

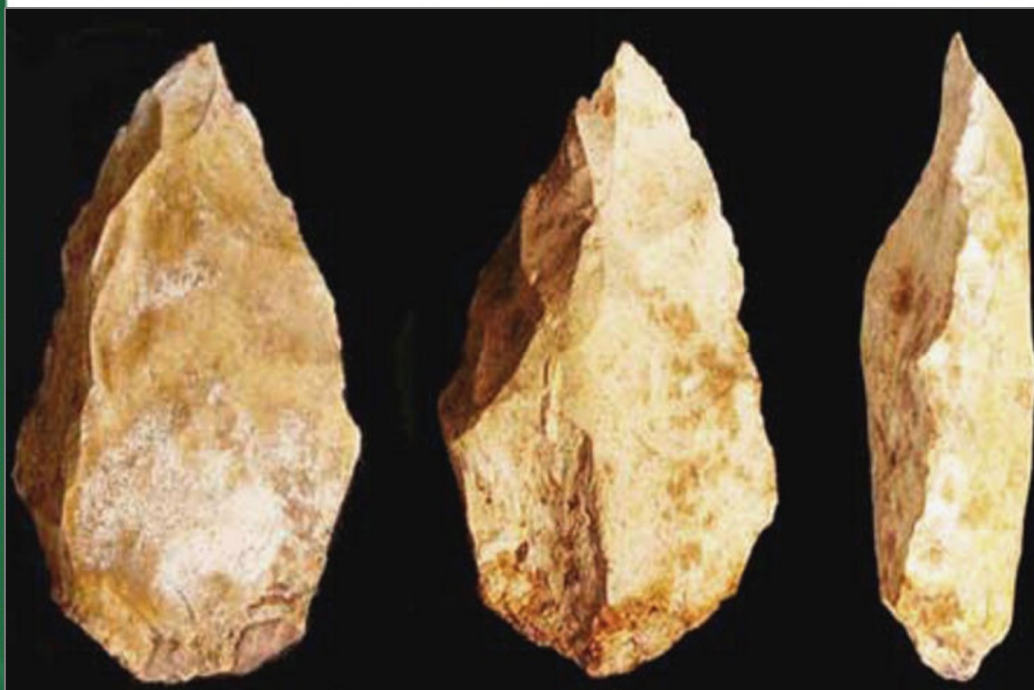
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**MEEPO YA MMU (PTY) LTD**

# **ARCHAEOLOGICAL SCOPING REPORT**

**Submitted to:**

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# 1. Executive Summary

Environmental Assurance (Pty) Ltd was appointed by Meepo Ya Mmu Mineral Resources (Pty) Ltd to undertake an archaeological study on the demarcated section on portions four, five and nine of the farm Papkuilfontein 469 JR to determine the scope of archaeological resources which could be impacted on by the proposed prospecting of sand, silica and clay.

During the site survey of the demarcated sections on the farm Papkuilfontein 469 JR, two sites of possible heritage significance were observed. Both sites are located on portion four and possibly consist of subsurface angular remains of what appears to be building structures. The angular building style and level of dilapidation suggest historical origins, but there is a possibility that these sites might be connected to the nearby modern settlements. The provenance of these sites could not be established and it is therefore recommended that an area of 50 m surrounding these sites not be impacted on until further research has been conducted. In addition to the two possible heritage sites on portion four, two graveyards were observed as well. One graveyard is located on portion four and the other on portion nine. It is recommended that an area of 20 m surrounding these graveyards not be impacted on by prospecting activities since they are protected by legislation.

Prospecting may continue on the demarcated section of portions four, five and nine of the farm Papkuilfontein 469 JR, subject to the recommendations made. Should culturally significant material or skeletal remains be exposed during the prospecting phase, all activities must be suspended pending further investigation by a qualified archaeologist (See National Heritage and Resources Act, 25 of 1999 section 36 (6)).

## 2. Project Background

### 2.1 Introduction

Environmental Assurance (Pty) Ltd was appointed by Meepo Ya Mmu Mineral Resources (Pty) Ltd to undertake an archaeological study on selected sections of portions four, five and nine on the farm Papkuilfontein 469 JR, Mpumalanga. The purpose of this study was to examine the demarcated section in order to determine if any archaeological resources of heritage value will be impacted on by the proposed prospecting of sand, silica and clay, as well as to archaeologically contextualise the general study area. The aim of this report is to provide the developer with information regarding the location of heritage resources on the demarcated section.

During the survey sites of heritage importance were located and recorded via GPS (Global Positioning System) location and photographic record. In the following report the significance and importance as well as legislative requirements regarding heritage resources found on the demarcated section are discussed.

## **2.2 Legislation**

The South African Heritage Resources Agency (SAHRA) aims to conserve and control the management, research, alteration and destruction of cultural resources of South Africa and to prosecute if necessary. It is therefore crucially important to adhere to heritage resource legislation contained in the Government Gazette of the Republic of South Africa (Act No.25 of 1999) as many heritage sites are threatened daily by development. Conservation legislation requires an impact assessment report to be submitted for development authorisation that, in all cases must include HIA's.

HIA's should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of development and (b) make recommendations for protection or mitigation of the impact of the sites.

### **2.2.1 The EIA and HIA processes**

Phase 1 Archaeological Assessments generally involve the identification of sites during a field survey with assessment of their significance, the possible impact development might have and relevant recommendations.

All Heritage Impact Assessment reports should include:

- a. Location of the sites that are found;
- b. Short description of the characteristics of each site;
- c. Short assessment of how important each site is, indicating which should be conserved and which mitigated;
- d. Assessment of the potential impact of the development on the site/s;
- e. In some cases, a shovel test, to establish the extent of a site, or collection of material might be required to identify the associations of the site. (A pre-arranged SAHRA permit is required); and
- f. Recommendations for conservation or mitigation.

This HIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential that it also provides the heritage authority with sufficient information about the sites to enable it to assess with confidence:

- a. Whether or not it has objections to a development;
- b. What the conditions are upon which such development might proceed;
- c. Which sites require permits for mitigation or destruction;

- d. Which sites require mitigation and what this should comprise;
- e. Whether sites must be conserved and what alternatives can be proposed that may re-locate the development in such a way as to conserve other sites; and
- f. What measures should/can be put in place to protect the sites that should be conserved.

When a Phase 1 HIA is part of an EIA, wider issues such as public consultation and assessment of the spatial and visual impacts of the development may be undertaken as part of the general study and may not be required from the archaeologist. If, however, the Phase 1 project forms a major component of an HIA it will be necessary to ensure that the study addresses such issues and complies with section 38 of the National Heritage Resources Act.

## **2.2.2 Legislation regarding archaeology and heritage sites**

*National Resource Act of April 1999*

According to Act No.25 of 1999 a historical site is “any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 60 years.” This clause is commonly known as the “60-years clause”. Buildings are amongst the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Farming Community settlements. “Tell” refers to the evidence of human existence which is no longer above ground level, such as building foundations and buried remains of settlements (including artefacts). The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects, meteorites and rare geological specimens;
- visual art objects;
- military objects;
- numismatic objects;
- objects of cultural and historical significance;
- objects to which oral traditions are attached and which are associated with living heritage;
- objects of scientific or technological interest;
- any other prescribed category.

With regards to activities and work on archaeological and heritage sites this Act states that:

*“No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority.” (34. [1] 1999:58)*

and

*“No person may, without a permit issued by the responsible heritage resources authority-*

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites. (35. [4] 1999:58).”*

and

*“No person may, without a permit issued by SAHRA or a provincial heritage resources agency-*

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;*
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60).”*

On the development of any area the gazette states that:

*“...any person who intends to undertake a development categorised as-*

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50m in length;*
- (c) any development or other activity which will change the character of a site-*

- (d) *exceeding 5000m<sup>2</sup> in extent; or*
- (e) *involving three or more existing erven or subdivisions thereof; or*
- (f) *involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
- (g) *the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
- (h) *the re-zoning of a site exceeding 10000m<sup>2</sup> in extent; or*
- (i) *any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development (38. [1] 1999:62-64)."*

and

*"The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:*

- (a) *The identification and mapping of all heritage resources in the area affected;*
- (b) *an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;*
- (c) *an assessment of the impact of the development on such heritage resources;*
- (d) *an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;*
- (e) *the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
- (f) *if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and*
- (g) *plans for mitigation of any adverse effects during and after the completion of the proposed development (38. [3] 1999:64)."*

### *Human Tissue Act and Ordinance 7 of 1925*

The Human Tissues Act (65 of 1983) and Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities. Graves 60 years or older fall under the jurisdiction of the National Heritage Resources Act as well as the Human Tissues Act, 1983.

### **3. Study Area and Project Description**

The farm Papkuilfontein 469 JR is located about 15 km northeast of the town of Cullinan and about 20 km north northwest of the town of Bronkhorstspruit (see **Error! Reference source not found.** and **Figure 1**). Portions four, five and nine of this farm lies within the Mpumalanga Province on the border with Gauteng. These portions are orientated in a north-eastern direction with the western boundary falling on the provincial boundary. Malanspruit, a perennial river and tributary to the Elands River, flows from north to south through these portions and is accompanied by a NFEPA wetland. In terms of vegetation the study area falls within Central Sandy Bushveld and experience an average annual rainfall of between 600 mm and 800 mm.

The section of portions four, five and nine of the farm Papkuilfontein 469 JR on which the proposed prospecting will take place is about 310 hectares in size. Clay and sand mineral deposits are predominantly found in this area and will be prospected for through excavating a number of holes roughly 1m<sup>2</sup> in size to a depth of about 6 metres. Excavations will be carried out via heavy machinery such as a back actor and samples will be taken at 1m intervals. The majority of the prospecting sites will be in relative close proximity of the river where most of the sand deposits are found. The exact coordinates of these sites, however, are not yet known. The main purpose for mining sand and clay is for the production of construction material.

**Table 1:** Farm name & coordinates

<b>Farm</b>	<b>Portions</b>	<b>Map Reference (1:50 000)</b>	<b>Coordinates</b>
Papkuilfontein 469 JR	4, 5, 9	2528 DA	25°36'37.485"S 28°40'27.641"E



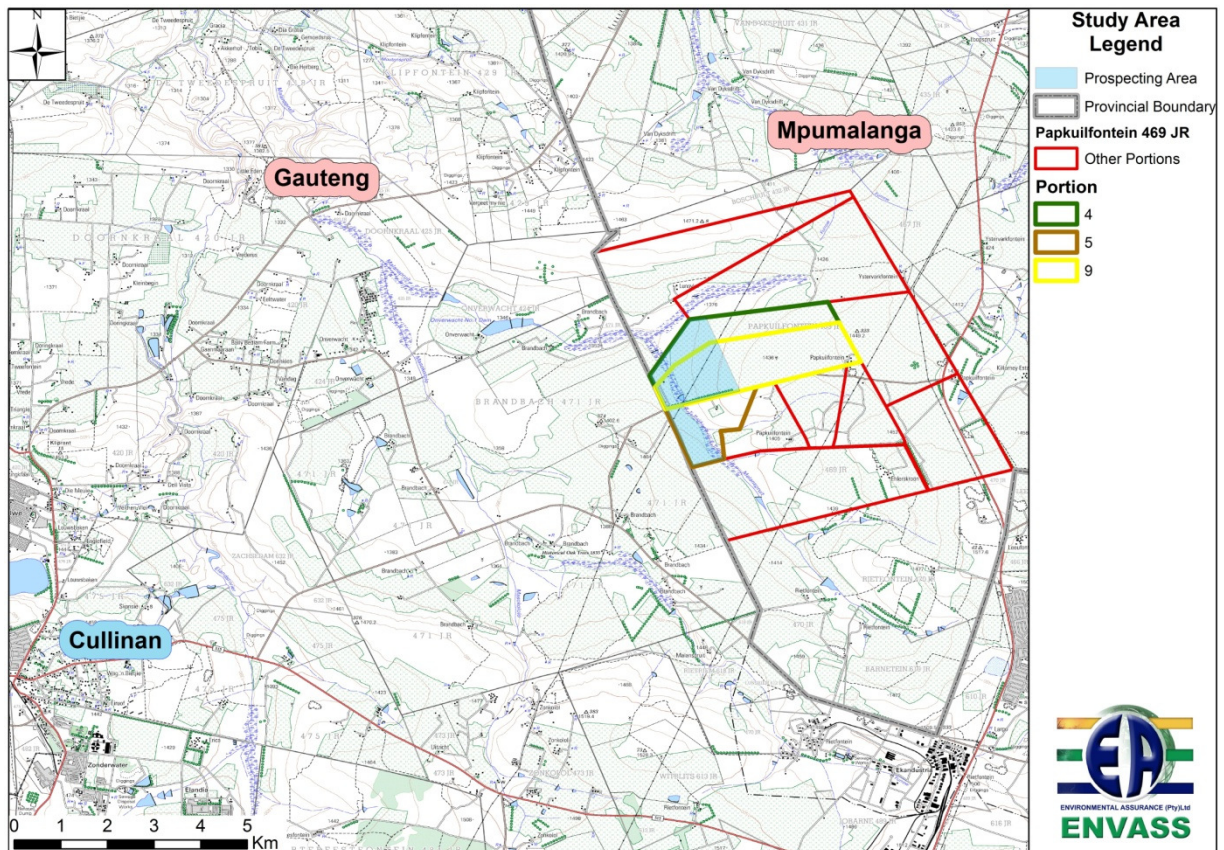


Figure 1: Segments of SA 1: 50 000 2528 DA indicating the study area

### 3.1 Archaeological Background

The southern African archaeology is broadly divided into the Earlier, Middle and Later Stone Age, Early and Later Iron Age, and Historical / Colonial Periods.

#### 3.1.1 The Earlier Stone Age

The earliest stone tool industry, the Oldowan, was developed by the earliest members of the genus *Homo* such as *Homo habilis*, around 2.6 million years ago. It contained tools such as cobble cores and pebble choppers (Toth & Schick 2007). The oldest stone tools from the Sterkfontein cave are found in the Oldowan Infill and date to between 2 and 1.7 million years ago. As the name suggests these tools are similar to those found at Olduvai Gorge in Tanzania. These stone tools therefore suggest the earliest direct evidence for culture in southern Africa (Clarke & Kathleen 2000). It was completely replaced by the Acheulean industry, which was first conceived by *Homo ergaster* around 1.8 or 1.65 million years ago, which lasted until around 300 000 Kya. Evidence from this period is also found at Swartkrans, Kromdraai and Sterkfontein. At about 1.5 million years ago the western side of the cave probably enlarged, since artefact-bearing breccias (coarse-grained sedimentary rock made of sharp fragments of rock and stone cemented together by finer material, produced by volcanic activity or erosion, including frost shattering) are more widely distributed. The most typical tools of the ESA are handaxes, cleavers, choppers and spheroids. Although they appear to have used handaxes often, there is disagreement about their use. There are no indications of hafting, and some artefacts are far too large

for that. Choppers and scrapers were likely used for skinning and butchering scavenged animals and sharp ended sticks were often obtained for digging up edible roots. Presumably, early humans used wooden spears as early as 5 million years ago to hunt small animals. Fire was used by the hominin *Homo erectus* and *Homo ergaster* as early as 300,000 or 1.5 million years ago and possibly even earlier. The invention of fire reduced mortality rates and provided protection against predators. Examples of sites from this time period include Kromdraai, Makapansgat and Sterkfontein and Swartkrans (Toth & Schick 2007).

### **3.1.2 The Middle Stone Age**

Middle Stone Age artefacts started appearing about 250 000 years ago and replaced the larger Earlier Stone Age bifaces, handaxes and cleavers with smaller flake industries consisting of scrapers, points and blades. These artefacts roughly fall in the 40-100 mm size range and were in some cases attached to handles, indicating a significant technical advance. Few other artefacts remain from this period. In some cases circular hearths were found which indicate the ability to make fire while animal and plant remains refer to a hunting and gathering lifestyle. It is also during this period that the first *Homo sapiens* species emerged. Associated sites are Klasies River Mouth, Blombos Cave and Border Cave (Deacon & Deacon 1999). The most recent deposit in the Sterkfontein cave dates to between 115 000 and 253 000 years ago and includes a few hominid fragments, fauna and Middle Stone Age artefacts (Clarke & Kuman 2000:10-13).

### **3.1.3 The Later Stone Age**

This time period ranges from about 20 000 years ago to the present and saw the emergence of *Homo sapiens sapiens*. Stone tools from this period are generally smaller but were used to do the same job as those from previous periods, but in a different way. At the time of European contact in South Africa, some such as the Khoisan people, were still making these tools. This greatly helped in understanding what these tools were used for. Some Later Stone Age associations are: rock art, smaller stone tools (microliths), bows and arrows, bored stones, grooved stones, polished bone tools, earthenware pottery and beads. Some Later Stone Age sites include Nelson Bay Cave, Rose Cottage Cave and Boomplaas Cave (Deacon & Deacon 1999).

### **3.1.4 Early Iron Age**

The Early Iron Age marks the movement of farming communities into South Africa at around 200 A.D. These groups were agro-pastoralist communities that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Artefact evidence from Early Iron Age sites is mostly found in the form of ceramic assemblages. The origins and archaeological identities of this period are largely based upon ceramic typologies. Early Iron Age ceramic traditions are classified by some scholars into different "streams" or trends in pot types and decoration that, over time emerged in southern Africa. These "streams" are identified as the Kwale Branch (east), the Nkope Branch (central) and the Kalundu Branch (west). Early Iron Age ceramics typically display features such as large and prominent inverted rims, large neck areas and fine elaborate decorations. This period continued up to the end of the first millennium AD (Huffman 2007). Some well-known Early Farming

Community sites include the Lydenburg Heads in Mpumalanga, Happy Rest in the Limpopo Province and Mzonjani in Kwa-Zulu Natal.

### **3.1.5 Later Iron Age and Historical Periods**

From literary sources it can be derived that the study area appears not to have been influenced on a large scale during the Later Iron Age and later times. One example of Later Iron Age activity in the area, although a considerable distance towards the east, was a Swazi attack on Kôpa forces in May of 1864 as well as Ndzundza Ndebele and Pedi movements (Bergh 1999: 176). Voortrekker history in the general area is more readily available as a result of the Tregardt and Van Rensburg trek as well as the Battle of Bronkhorstspuit in 1880.

According to history Louis Tregardt and Johannes van Rensburg's northward treks during the 1830's were forced in a different direction after reaching the Middelburg area. Here difficult terrain forced the treks in a western direction towards Spitskop and Renosterkop in the vicinity of present day Bronkhorstspuit. From here they again turned in a northern direction along the Olifants River towards the Strydpoort Mountains to reach Soutpansberg. Some of the place names to the north of Bronkhorstspuit referring to the Voortrekker route are: Vlooiokop, Trichardspoort and Renosterpoort (Rex 1969: 1-3).

It should be kept in mind that the trekkers were on a constant lookout for favourable areas to settle. The area between Suikerbosrand near Heidelberg, and Renosterkop near Cullinan probably seemed favourable because of the abundant water sources, ample game and grazing fields. In addition to natural resources, it is argued that the area was sparsely populated as a result of Ndebele western movements under Mzilikazi during the 1820's and 1830's. Because of the agricultural and grazing potential of the area, most members of the Potgieter Commission, who followed Tregardt and Van Rensburg's tracks, and some of their relatives and descendants settled from the 1840's onward on farms along the Apies, Elands, Wilge and Olifants Rivers, as well as along the Morelettaspruit and Bronkhorstspuit (Rex 1969: 7-8).

#### **The Battle of Bronkhorstspuit**

In 1874 Lord Carnarvon, the Colonial State Secretary, wished to unite British territory and the two Republics under the British flag. Because none of these states were in favour of uniting, Carnarvon reasoned that through uniting with the Transvaal, the others would follow. Due to poor relations, the only option left was annexation. In 1877 Shepstone was sent from Natal to Pretoria with a police force of 25 with the goal to annex the Transvaal. On 12 April 1877, Shepstone raised the British flag and the Transvaal was annexed without firing a single shot. Several deputations were sent to England to regain independence, but both failed. Consequently S. P. J. Kruger, P. Joubert and M. W. Pretorius decided to gather the Boer forces at Paardekraal to discuss the future of the Transvaal. During the meeting, which lasted from 12 to 16 December 1880, it was decided that Heidelberg would serve as the seat of the government. British forces were stationed in most of the towns, but were too weak to launch attacks on Boer forces. British forces were therefore ordered from Lydenburg to strengthen forces in Pretoria. Upon receiving this news, Frans Joubert was sent from Heidelberg to Pretoria with a force consisting of between 200 and 300 men to intercept and stop these reinforcements. According to

the historian, Theal, the British forces under Col. Anstruther consisted of 257 men and 34 wagons. On 20 December 1880 they arrived at the place known today as Bronkhorstspuit. A brief exchange of words in which Joubert requested Anstruther to discontinue his mission resulted in a 10 to 20 minute battle over open field. After a significant amount of casualties on the British side, Col. Anstruther, who was mortally wounded, requested that the white flag be raised. According to Theal, 66 on the British side were killed and 72 wounded. Later, 10 of the wounded died as well. On the Boers' side, one commando member was killed in action and another five wounded. Later, another succumbed to his wounds. The captives were transported to Heidelberg and from there to the Vaal River. From there they were allowed to go to the Free State. This was the first open battle of the First Anglo Boer War (Roodt 1949: 7-9).

### **The naming of the town of Bronkhorstspuit**

The origin of the town of Bronkhorstspuit dates to 1904. The town was founded on the farm Hondsrivier No. 361 and was the property of C. J. G. Erasmus. The town was initially known as 'Erasmus', and only changed to 'Bronkhorstspuit' in 1929 (Roodt 1949: 11-12). Although many trekkers with the surname 'Bronkhorst' formed part of the Tregardt and Van Rensburg treks, it is unlikely that they were responsible for the town's naming. According to Rex (1969) it is far more likely that the Potgieter commission, who followed the Tregard and Van Rensburg route to Soutpansberg and back during the latter half of 1836, were responsible for the naming of places such as Bronkhorstspuit, Renoster- and Trichardtspoort. Another possibility for the naming of the town of Bronkhorstspuit relates to a certain type of plant, called a 'Bronkhorst', which grows freely in this area.

## **4. Methodology**

Archaeological reconnaissance of the area under investigation was mainly done through systematic site surveys and identifying possible heritage sites from satellite imagery. Due to good visibility as a result of recent veld fires the surveys were done at about 100m intervals on the section demarcated for prospecting. The area was also inspected through employing satellite imagery in order to locate possible heritage sites that are no longer easily visible on ground level. The sites that were located were then recorded via GPS and photo record. The reconnaissance of the area under investigation served a twofold purpose:

- To obtain an indication of heritage material found in the general area as well as to identify/locate archaeological sites on the sections of the portions that will be affected. This was done in order to establish a heritage context and to supplement background information that would benefit developers through identifying areas that are sensitive from a heritage perspective.
- All archaeological and historical events have spatial definitions in addition to their cultural and chronological context. Where applicable, spatial recording of these definitions were done by means of a handheld GPS during the site visit.

## 4.1 Sources of information

Standard archaeological procedures for the observation of heritage resources were followed at all times during the survey. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of archaeological material remains were recorded by means of a Garmin Oregon 550 GPS and archaeological features and general conditions on the terrain were photographed with a Sony Cyber-shot digital camera.

Information regarding past human activity and the location of sites which may be of heritage value was also obtained through personal communication with people residing on the affected portions. This also proved valuable in terms of contextualising the sites that were discovered.

A literature study, which incorporated previous work done in the region, was conducted in order to place the study area into context from a heritage perspective. Historical maps dating to between 1902 and 1905 were also inspected for traces of past human activity, but no such indications were observed. It should be noted that a full phase one impact assessment would be necessary should further development be initiated on portions four, five and nine of the farm Papkuilfontein 469 JR.

## 4.2 Limitations

The surrounding vegetation in the area under investigation is Central Sandy Bushveld consisting mostly of grass fields and a few isolated trees. The general visibility of the investigated areas was good at the time of surveying (October 2012) due to recent veld fires (**Figure 2**). The visibility conditions for locating archaeological sites, such as stone walled enclosures and graves, was therefore optimal. Smaller finds, such as stone tools and other material culture, could however still go undetected since a total coverage of the study area was not possible. It should be noted that undetected heritage remains may be present in sub-surface deposits, if found all activities must be suspended pending further archaeological investigations by a qualified archaeologist (See National Heritage and Resources Act, 25 of 1999 section 36 (6)).



**Figure 2:** Environment on the section demarcated for prospecting

## **5. Archaeological and Historical Remains**

### **5.1 Stone Age Remains**

No Stone Age archaeological remains were found.

### **5.2 Iron Age Farmer Remains**

No Iron Age Farmer archaeological remains were identified in the study area.

### **5.3 Historical Remains**

Two sites were identified within the area demarcated for prospecting that could possibly relate to historical times. Sites PKF 3 and PKF 4 are located on portion four of the farm Papkuilfontein 469 JR and appear to be the subsurface remains of angular building structures (**Figure 3 & Figure 4**). Both sites were identified through the use of satellite imagery and confirmed during the site visit. The angular layout and level of dilapidation suggest that the sites were inhabited during historical times, but due to the close proximity to several modern structures a possibility also exists that these sites might be associated with more recent activities. Through personal communication with one of the residents of a nearby settlement it was determined that they have occupied the area for several decades. The exact date, unfortunately, is not known. Site PKF 3 (**Figure 5**) is located next to the fence on the western boundary of portion four and appears to consist of a series of angular subsurface foundation remains. This is deducted from the slightly raised angular outlines of what could possibly have been settlements as well as soil marks evident on satellite imagery. No material culture, however, was observed on the surface. Site PKF 4 (**Figure 6**) is located about 130 m northeast of site PKF 3 and shares

similar traits. Site PKF 4 is also slightly larger (+- 1182 m<sup>2</sup>) and appears to consist of only one subsurface angular enclosure. Again no material culture was observed on the surface. It should also be noted that a trench, in which a water pipe was placed, was dug through the site.

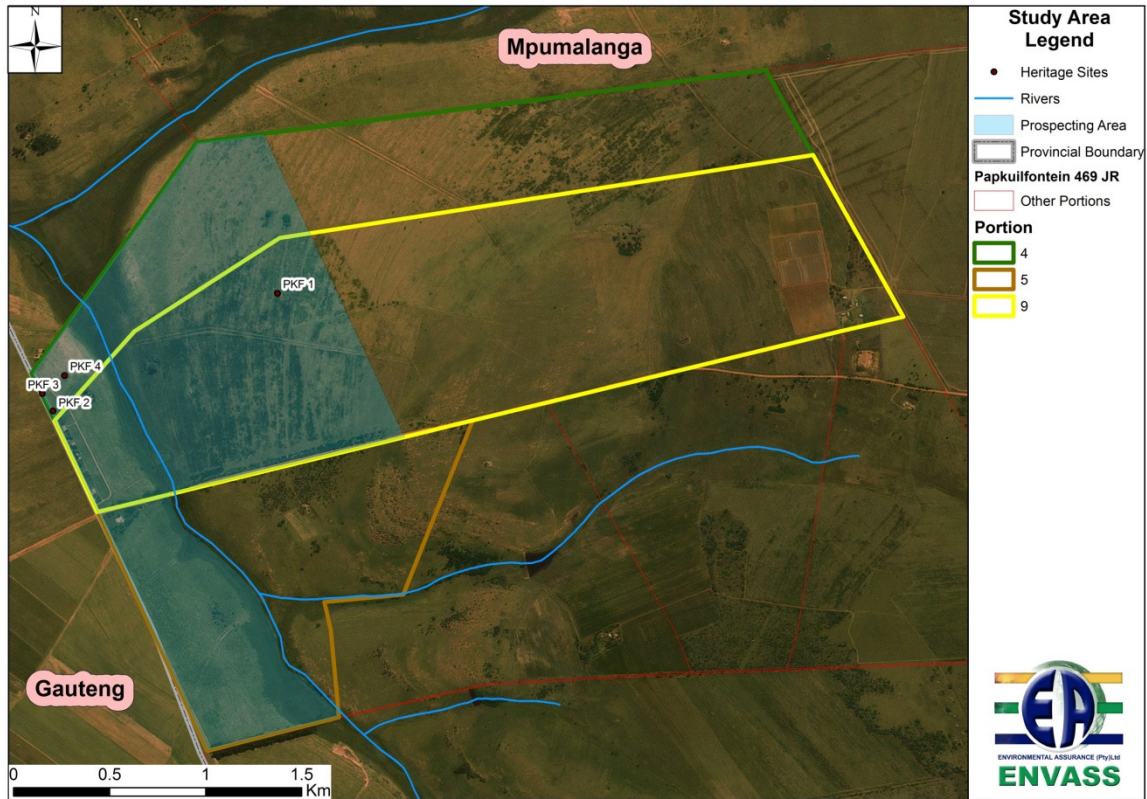


Figure 3: Distribution of heritage sites within the area demarcated for prospecting



**Figure 4:** Close-up of distribution of heritage sites

**Table 2:** Heritage site coordinates on the section demarcated for prospecting

Site	Coordinates
PKF 3	25°36'51.89"S 28°39'13.95"E
PKF 4	25°36'49.03"S 28°39'17.55"E





**Figure 5:** Site PKF 3 (A cluster of angular subsurface settlement remains)



**Figure 6:** Site PKF 4 (Single angular subsurface settlement remains)

#### **5.4 Graves**

Two graveyards were observed on the section demarcated for prospecting. Site PKF 1 (**Figure 5**) is located on portion nine of the farm Papkuilfontein 469 JR about 800 m from the Malanspruit on the eastern side. A total of

17 positively identified graves, oriented east-west in the Christian-Western style, were observed with the possibility of three additional graves. The graves are spaced between several coral trees and the fence demarcating the graveyard has been destroyed. A number of graves have headstones while several others only consist of stones stacked on top of each other. According to one of the residents of the settlements on the western side of the river the graves are associated with the Sotho speaking population of the settlements. Although some of the dates on the headstones are not visible, it could be determined that a few range between the 1930's and early 2000's.

Site PKF 2 (**Figure 8**) is located on portion four of the farm Papkuilfontein 469 JR on the western boundary. The graveyard is fenced off and consists of 24 graves oriented east-west in the Christian-Western style. A number of graves have headstones while several others only consist of stones stacked on top of each other. Personal communication with one of the residents of the nearby settlements revealed that these graves are associated with the Zulu speaking population of these settlements. Again not all of the graves have headstones with visible dates but appear to stretch over several decades. The headstones with visible dates range from the late 1980's to the early 2000's.



**Figure 7:** Graveyard on portion nine of Papkuilfontein 469 JR (Site PKF 1)



**Figure 8:** Graveyard on portion four of Papkuilfontein 469 JR (Site PKF 2)

**Table 3:** Coordinates for graveyards on the section demarcated for prospecting

Site	Coordinates
PKF 1	25°36'35.01"S 28°39'53.64"E
PKF 2	25°36'54.89"S 28°39'15.85"E

## 6. Evaluation & Recommendations

The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

**A fundamental aspect in the conservation of a heritage resource relates to whether the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. There are many aspects that must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and if appropriate mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed.**

## 6.1 Field Rating

All sites should include a field rating in order to comply with section 38 of the national legislation. The field rating and classification in this report is prescribed by SAHRA.

Rating	Field Rating/Grade	Significance	Recommendation
National	Grade 1		National site
Provincial	Grade 2		Provincial site
Local	Grade 3 A	High	Mitigation not advised
Local	Grade 3 B	High	Part of site should be retained
General protection A	4 A	High/Medium	Mitigate site
General Protection B	4 B	Medium	Record site
General Protection C	4 C	Low	No recording necessary

**Site:** Site PKF 3 (A cluster of angular subsurface settlement remains)

Rating	Field Rating/Grade	Significance	Recommendation
General protection B	4 B	Medium	Record site

**Site:** Site PKF 4 (Single angular subsurface settlement remains)

Rating	Field Rating/Grade	Significance	Recommendation
General protection B	4 B	Medium	Record site

**Site:** PKF 1 (Graveyard on portion nine)

Rating	Field Rating/Grade	Significance	Recommendation
Local	Grade 3 A	High	Mitigation not advised

**Site:** PKF 2 (Graveyard on portion four)

Rating	Field Rating/Grade	Significance	Recommendation
Local	Grade 3 A	High	Mitigation not advised

## 6.2 Statement of significance

Two sites of possible heritage significance were observed on the section demarcated for prospecting on portion four of the farm Papkuilfontein 469 JR. In addition to these sites, two graveyards were located on this section as well: one graveyard on portion four, the other on portion nine.

The two sites on portion four may be of historical origin due to its dilapidated state (Sites PKF 3 and PKF 4). The angular building style also suggests historical times, but the possibility exists that these foundation remains may relate to the nearby modern settlements. If the remains are older than 60 years it is protected under the National Heritage and Resources Act (25 of 1999), which means that it needs to be properly recorded by a qualified archaeologist and a destruction permit obtained should the need exist to demolish the sites. It is also possible that the sites may provide information regarding the history of the general area and would therefore require further research before it may be impacted on.

The two graveyards (Sites PKF 1 & PKF 2) appear to be associated with the nearby settlements. The National Heritage Resources Act (25 of 1999) as well as the Human Tissues Act (65 of 1983) protect graves older than 60 years. Graves younger than 60 years, however, are protected under the Human Tissue Act (65 of 1983) and falls under Section 2 (1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925). The exhumation of graves falls under the jurisdiction of the National Department of Health as well as the relevant Provincial Department of Health. Exhumation permission must also be obtained from the relevant local or regional council where graves are located, as well as from the relevant regional and local council to where the grave will be relocated to.

### 6.3 Recommendations

The following recommendations are made in terms with the National Heritage Resources Act (25 of 1999):

- Because the provenance of the two sites (PKF 3 and PKF 4) could not be established it is recommended that no prospecting activities in a radius of 50 m of these sites be carried out.
- It is recommended that no prospecting activities be conducted within a radius of 20 m from the edges of the two graveyards (Sites PKF 1 and PKF 2).
- Before any prospecting activities commence it is advised that a qualified archaeologist examine each of the prospecting points as soon as the coordinates for these points are available.
- A full Phase 1 Archaeological Impact Assessment (AIA) should be performed on all affected portions preceding further development, as required by Heritage Legislation.
- Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material and skeletal remains may be exposed during prospecting, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist (See National Heritage and Resources Act, 25 of 1999 section 36 (6)). From a heritage point of view prospecting may proceed on the demarcated section of portions four, five and nine of the farm Papkuilfontein 469 JR (as indicated by **Figure 3**) subject to the abovementioned conditions and recommendations.

## 7. Addendum: Terminology

### **Archaeology:**

The study of the human past through its material remains.

### **Artefact:**

Any portable object used, modified, or made by humans; e.g. pottery and metal objects.

### **Assemblage:**

A group of artefacts occurring together at a particular time and place, and representing the sum of human activities.

### **Context:**

An artefact's context usually consist of its immediate *matrix* (the material surrounding it e.g. gravel, clay or sand), its *provenience* (horizontal and vertical position within the matrix), and its *association* with other artefacts (occurrence together with other archaeological remains, usually in the same matrix).

### **Cultural Resource Management (CRM):**

The safeguarding of the archaeological heritage through the protection of sites and through salvage archaeology (rescue archaeology), generally within the framework of legislation designed to safeguard the past.

### **Excavation:**

The principal method of data acquisition in archaeology, involving the systematic uncovering of archaeological remains through the removal of the deposits of soil and other material covering and accompanying it.

### **Feature:**

An irremovable artefact; e.g. hearths or architectural elements.

### **Ground Reconnaissance:**

A collective name for a wide variety of methods for identifying individual archaeological sites, including consultation of documentary sources, place-name evidence, local folklore, and legend, but primarily actual fieldwork.

### **Matrix:**

The physical material within which artefacts is embedded or supported, i.e. the material surrounding it e.g. gravel, clay or sand.

### **Phase 1 Assessments:**

Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.

### **Phase 2 Assessments:**

In-depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

**Sensitive:**

Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

**Site:**

A distinct spatial clustering of artefacts, features, structures, and organic and environmental remains, as the residue of human activity.

**Surface survey:**

Two basic kinds can be identified: (1) unsystematic and (2) systematic. The former involves field walking, i.e. scanning the ground along one's path and recording the location of artefacts and surface features. Systematic survey by comparison is less subjective and involves a grid system, such that the survey area is divided into sectors and these are walked systematically, thus making the recording of finds more accurate.

## 8. References

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