hectares (Pelser 2007). Unfortunately almost 110 of these sites were already negatively impacted on in 2007. Another site worth mentioning is the LIA stone walled complex at Medunsa on the southern border of the prospecting area. The sites are currently being researched as part of a Master's Thesis project. Following the classification system used for Makau these sites belong to Mike Taylor's (1979) group 2, particularly group 2a. These sites date to between AD 1650 and AD 1840.

Sotho Tswana stonewalled sites with Uitkomst pottery have been found close to the study area and dates to the seventeenth to nineteenth centuries.

5.6 Historical Information Available on the Study Area

The following report will endeavour to give an account of the history of this farm and also a brief overview of the history of the area and district in which it is located. The report has been divided into several sections that will focus on the following aspects:

General history of human settlement in the area

The history of black and white interaction in the area

A history of specific land ownership and development of the farm where this could be traced

5.6.1. Historiography and Methodology

It was necessary to use a wide range of sources in order to give an accurate account of the history of the area in which the Syferfontein 430JQ is located. Sources include secondary source material, maps, electronic sources and archival documents. It was possible to trace a number of documents in the National Archives that specifically relates to issues on the farm Syferfontein 430JQ.

5.6.2. Maps of the Area under Investigation

Since the mid 1800's up until the present, South Africa has been divided and re-divided into various different districts. Since 1857, the farm Syferfontein 430JQ formed part of the Pretoria District. (Geschiedenisatlas van Suid-Afrika 1999: 17) In 1902 the Pretoria District was subdivided into various wards and the farm was now located in the Crocodile Ward of the Pretoria District.(Geschiedenisatlas van Suid-Afrika 1999: 18) In 1928 the District of Brits was established and the farm was now located in this district. This remained the case up until 1977, when South Africa was divided into various smaller Magisterial Districts. The area of the farm became part of the Odi Magisterial District. (Geschiedenisatlas van Suid-Afrika 1999: 25) Since the late 1970's, however, the farm was located in the Bophuthatswana Bantustan or homeland. This area was however reintegrated into South Africa in 1994. (Geschiedenisatlas van Suid-Afrika 1999: 26-27) It will also be noted that the farm was first known as Syferfontein 310 and later Syferfontein 430 JQ. The farm was also spelled as Cyferfontein in certain sources.

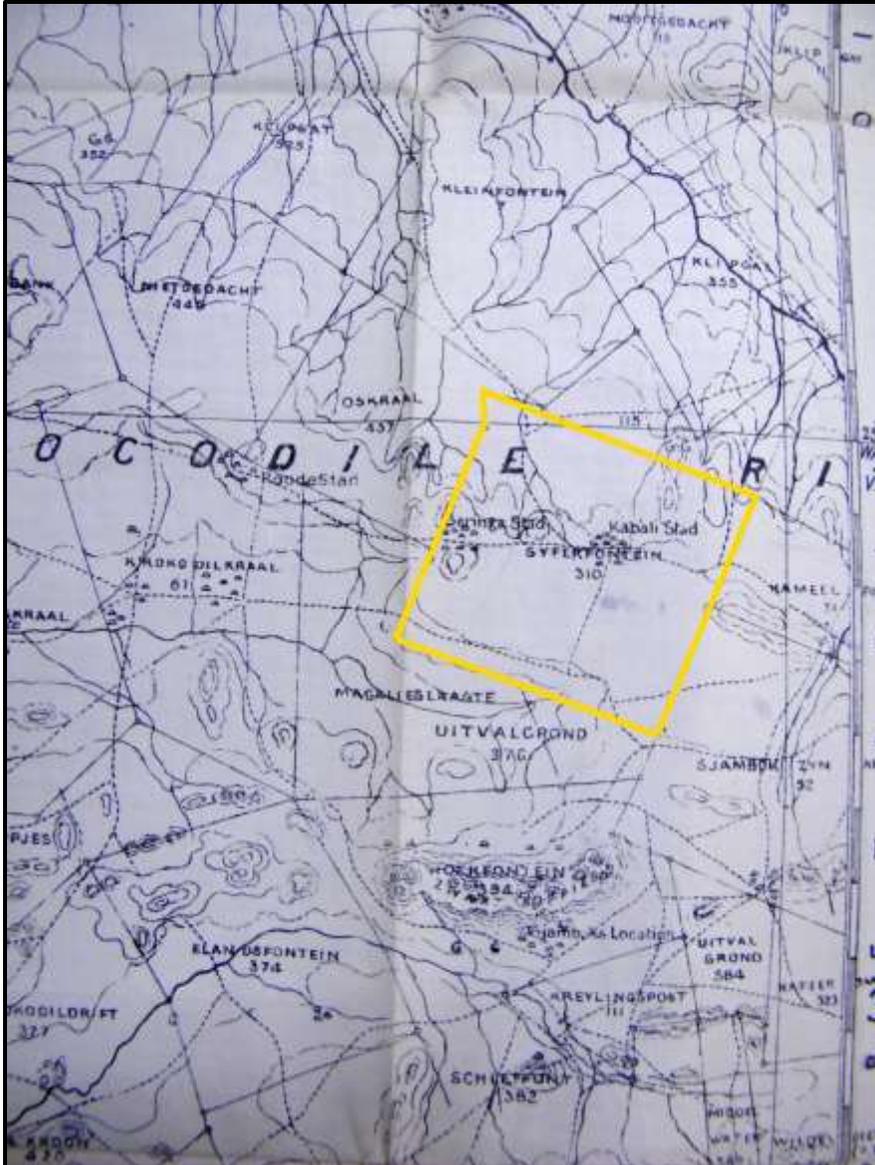


Figure 5. 1905 Major Jackson map of Syferfontein No. 310. (Major Jackson Series 1905)

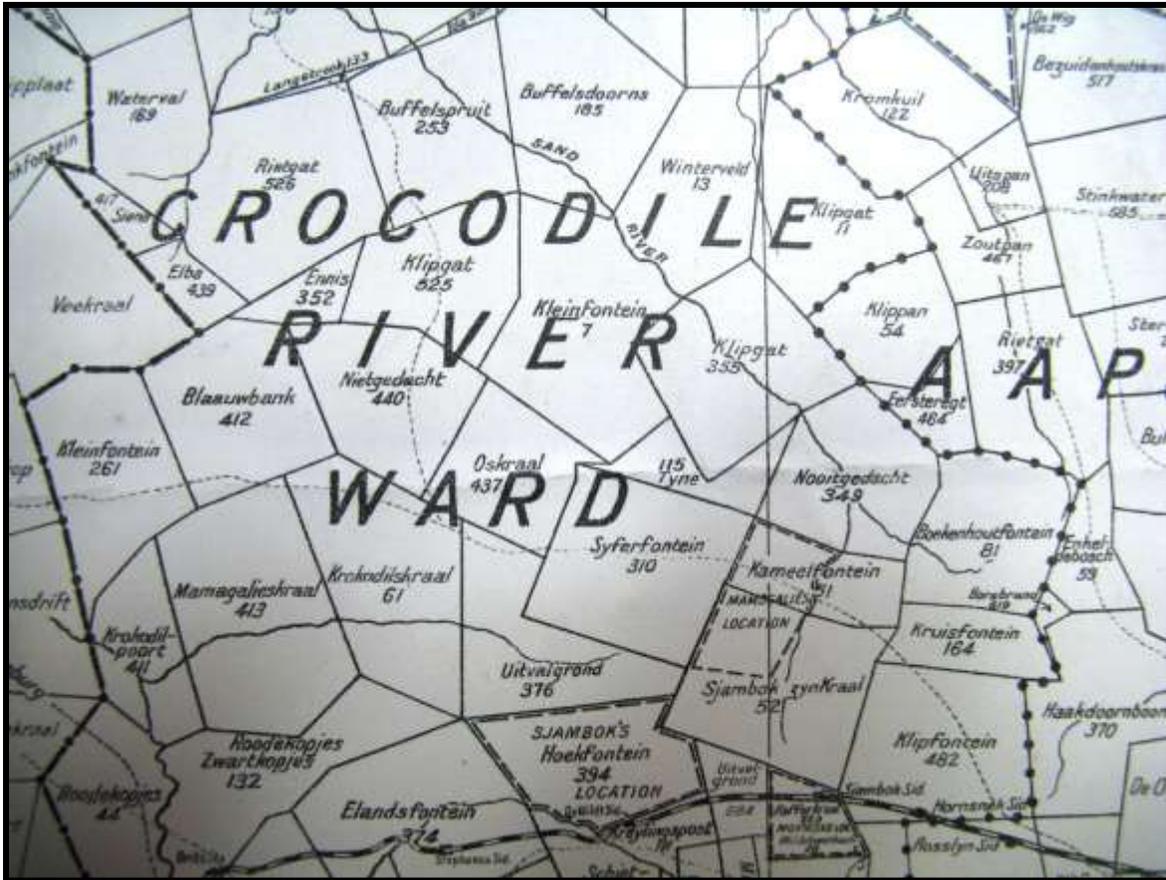


Figure 6. Map showing the location of the farm in the Crocodile Ward, Pretoria District. (Magisterial District of Pretoria Map 1917)

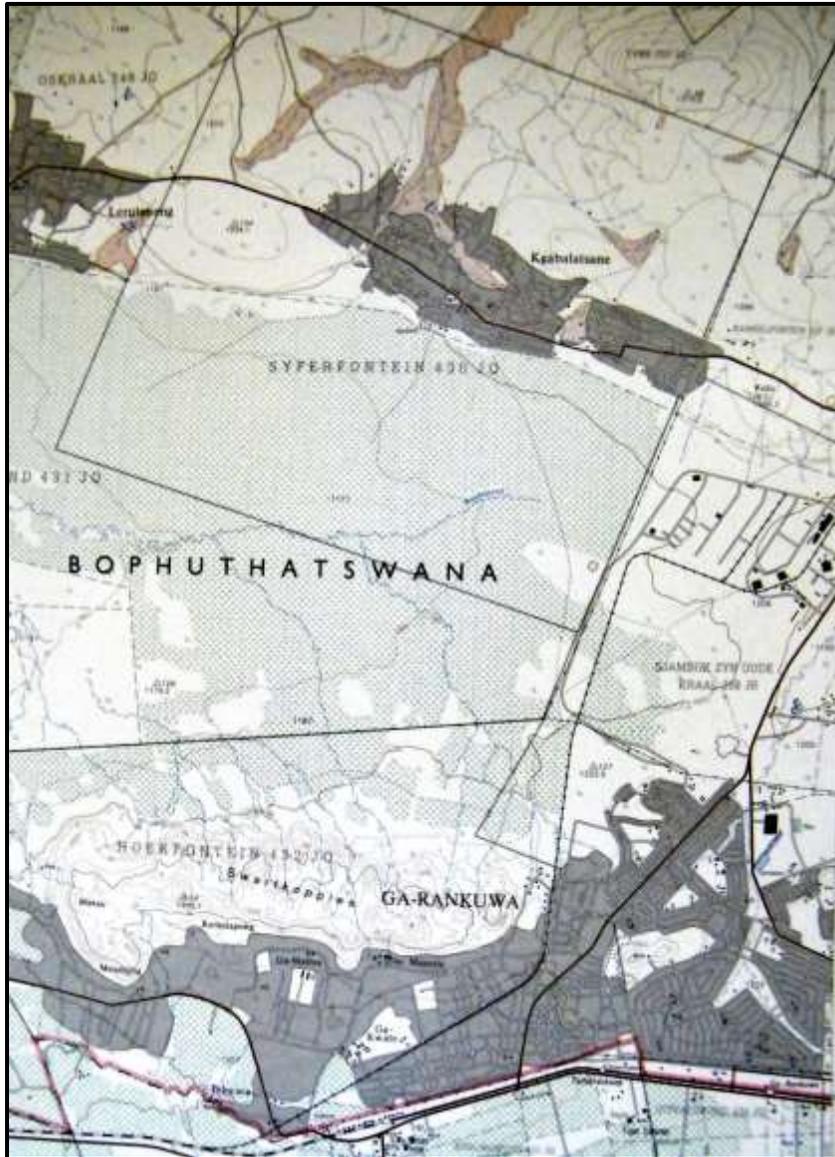


Figure 7. 1985 Topographical Map of the farm Syferfontein 430 JQ. One can see that about 50% of the land was cultivated at the time, and that the settlement of Kgalatsane was located on the farm. Bophuthatswana and Ga-Rankuwa are visible to the south of the property. (Topographical Map [2527DB] 1985)

5.6.3. A Brief History of Human Settlement and Black And White Interaction in the Brits Area

J. S. Bergh's historical atlas of the four northern provinces of South Africa is a very useful source for the writing of local and regional history. Through this source it could be ascertained that there might have been sporadic occurrences of Malaria infections in the area of the farm Syferfontein 430JQ during the rainy season, up until the 1930's. Tsetse flies were however not present in the area at that time. (Geschiedenisatlas van Suid-Afrika 1999: 2)

Archaeological excavations on the farm Roodekoopjes located about 1.5km west of the town of Brits confirm the material heritage of Sotho and Tswana tribal origin in this area. It would seem that the Tswana tribes settled in the Rustenburg area around 1500 AD. There is evidence that the Bakwena-Ba-Magopa (which has as its totem the crocodile) settled on the banks of the Crocodile River in the 17th century. According to local reminiscences the Magaliesberg was named after one of their chiefs, either Mogale or Mamogale. (Steyn et al, 1978)

The Difaqane (Sotho), or Mfekane ("the crushing" in Nguni) was a time of bloody upheavals in Natal and on the Highveld, which occurred around the early 1820's until the late 1830's. (Geschiedenisatlas van Suid-Afrika 1999: 10) It came about in response to heightened competition for land and trade, and caused population groups like gun-carrying Griquas and Shaka's Zulus to attack other tribes. (Geschiedenisatlas van Suid-Afrika 1999: 14; 116-119) In 1825 as a result of the Mfecane Mzilikazi of the Matabeles conquered the area and displaced the Tswana tribes that used to live in the area. Mzilikazi established his kraal north of the Magaliesberg in the vicinity of the present day Hartbeespoort Dam. (Steyn et al, 1978) By the late 1820's that a mass-movement of Dutch speaking people in the Cape Colony started advancing into the northern areas. This was due to feelings of mounting dissatisfaction caused by economical and other circumstances in the Cape. This movement later became known as the Great Trek. This migration resulted in a massive increase in the extent of that proportion of modern South Africa dominated by people of European descent. (Ross 2002: 39)

In 1837 the Voortrekkers drove Mzilikazi into territory now located in present day Zimbabwe. As a result many of the Tswana tribes returned to their ancestral land and settled in the areas occupied by them before the advent of the Mfecane. (Steyn et al 1978) As can be expected, the movement of whites into the northern provinces would have a significant impact on the black people who populated the land. This was also the case in the North West Province, where Syferfontein 430JQ is located. The first white people settled on the farm De Kroon near Brits in the 1840's. At first many of these settlers lived in

Hartbeeshuysies which later developed into more permanent structures. Water furrows were laid from the Crocodile River to irrigate their agricultural fields. (Steyn et al, 1978)

The area next to the Crocodile River north of the Magaliesberg was seen as a good place for human settlement. Although, there were malaria outbreak during the rainy seasons the area had adequate water supplies and game was plentiful. (Steyn et al, 1978) By 1860, the population of whites in the central Transvaal was already very dense and the administrative machinery of their leaders was firmly in place. Many of the policies that would later be entrenched as legislation during the period of apartheid had already been developed. (Geschiedenisatlas van Suid-Afrika 1999: 170)

By 1899, some farms in the area of Brits were owned by blacks. The title deeds to these farms were usually registered in the name of missionary societies. The Bakwena-Ba-Magopatribe owned Syferfontein 430JQ (then no. 310). The following table compiled from P.L. Breutz, *The Tribes of Rustenburg and Pilansberg Districts*, indicates the farms owned by this tribe in the Brits area.

| Farm name and number | Morgen |
|----------------------|--------|
| Berseba 503 | 5046 |
| Boschport 841 | 4459 |
| Karreepoort 623 | 623 |
| Leeuwkop 501 | 5374 |
| Leeuwpan 1047 | 155 |
| Losperfontein 119 | 3677 |
| Pearl 395 | 98 |
| Waaikraal 206 | 1718 |
| Wolwekraal 512 | 2827 |
| Wonderkop 835 | 373 |
| Nooitgedacht 908 | 475 |
| Kameelfontein 51 | 2199 |
| Sjambokzyn Kraal 52 | 4264 |

| | |
|-------------------|------|
| Syferfontein 310 | 5110 |
| Oskraal 437 | 1015 |
| Uitvalgrond 376 | 494 |
| Palmietfontein 59 | 5823 |
| Kaalzandbult 34 | 3437 |
| Uitvalgrond 326 | 494 |
| Elandsfontein 20 | 5335 |
| Elandsfontein21 | 2923 |

The ownership of these farms by the Bakwena-Ba-Magopa can be traced back at least to 16 March 1885. On this date the Location Commission of the South African Republic (ZAR) was informed by the then Chief of the Bakwena-Ba-Magopa, Jacobus More Mamogale that the tribe owned several farms with the Hermansburg Missionary Society. (Geschiedenisatlas van Suid-Afrika 1999: 217) The Location Commission had to report to the ZAR government on what land in the ZAR had to be set aside for black occupation.

During the twentieth century the 1913 Natives Land Act and the 1936 Native Trust and Land Act ensured that black "homelands" were to be established in various areas in South Africa. The farms mentioned above were assimilated into what was to become the "Independent Black State" of Bophuthatswana. (Geschiedenisatlas van Suid-Afrika 1999: 43) As part of Apartheid policy the town of Brits ideally located to become what was known as a border industry town. The town and surrounding farms provided work for black people residing in Bophuthatswana. In 1976 about 10 500 black labourers commuted daily between this town and the homeland. (Steyn et al, 1978)

5.6.4. Historical Overview of The Ownership And Development Of The Farm Syferfontein 430JQ

The following section gives an overview of some primary sources that could be located in the National Archives of South Africa, Pretoria. The documents mainly deal with the granting of business licenses to various people who wanted to operate business ventures on the farm. Some applications were submitted with sketches as to where the stores were to be located. Although the farm belonged to the Bakwena-Ba-Magopa Tribe it was hold in

guardianship for them by the Department of Native Affairs. Thus, the Minister of Native Affairs had to approve any development that occurred on the farm.

On 11 July 1918 the Governor-General approved in terms of section one of the Natives Land Act of 1913 and Clause Three of 1898 (Transvaal), a lease between Abraham Frederic Memorable, the registered owner of Syferfontein 310 and sub-chief of the Bakwena-Ba-Magopa Tribe and Gerhardus Petrus Johannes Erasmus. Erasmus wanted to establish a Blacksmith and Farrier business on the farm. The lease was approved for a period of 5 years for an annual rental sum of £9. This lease was renewed for another 5 years in 1923. (NASA, TAB, NTS, 1153: 94/162)

On 30 July 1919 a memorandum of agreement was drawn up between Johannes Otto More Mamogale, Paramount Chief of the Bakwena Tribe, and one Solly Ziman. Ziman wanted to establish a general dealer and butchery on the farm. The following sketch shows the location of the proposed store on Syferfontein:

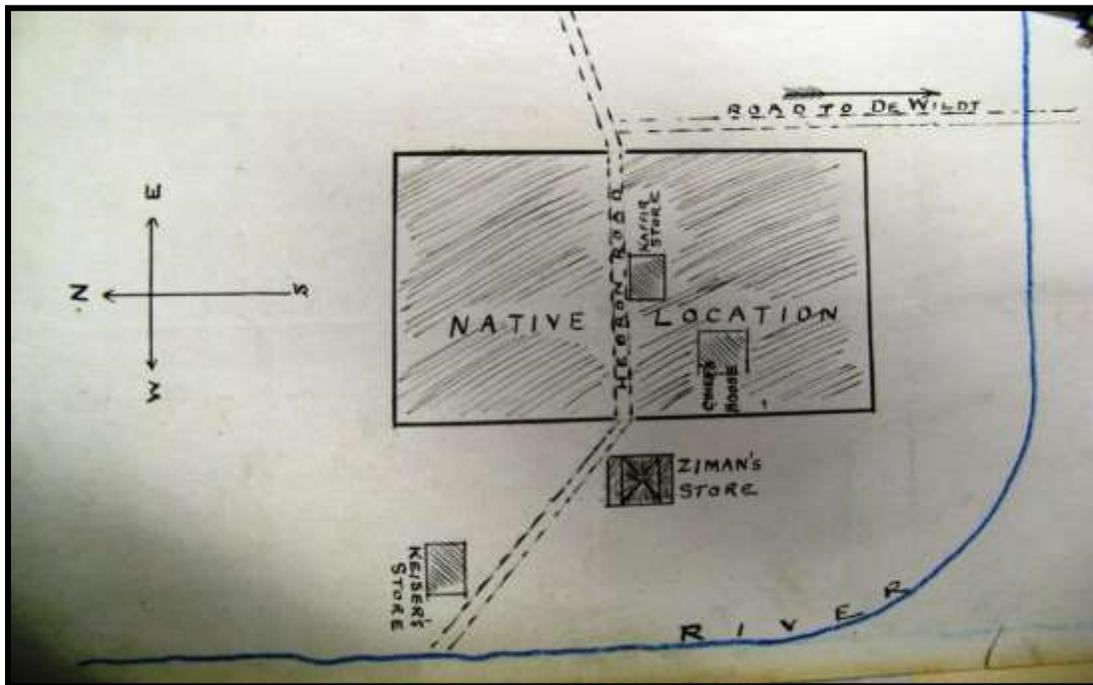


Figure 9. Sketch showing the proposed site for Ziman's store on Syferfontein. Source: NASA, TAB, NTS, 1156: 118/162

However, before the Ziman could establish his store he died. On 10 March 1924 the Governor General approved the cession of the lease from Solly Ziman's insolvent estate to the one A.F. Trouw. It would seem that Trouw was now going to establish this business venture on the farm. No mention is made in the file whether this actually happened. (NASA, TAB, NTS, 1156: 118/162)

Nevertheless, on 10 October 1924 various members of the Bakwena tribe signed a memorandum granting their chief J.O.M. Mamogale the right to enter into a lease with one John Ziman (no mention is made whether he is a relation to S. Ziman mentioned above) for trading rights on the farm Syferfontein no. 310 for a period of 5 years at a rental sum of £24 per annum. This lease was approved by the Governor General on 12 March 1925. Mention was made that there were already four businesses located on the property. Ziman was to establish a general dealer and butchery. However, the lease was not renewed in 1930 as the tribe unanimously refused to agree to a renewal of the lease as Ziman did not conduct his business in the past to the satisfaction of the tribe. (NASA, TAB, NTS, 1158: 136/162)

On 27 September 1926 the Prime Minister recommended to the Governor General to approve a first mortgage bond in terms of Clause Three of Law Three of 1989 (Transvaal) and of Section one of the Natives Land Act, 1913 in trust for the Bakwena Tribe under Chief Johannes Otto More Mamogale in favour of Johannes Wilhelmus Wessels for the sum of £3084. 19. 0 for a certain quitrent of the farm Syferfontein no. 310 measuring 5110 morgen and 502 square roods. As well as a certain quitrent on the farm Kaalzandbult no. 341 measuring 3437 morgen 52 square roods. Both farms were situated in the district of Pretoria. (NASA, TAB, URU, 875:3003)

At a tribal meeting held at Hebron, of the Bakwena-Ba-Magopa tribe in 30 March 1950 it was resolved that Ishmail Peege would be granted a trading site at Kgabaltsane on the farm Syferfontein 310. The lease was granted subject to rental of £12 per annum and the site could not exceed 40 by 40 yards. The Minister of Native affairs approved the lease agreement between Captain George More on behalf of the Tribe and Peege on 23 May 1950. (NASA, TAB, NTS, 1277: 1971/162)

At a tribal meeting held at Hebron, of the Bakwena-Ba-Magopatribe in 30 March 1950 it was resolved that Thomas Sepeng would be granted a trading site at Kgabaltsane on the farm Syferfontein 310. The lease was granted subject to rental of £12 per annum and the site could not exceed 40 by 40 yards. The Minister of Native affairs approved the lease agreement between Captain George More on behalf of the Tribe and Sepeng on 23 May 1950. (NASA, TAB, NTS, 1277: 1972/162)

At a tribal meeting held at Hebron, of the Bakwena-Ba-Magopatribe in 30 March 1950 it was resolved that Petrus Thipe would be granted a trading site at Kgabaltsane on the farm Syferfontein 310. The lease was granted subject to rental of £12 per annum and the site could not exceed 40 by 40 yards. The Minister of Native affairs approved the lease agreement between Captain George More on behalf of the Tribe and Thipe on 23 May 1950. (NASA, TAB, NTS, 1277: 1975/162) The following sketch accompanied the three above mentioned applications:

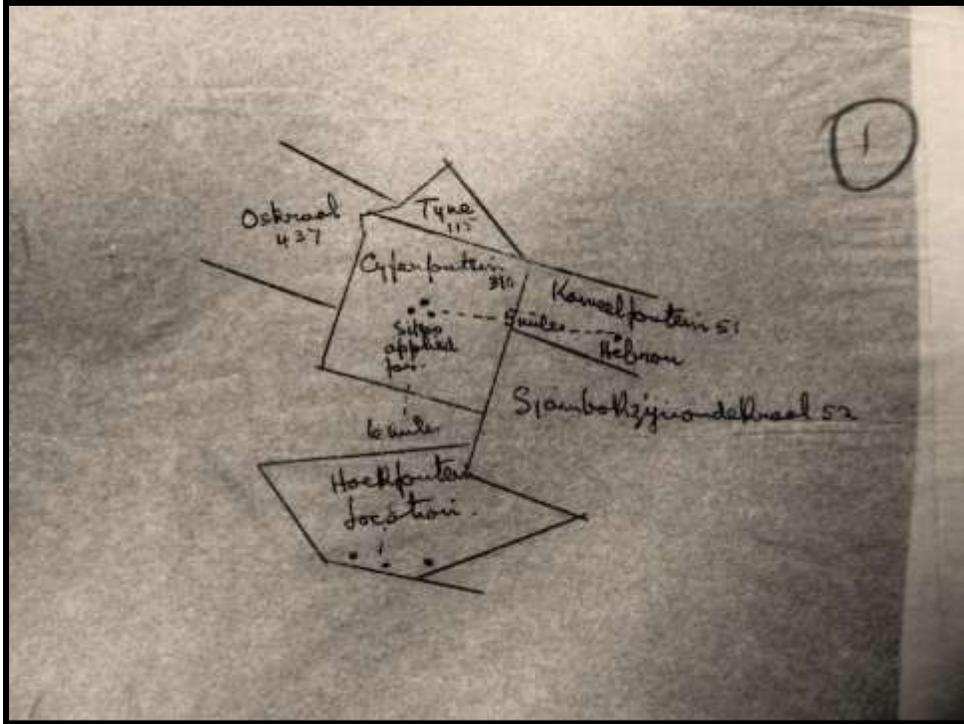


Figure 10. Sketch showing the proposed trading sites applied for on "Cyferfontein 310".
From: NASA, TAB, NTS, 1277: 1975/162

According to a tribal resolution taken at a public meeting of the Bakwena-Ba-Magopa on 25 June 1956 one Lazurus Motlhabi was granted the authority to trade as a butcher on the farm Syferfontein for a rental of £1 per month. Mention was made of one Pego who had a General's Dealer license on the farm and there were some issues asked as to whether these two businesses would not be too closely located to one another. (NASA, TAB, NTS, 1323: 2819/162) The following sketch was included to indicate the respective geographically locations of the two **businesses on the farm**.

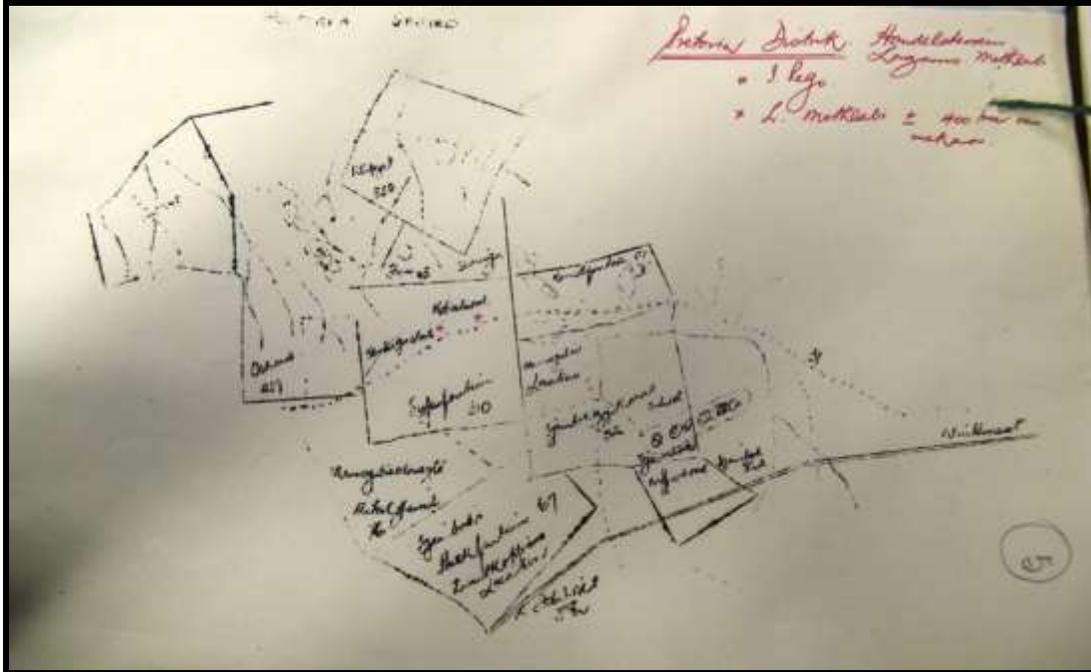


Figure 11. Sketch showing the respective locations of the stores of J. Pego and L. Mothlabi. Source: NASA, TAB, NTS, 1323: 2819/162

On 15 August 1957 a mineral lease for the farm Syferfontein 310, in the Pretoria District was entered into between Minister H.F. Verwoerd (in his capacity of Trustee for the Bakwena-Ba-Magopa Tribe) and Minerals Engineering Company South Africa Pty Ltd. The lease was entered into for the exclusive right to mine, win and recover iron ore on the farm. The agreement was entered into for a period of 5 years. The conditions of the lease stated that no permanent buildings could be erected on the lease area without the consent of the Minister of Native Affairs. It further stated that no new roads could be constructed without the approval of the Native Commissioner of Pretoria. The lessee was granted the right to drill for water and to sink boreholes. The lessee had to comply strictly with any provision, maintenance, repair or removal of housing for black staff. The lease was subject to the lessee paying a minimum royalty of £50 per quarter for the rights to the iron ore. It was also mentioned that the lessee had to employ black staff from the Bakwena-Ba-Magopa Tribe. (NASA, TAB, BAO, 10086/17: D52/1093/29) According to a handwritten memo in the file the company changed its name to Transvaal Vanadium Co Pty Ltd in December 1960. This came about after Anglo-American purchased shares in the company. The lease was renewed for a period of 5 year on 21 August 1962 and again on 31 December 1968. (NASA, TAB, BAO, 10086/17: D52/1093/29)

On 28 January 1975 UCAR Minerals Corporation a Vanadium extraction plant near Brits situated on the farms Krokodilkraal and Uitvalgrond wanted permission to secure an assured water supply for their mining operations from the farms Uitvalgrond and Syferfontein. It

was noted that the territory was Bantu Trust Property. The company wanted permission to proceed with survey and exploratory drill work for the sinking of boreholes. Mention is made that the company would in future employ 250 black people from the area. However, in response to the request a letter dated 11 April 1975 by the Magistrate at Odi states that the land was in fact not Bantu Trust Property, but owned Tribal land and that Syferfontein belonged to the Bakwena-ba-Magopa tribe. The Chief of the tribe was J.E.L Mamogale and the company was instructed to ascertain from the tribe as to whether any servitudes can be granted on the property. Once the tribal authority was to give its consent the matter can be approved by the State President. There is no correspondence in the file which states whether this request was indeed subsequently approved. (NASA, TAB, BAO, 10139: D52/1547/13)



Figure 12. Sketch indicating the red lines on Syferfontein for the sinking of potential boreholes on the farm. From: NASA, TAB, BAO, 10139: D52/1547/13.

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*

» 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 Probability*

MSA: *Medium Probability*

LSA: *Medium- Probability*

LSA –Herder: *Low Probability*

» Iron Age finds

EIA: *Low Probability*

MIA: *N.A*

LIA: *Low - Medium Probability*

» Historical finds

Historical period: *Medium Probability*

Historical dumps: *Medium Probability*

Structural remains: *Medium Probability*

Cultural Landscape: *Medium probability*

» Living Heritage

For example rainmaking sites: *Low Probability*

» Burial/Cemeteries

Burials over 100 years: *Medium Probability*

Burials younger than 60 years: *High 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 thorough 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. Archaeology

8.1.1 Archaeological finds

There is a low – medium likelihood of finding Middle Stone Age artefacts scattered over the study area; these sites are mostly out of context and of low - medium archaeological significance. There is an increased likelihood of finding Stone Age material nearer to rivers, tributaries and ridges. Several stone walled settlements are known from the literature occurring in the wider region (Medunsa S25 36 27.5451 E28 01 35.8124) Makau S25 36 9.1419 E 27 54 47.2624) Zambok Zyn Kraal S25 35 42.1251 E 28 01 17.5626. During the short site visit no stone wall settlements were recorded, these types of settlements are clearly visible on aerial photographs and a Google image show only extensive agricultural activities. .

8.1.2 Nature of Impact

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

8.1.3 Extent of impact

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

8.2. Historical period

8.2.1 Historical finds: I

Including middens, structural remains and cultural landscape. The desktop study highlighted the fact that the area was occupied at least from the late 1800's and mining from the mid 1900's and features dating to these periods can occur.

8.2.2 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

8.2.3 Extent of impact

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

8.3. Burials and Cemeteries

8.3.1 Burials and Cemeteries

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

8.3.2 Nature of Impact

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

8.3.3 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 be graded as Generally Protected B. Any sites in the study area that was not picked up during the scoping study should be mitigatable and no red flags are identified. However if any grave sites occur the area of a sensitive nature and of high social value, these sites should rather be avoided.

10. CONCLUSIONS AND RECOMMENDATIONS

This report endeavoured to give an account of the history of the farm Syferfontein 430 JQ. No sites of significance were identified based on a desktop study supplemented by a brief site visit.

» Archaeological sites

If any sites occur in the study area they could be mitigated either in the form of conservation of the sites 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 destruction.

» 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 older than 60 years.

» 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 in-situ. These sites can however be relocated if conservation is not possible, but this option must be seen as a last resort. The presence of any grave sites can only be confirmed during a thorough 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.

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 serves as a council member for the CRM Section of the Association of Southern African Association Professional Archaeologists and 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, DRC and Tanzania 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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MAPS

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