

# **PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT**

**for**

**Environmental Assurance  
(Pty) Ltd**

**on**

**Portion 43, a portion of  
Portion 16 of the Farm  
Rooidraai 34 JT -  
Mpumalanga**

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**September 2014**

## Executive Summary

The author was appointed by Environmental Assurance (Pty) Ltd to undertake a Phase 1 Archaeological study for BEUKA Ontwikkelings Trust on Portion 43, a portion of Portion 16 of the farm Rooidraai 34 JT, Mashishing. Mashishing is located about 70 km northwest of Mbombela and 47 km south of Burgersfort in the Mpumalanga Province. The aim of the study is to determine the scope of archaeological resources which could be impacted on by the proposed construction of a service station and truck stop on Portion 43, a portion of Portion 16 of the Farm Rooidraai 34 JT.

During the pedestrian survey on Portion 43 and the surroundings, no sites of heritage importance were observed. However, a small complex of recent origin consisting of a homestead, domestic area, dam and small stone & cement platform was observed. Of these only the homestead and part of the domestic area falls within the portion demarcated for development.

Although no sites of heritage importance were observed on the demarcated portion, the significance of the larger historical and pre-historical landscape must be stressed as the of the Lydenburg Heads, Fort Howard, as well as numerous Late Iron Age stone walled archaeological sites are located in the Mashishing district.

### **Portion 43, a portion of Portion 16 of the Farm Rooidraai 34 JT, Mashishing**

The homestead and its associated structures and features (stone & cement platform, dam, domestic area) do not exceed 60 years and are therefore not protected under the National Heritage and Resources Act, 25 of 1999. However, should the need exist to demolish these remains it is recommended that a qualified archaeologist record the site through site drawings and photographs and apply for a destruction permit from the South African Heritage and Resources Agency (SAHRA).

Due to no visible other material remains pertaining to heritage resources and subject to adherence of the recommendations development may continue on the specific portion. Should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relevant heritage resources authority contacted (See National Heritage and Resources Act, 25 of 1999 section 36 (6)). Also, should culturally significant material be discovered during the course of development and construction phases, all activities must be suspended pending further investigation by a qualified archaeologist.

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# 1. Project Background

## 1.1 Introduction

Environmental Assurance (Pty) Ltd appointed the author to undertake an Archaeological study for BEUKA Ontwikkelings Trust on Portion 43, a portion of Portion 16 of the Farm Rooidraai 34 JT, Mpumalanga Province (**Figures 1 & 2**). The purpose of this study is to examine the demarcated portion in order to determine if any archaeological resources of heritage value will be impacted on by the proposed construction of the Rooidraai Service Station and Truck Stop, 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 portion demarcated for development.

In the following report, I discuss the implication for development on Portion 43 of the farm Rooidraai 34 JT with regard to heritage resources. The legislation section included serves as a guide towards the effective identification and protection of heritage resources and will apply to any such material unearthed during development and construction phases on the demarcated study area.

## 1.2 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 must include an AIA if triggered.

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

### 1.2.1 The EIA and AIA processes

Phase 1 Archaeological Impact 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 Archaeological Impact Assessment reports should include:

- a. Location of the sites that are found;
- b. Short descriptions of the characteristics of each site;



- c. Short assessments of how important each site is, indicating which should be conserved and which mitigated;
- d. Assessments 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, to identify the associations of the site, may be necessary (a pre-arranged SAHRA permit is required); and
- f. Recommendations for conservation or mitigation.

This AIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential to also provide the heritage authority with sufficient information about the sites to enable the authority 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 to relocate the development in such a way as to conserve other sites; and
- f. What measures should or could be put in place to protect the sites which should be conserved.

When a Phase 1 AIA 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 AIA it will be necessary to ensure that the study addresses such issues and complies with Section 38 of the National Heritage Resources Act.

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

*National Heritage Resource Act No.25 of April 1999*

Buildings are among 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. 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;
- books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives;
- 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 issued 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 authority:*

- (a) *destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;*
- (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-*
- i. exceeding 5000m<sup>2</sup> in extent; or*
  - ii. involving three or more existing erven or subdivisions thereof; or*
  - iii. involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - iv. the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
- (d) *the re-zoning of a site exceeding 10000m<sup>2</sup> in extent; or*
- (e) *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.

## 2. Study Area and Project Description

### Location & Physical environment

Lydenburg, or Mashishing as it is now known, is located in the Mpumalanga Province and lies near the northern border with the Limpopo Province. Mashishing falls within the Ehlanzeni District Municipality and the Thaba Chweu Local Municipality. Mbombela, previously Nelspruit, is located roughly 70 km southeast of Mashishing and Burgersfort 47 km to the north. In terms of vegetation the study area falls within the Grassland Biome which is typically associated with summer rainfall regions. This Biome covers approximately 28% of South Africa (Manning 2009, cited in Marais 2014). On a local scale the vegetation consists of a dominant ground layer comprising grass and herbaceous perennials. Few woody plant species are present. According to a different classification the area falls within Lydenburg Montane Grassland (Mucina & Rutherford 2006). Previous classifications (Acocks 1953) identified this vegetation type as North-Eastern Sandy Highveld.

Soils in the study area are generally derived from the underlying geology: Shale, quartzite, lavas and dolomites belonging to the Pretoria Group of the Transvaal Supergroup. Generally the soil is of intermediate suitability for arable agriculture where the climate permits.

The study area falls within the summer rainfall region while the rainy season generally stretches from October to March. Annual rainfall is about 858 mm with frequent mist and frost occurring about 21 days per year. Average daily temperatures may vary between 22 and 28 °C while minimum temperatures during winter months may reach °C. Daily wind speeds generally vary between 5 and 7 km/h.

In terms of topography the general area falls on the Lowveld Escarpment with an average elevation of 1400 MASL. Altitudes, however, may vary between 600 and 2160 MASL. The elevation of the project area is 1474 MASL and is generally flat with a gradual slope from east to west.

The study area falls within the Quarternary catchment B42A, belonging to the Steelpoort Olifants sub-Water Management Area (WMA). The closest river to the study area is the Dorps River which flows roughly 2.5 km to the east.

The current utilisation of the area demarcated for development is unknown, but was probably used for agricultural or grazing purposes. The surrounding land uses include transformed land previously used for agricultural activities to the north, the R540 road with transformed land and guest houses to the east, a guest lodge and agricultural land to the south and transformed agricultural land to the west.

### Project description

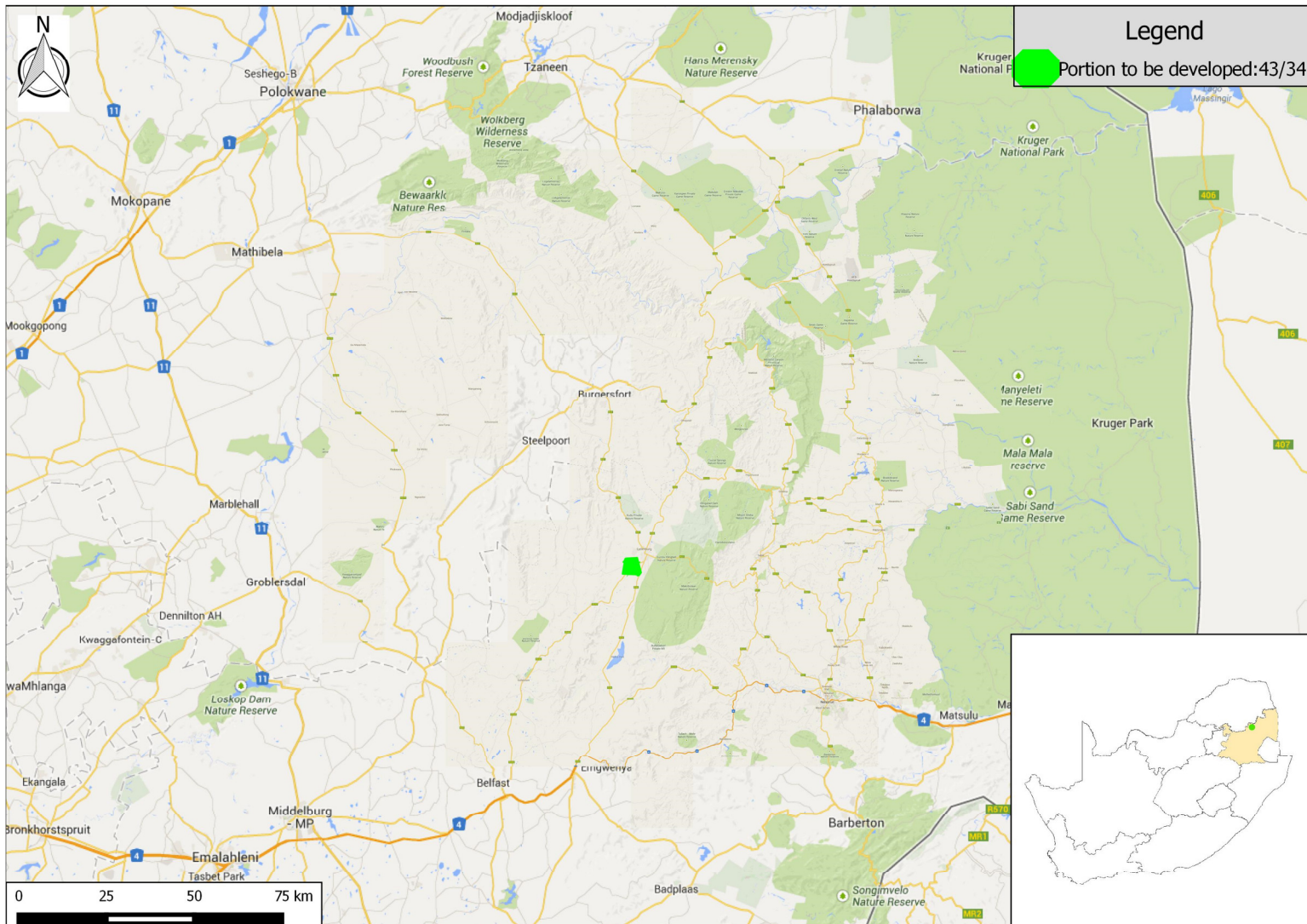
Portion 43, a portion of Portion 16 of the Farm Rooidraai 34 JT, is demarcated for the construction of a filling station and truck stop (Table 1). Portion 43 is located 5 km southwest of Mashishing and borders the R540 Dullstroom-Mashishing and R577 Roosenekal intersection (**Figure 2**). The area demarcated for development is 9.889 hectare in size. The site is ideal for the proposed development since both roads carry high volumes of traffic relating to the mining and forestry industries.

The proposed development will consist of the following infrastructure: 5 X 23 000 ℓ underground storage tanks, 3 X 23 000 ℓ aboveground storage tanks, filling station with fuel pumps, paved truck stop and storage area for truck containers, boom and security office, convenience store and storage, Wimpy, ATM, Electrical supply from Eskom, Stand-by generators, paved access and internal roads, paved parking areas, office and staff ablutions, ablutions, staff change rooms, fire prevention, potable and fire water distribution from existing borehole on site, conservancy tank, first aid facilities. Site access will be from both the R540 and R577 roads in order to promote traffic flow through the proposed development.

Because the Thaba Chweu Local Municipality is driven mainly by tourism, agricultural, mining, and forestry productions, the roads bordering the study area carries a significant amount of heavy vehicles for the transportation of commodities. It should also be mentioned that mining is playing an increasingly important role as it is responsible for 32% of the Thaba Chweu Gross Geographic Product. The site is therefore favourably located. Also, once the truck stop and filling station is operational, the aim is to employ 22 employees, adding towards socio-economic improvement.

**Table 1:** Property name & coordinates

<b>Property</b>	<b>Portion</b>	<b>Map Reference (1:50 000)</b>	<b>Coordinates</b>
Rooidraai 34 JT	43, a portion of Portion 16	2530AB	S: -25.128847 E: 30.410073



**Figure 1:** Regional and Provincial location of the study area.

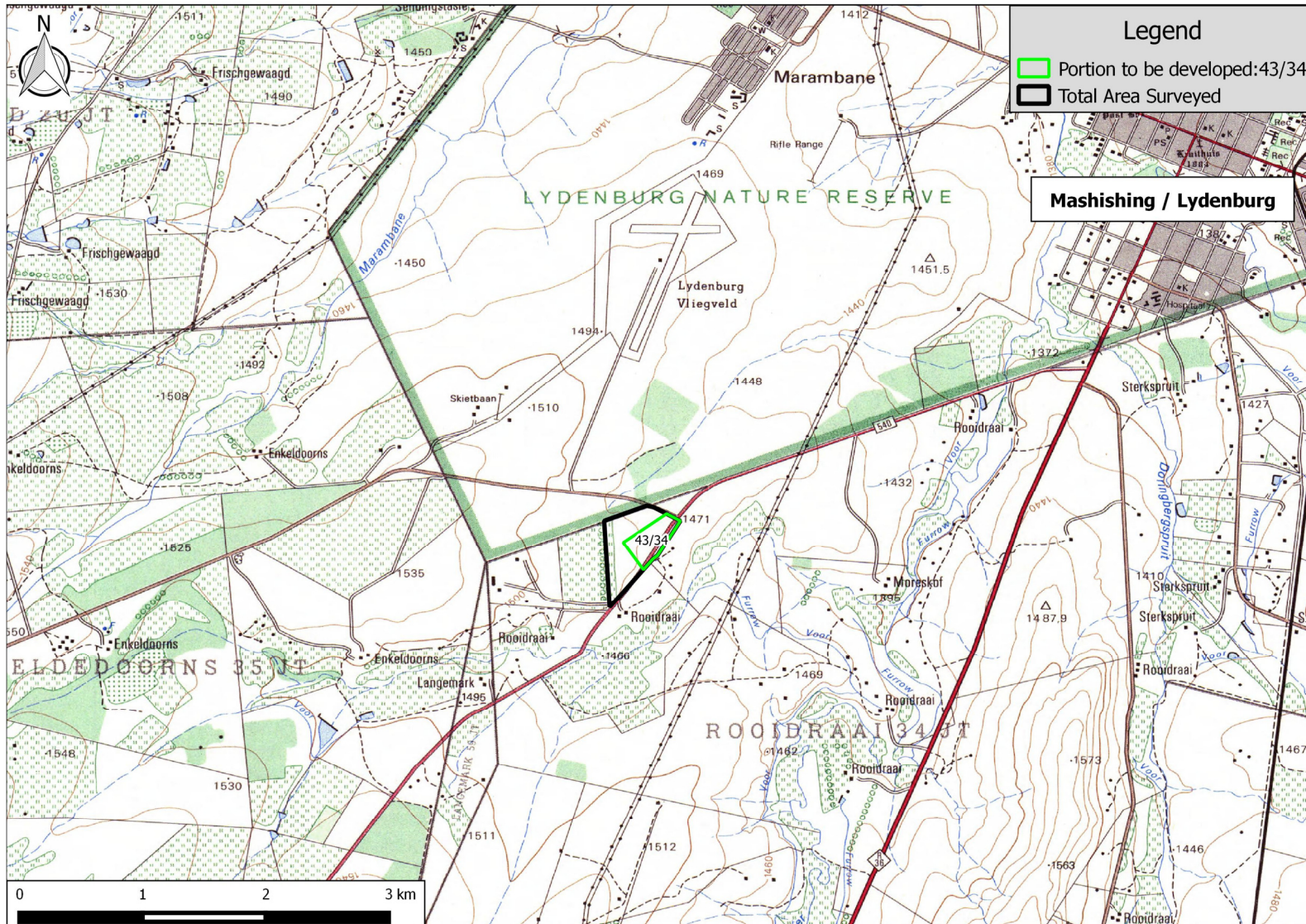
Tobias Coetzee ©

Rooidraai Filling Station AIA-001/14\_15

Order number: 001/14\_15 HIA

September 2014





**Figure 2:** Segment of SA 1: 50 000 2530 AB indicating the study area.



## 2.1 Archaeological Background

Southern African archaeology is broadly divided into the Early, Middle and Later Stone Ages; Early, Middle and Later Iron Ages; and Historical or Colonial Periods. This section of the report provides a general background to archaeology in South Africa and also focuses on more site specific elements where relevant.

### 2.1.1 General Archaeological Context

#### The Stone Age

The earliest stone tool industry, the Oldowan, was developed by early human ancestors which were the earliest members of the genus *Homo*, such as *Homo habilis*, around 2.6 million years ago. It comprises tools such as cobble cores and pebble choppers (Toth & Schick 2007). Archaeologists suggest these stone tools are the earliest direct evidence for culture in southern Africa (Clarke & Kuman 2000). The advent of culture indicates the advent of more cognitively modern hominins (Mitchell 2002: 56, 57)

The Acheulean industry completely replaced the Oldowan industry. The Acheulean industry was first developed by *Homo ergaster* between 1.8 to 1.65 million years ago and lasted until around 300 000 years ago. Archaeological evidence from this period is also found at Swartkrans, Kromdraai and Sterkfontein. The most typical tools of the ESA are handaxes, cleavers, choppers and spheroids. Although hominins seemingly used handaxes often, scholars disagree about their use. There are no indications of hafting, and some artefacts are far too large for it. Hominins likely used choppers and scrapers for skinning and butchering scavenged animals and often obtained sharp ended sticks for digging up edible roots. Presumably, early humans used wooden spears as early as 5 million years ago to hunt small animals.

Middle Stone Age artefacts started appearing about 250 000 years ago and replaced the larger Early 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. The first *Homo sapiens* species also emerged during this period. Associated sites are Klasies River Mouth, Blombos Cave and Border Cave (Deacon & Deacon 1999).

Although the transition from the Middle Stone Age to the Later Stone Age did not occur simultaneously across the whole of southern Africa, the Later Stone Age ranges from about 20 000 to 2000 years ago. Stone tools from this period are generally smaller, but were used to do the same job as those from previous periods; only in a different, more efficient way. The Later Stone Age is associated with: rock art, smaller stone tools (microliths), bows and arrows, bored stones, grooved stones, polished bone tools, earthenware pottery and beads. Examples of Later Stone Age sites are Nelson Bay Cave, Rose Cottage Cave and Boomplaas Cave (Deacon & Deacon 1999).

## The Iron Age & Historical Period

The Early Iron Age marks the movement of farming communities into South Africa in the first millennium AD, or around 2500 years ago (Mitchell 2002:259, 260). These groups were agro-pastoralist communities that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Archaeological evidence from Early Iron Age sites is mostly artefacts in the form of ceramic assemblages. The origins and archaeological identities of this period are largely based upon ceramic typologies. Some scholars classify Early Iron Age ceramic traditions into different “streams” or “trends” in pot types and decoration, which emerged over time 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 until the end of the first millennium AD (Mitchell 2002; Huffman 2007). Some well-known Early Iron Age sites include the Lydenburg Heads in Mpumalanga, Happy Rest in the Limpopo Province and Mzonjani in Kwa-Zulu Natal.

The Middle Iron Age roughly stretches from AD 900 to 1300 and marks the origins of the Zimbabwe culture. During this period cattle herding appeared to play an increasingly important role in society. However, it was proved that cattle remained an important source of wealth throughout the Iron Age. An important shift in the Iron Age of southern Africa took place in the Shashe-Limpopo basin during this period, namely the development of class distinction and sacred leadership. The Zimbabwe culture can be divided into three periods based on certain capitals. Mapungubwe, the first period, dates from AD 1220 to 1300, Great Zimbabwe from AD 1300 to 1450, and Khami from AD 1450 to 1820 (Huffman 2007: 361, 362).

The Later Iron Age roughly dates from AD 1300 to 1840. It is generally accepted that Great Zimbabwe replaced Mapungubwe. Some characteristics include a greater focus on economic growth and the increased importance of trade. Specialisation in terms of natural resources also started to play a role, as can be seen from the distribution of iron slag which tend to occur only in certain localities compared to a wide distribution during earlier times. It was also during the Later Iron Age that different areas of South Africa were populated, such as the interior of KwaZulu Natal, the Free State, the Gauteng Highveld and the Transkei. Another characteristic is the increased use of stone as building material. Some artefacts associated with this period are knife-blades, hoes, adzes, awls, other metal objects as well as bone tools and grinding stones.

The Historical period mainly deals with Europe’s discovery, settlement and impact on southern Africa. Some topics covered by the Historical period include Dutch settlement in the Western Cape, early mission stations, Voortrekker routes and the Anglo Boer War.

## 2.1.2 Mashishing / Lydenburg Archaeo-History

The Mashishing / Lydenburg area has a rich history spanning from early to Historical times. Below is a brief account of earlier events in the Mashishing / Lydenburg area.

One of the more famous EIA sites in Mpumalanga is attributed to the Lydenburg Heads site which comprise seven hollow ceramic sculptures. Pieces of the Lydenburg Heads were discovered and collected by Ludwig von Bezing in the Sterkstroom Valley near Lydenburg in 1957. Over the years he collected the remains of seven heads and while studying medicine at the University of Cape Town brought his finds under the attention of Prof Ray Inskeep of the department of Archaeology. Under Prof Ray Inskeep's supervision two large heads and five small ones were reconstructed. The Lydenburg Heads are housed in the Iziko Museum in Cape Town. Prof Inskeep also arranged for the systematic excavation of the site. Excavations revealed that the site was occupied during two periods. The first period was dated to around AD 600 and the second from the 9<sup>th</sup> – 11<sup>th</sup> century AD. Because the Lydenburg Heads were removed from their context dating is difficult. Compared to ceramics found at the dated sites of Ndongonwane and Msuluzi near the KwaZulu-Natal coast, it is believed that the Lydenburg Heads date to the second period of occupation. These similarities reinforce the fact that EIA communities moved and interacted (Delius 2007: 53 – 55).

Regarding the decorations of the Lydenburg Heads there is a striking similarity. Its form is elongated and bag-shaped orientated in order so that the mouth of the pot becomes the base of the neck of the head. Clay was added to form the eyes, ears, lips and scarification-like features. Patterns were also cut into the wet clay. Some societies typically carry out dental mutilation during initiation and might explain why the bigger heads are missing teeth and the smaller heads have gaps between the front teeth. The Lydenburg Heads may therefore have been used in pre-marital initiation schools. Also, it should be noted that some human remains dating to the Iron Age are missing front teeth, which reinforces the connection (Delius 2007: 55).

Later Iron Age activity are generally marked by stone walled enclosures. The numerous stone walled enclosures in Mpumalanga have long been the subject of identity disputes. Research into these sites were conducted by researchers such as Van Hoepen (1939), Mason (1962), Evers (1975), Marker & Evers (1976), Collett (1979), Maggs (2008), (Delius & Schoeman 2008), Delius, Maggs & Schoeman (2012). Research identified the area occupied by these stone walled enclosures stretching more or less from Carolina in the south to Ohrigstad in the north as Bokoni.

Oral traditions from Bokoni are scarce but some historical information from other groups such as the Pedi has been collected. Oral traditions from the Maroteng, who established a Pedi kingdom in the eastern Transvaal, indicate contact between them and the Koni when they crossed the Crocodile River around 1650. Thus the Koni were already established in the Crocodile River area by that time (Delius & Schoeman 2008: 142-143).

Pedi oral traditions indicate that Bokoni was occupied from the 1500s to the mid 1800s (Delius & Schoeman 2008). This occupation phase, marked by a period of peace, was disrupted by episodes of prolonged violence. One of these, the *mfecane*, resulted in major shifts in Bokoni and a reconfiguration of the region.

Van Hoepen's research indicated that Pedi or Ndzundza groups settled in the study area while research by Evers (1975) and Collett (1979) drew on similarities between ceramics and settlement layout patterns of modern Pedi communities. Later research done by Schoeman (1997) and Delius and Schoeman (2008) challenged the Pedi model.

Research by Marker and Evers (1976), which focused on settlement attributes, identified three different levels of settlement complexity in their study of stone walled enclosures in the eastern Transvaal. The first type is associated with smaller isolated settlements and consists of two concentric circles. The second settlement type is characterized by large central enclosures with two entrances on both sides and smaller stone circles which are found in association with these large enclosures. Whereas the first two types may be associated with terracing, the third type is not and consists of small stone walled enclosures grouped together.

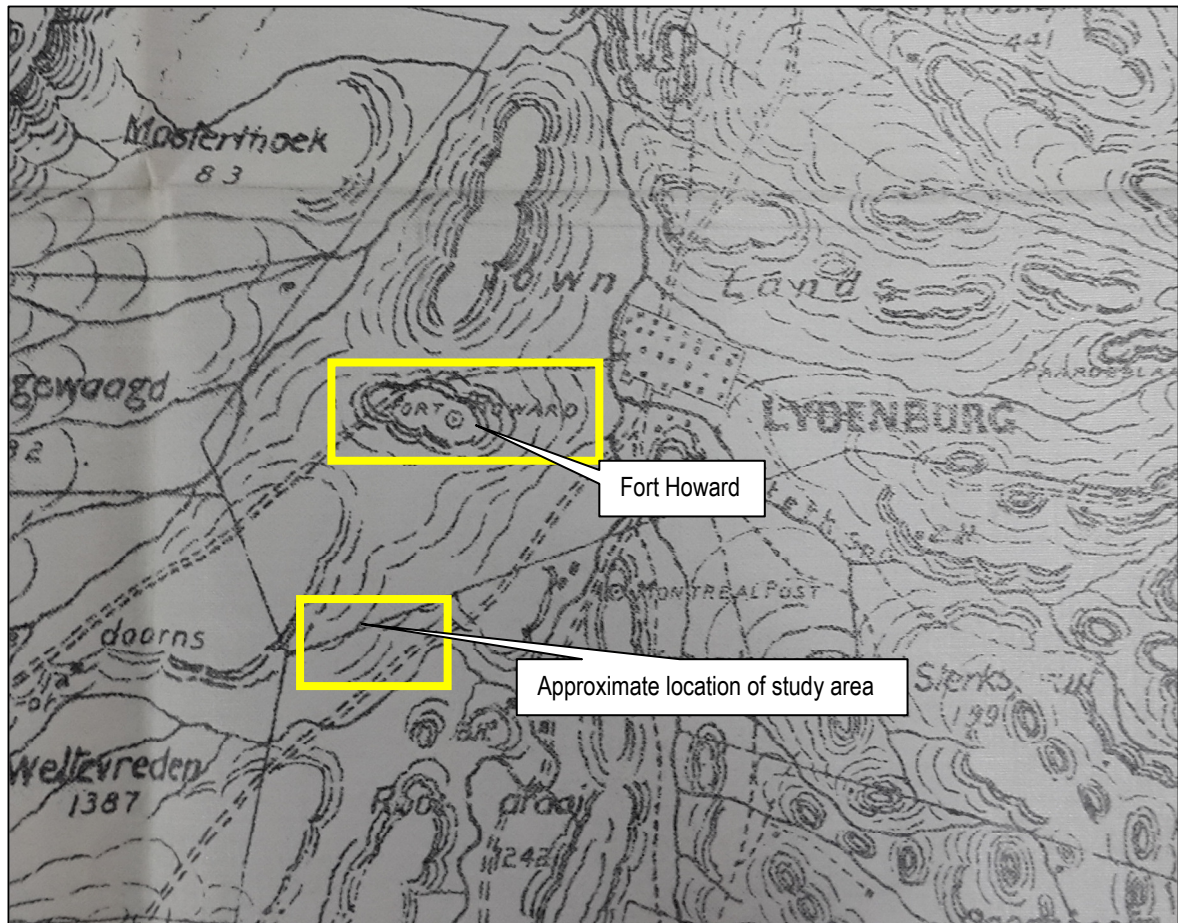
Revil Mason (1962) conducted research on a larger scale and also employed aerial photographs. His study focused on the stone walled settlements of the Steelpoort, Crocodile, Komati and Sabi rivers where he located 1792 sites. Evers (1975) then covered the area between Lydenburg and Machadodorp also using aerial photography and identified 166 sites which, based on Mason's definition, is equivalent to 5000 sites.

### **Lydenburg / Mashishing town origins & Anglo Boer War**

The town of Lydenburg, or Mashishing as it is now known, has its origins in the 19<sup>th</sup> Century. The Voortrekkers in the Transvaal, Natal and the Free State made use of Durban / Port Natal for trading, until the British annexed Natal in 1843 (Celliers 2007). This led to the Voortrekkers Andries Pretorius and Hendrik Potgieter exploring different possibilities to reach the coast at Delagoa Bay (Maputo). This resulted in Potgieter leaving for Delagoa Bay in November 1843 to explore trade possibilities as well as to make contact with a Dutch trading ship sent by the merchant George Ohrig. This route more or less followed the present N4 highway through Schoemansklouf and the Crocodile River (Bulpin 2002: 93). Subsequent expeditions to Delagoa Bay were undertaken by Karel Trichardt and passed the site where the town of Andries-Ohrigstad would be established in 1845. Tsetse and Malaria severely hampered routes to the coast (De Vaal 1990).

During March / April 1848 Potgieter and his party departed the town of Andries-Ohrigstad and moved to Soutpansberg. Factors for this decision included poor suitability for cattle farming, failure to find a practicable route free from tsetse to Delagoa Bay, conflict among the leaders of the Andries-Ohrigstad community, and the presence of malaria. With the malaria epidemic of 1849 the rest of the community left the town and established the town of Lydenburg further south in 1850 (Bergh 1998: 131).

During the Anglo-Boer War (1899 – 1902) the town of Lydenburg surrendered to British forces on September 6, 1900 under Sir Redvers Buller. This led to the battle of Paardeplaats on September 8, 1900. The British occupied the town of Lydenburg for the duration of the Anglo-Boer War. One of the forts constructed by the British during these times, Fort Howard, is located roughly 3 km northeast of the study area, Portion 43 of the farm Roodraai 34 JT (**Figure 3**) (Celliers 2007).



**Figure 3:** Fort Howard in relation to the study area (Extract from: General's Office under direction of Major H.M. Jackson, August 1902).

### 3. Methodology

I conducted archaeological reconnaissance of the study area through a systematic pedestrian site survey. The transects were spaced roughly 50 m apart and possible sites were recorded via GPS (Global Positioning System) location and photographic record (Table 2). Also, the site was inspected beforehand on Google as well as black and white aerial imagery in order to identify possible heritage remains. Although development will only occur on Portion 43, the surrounding area was surveyed as well. This was done in order to determine whether there are any heritage resources that might be impacted on by the proposed development. The total area

surveyed, therefore, was 29.7 hectare. This is roughly 20 hectare larger than the area demarcated for development.

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 or locate archaeological sites on Portion 43 of the Farm Rooidraai 34 JT. 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.

### 3.1 Sources of information

At all times during the survey I followed standard archaeological procedures for the observation of heritage resources. As most archaeological material occurs in single or multiple stratified layers beneath the soil surface, I paid special attention to disturbances; both man-made such as roads and clearings, and those made by natural agents such as burrowing animals and erosion. I recorded locations of archaeological material remains by means of a Garmin Oregon 550 GPS and photographed these sites as well as general conditions on the terrain with a Sony Cyber-shot camera.

I conducted a literature study, which incorporated previous work done in the region, in order to place the study area into context from a heritage perspective.

Personal communication with the previous owner of Portion 43 of the Farm Rooidraai 34 JT, Mr. Ben Ehlers, revealed that his section of the Farm Rooidraai 34 JT is a family farm which belonged to his father and grandfather. Around 2004 he decided to subdivide the farm and sold Portion 43 to BEUKA Ontwikkelings Trust.

### 3.2 Limitations

The vegetation on the study area consists mainly of grasslands (**Figures 4 - 6**). The general visibility was good during the time of surveying since the area was recently burnt (September 2014).





**Figure 4:** Environment in an eastern direction along the southern boundary of the study area



**Figure 5:** Environment in a north-western direction from the south-eastern corner of the study area



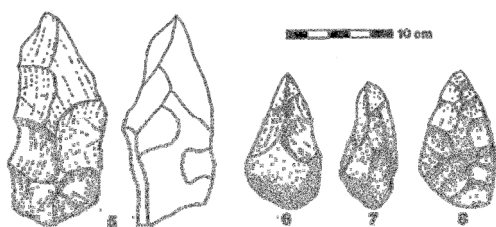
**Figure 6:** Environment in a south-eastern direction from the northern boundary of the study area

## 4. Archaeological and Historical Remains

### 4.1 Stone Age Remains

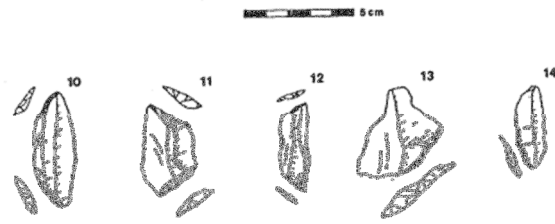
I found no Stone Age archaeological remains on Portion 43 of the Farm Rooidraai 34 JT.

Although I located no Stone Age archaeological remains, such artefacts may occur in area. These artefacts are often associated with rocky outcrops or water sources. **Figures 7 - 9** below are examples of stone tools often associated with the Early, Middle and Later Stone Age of southern Africa.

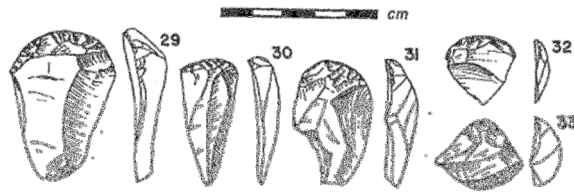


**Figure 7:** ESA artefacts from Sterkfontein (Volman 1984)





**Figure 8:** MSA artefacts from Howiesons Poort (Volman 1984)



**Figure 9:** LSA scrapers (Klein 1984)

## 4.2 Iron Age Farmer Remains

I found no Iron Age Farmer archaeological remains on Portion 43 of the farm Roidraai 34 JT. However, A study conducted by Archaeology Africa on Portion 18 of the Farm Roidraai 34 JT revealed Iron Age Farmer remains. Portion 18 is located roughly 1.5 km east of Portion 43. Their findings included three stone walled sites belonging to the Later Iron Age. One of the three sites was classified as having a low significance, another as moderate and the last as a site of high significance. Mitigation measures for the site with a low significance included recording through drawings and photographs, written report and applying for a destruction permit. Mitigation measures for the site with moderate significance included recording, excavation, a written report and a destruction permit. Mitigation measures for the site classified as having a high significance included a 15 m buffer zone and site management plan. If this was not possible the recommendation was that the site be recorded, excavated, a report written and the application if a destruction permit (Birkholtz 2007: 17-25).

In another study done by Archaeology Africa (Birkholtz 2006) on Portion 121 of the Farm Sterkspruit 33 JT, which is roughly 3 km east of Portion 43 of the Farm Roidraai 34 JT, several stone walled enclosures, terrace stone walling and grinding stones belonging to the Later Iron Age were observed as well as a more recent cemetery.

## 4.3 Historical Remains

I found no Historical archaeological remains on Portion 43 of the farm Roidraai 34 JT. The study conducted by Archaeology Africa on Portion 18 of the Farm Roidraai 34 JT revealed a site possibly dating to the historical period. The site also consists of stone walling, but square-shaped features were observed as well. This site was classified as having a low significance with the following mitigation: recording through drawings and photographs, written report, destruction permit (Birkholtz 2007: 17-25).

#### 4.4 Recent remains

I located two structures (**Figures 11 – 13**) and one other feature (**Figure 14**) of modern origin on the northern boundary of the surveyed area (Lyd 1 – 3). The site Lyd 1 is the only site falling within the area demarcated for development, but forms part of a small homestead complex extending into the adjacent portion to the north (**Figure 10**). The entire complex, roughly 75 m X 50 m appears to have been fenced off. Although the fence only remains in certain places. Lyd 1 is the ruin of a 10 m X 5 m homestead built from stone (**Figures 11 – 12**), while Lyd 2 is small structure consisting of stone and cement (**Figure 13**). Lyd 3 appears to be the remains of a dam (**Figure 14**).

According to the previous owner of Portion 43, Mr Ben Ehlers, the homestead with the associated structures and features were built between 25 and 30 years ago for a farm worker. According to Mr. Ehlers the homestead fell into disuse roughly 15 years ago. The small construction of stone and cement (Lyd 2) used to be a platform for a water tank. Lyd 3 was a dam and was associated with the homestead.

Because the homestead with its associated structures and features are not older than 60 years, the area demarcated as domestic area on figure 10 is not protected under the National Heritage Resources Act, 25 of 1999.



**Figure 10:** Study area with survey transects

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**Table 2:** Site and Survey Points coordinates

<b>Site / Survey Point Name</b>	<b>Longitude</b>	<b>Latitude</b>
Lyd1	30.410339	-25.128201
Lyd2	30.410255	-25.127806
Lyd3	30.410218	-25.127856



**Figure 11:** Recent structure on the study area viewed from the north (Lyd 1)





**Figure 12:** Recent structure on the study area viewed from the southeast (Lyd 1)



**Figure 13:** Recent platform on the study area viewed from the west (Lyd 2)



**Figure 14:** Recent dam on the study area viewed from the west (Lyd 3)

#### **4.5 Graves**

No graves were observed during the survey. According to Mr. Ehlers no graves exist on the portion demarcated for development.

### **5. Evaluation**

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.

Because the findings on Portion 43 of the farm Rooidraai 34 JT is of relative recent origin, it is of low significance from a heritage perspective.

## 5.1 Field Rating

All sites should include a field rating in order to comply with section 38 of the National Heritage Resources Act (Act No. 25 of 1999). The field rating and classification in this report is prescribed by SAHRA.

**Table 3:** Field Rating

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:** Lyd1, Lyd2, Lyd3

The modern structures and feature observed in the vicinity of the study area do not exceed 60 years and are therefore not protected under the National Heritage Resources Act, 25 of 1999. For this reason the sites were not rated.

## 6. Statement of Significance & Recommendations

### 6.1 Statement of significance

#### **Portion 43, a portion of Portion 16 of the Farm Rooidraai 34 JT**

I observed no archaeological material of heritage significance on Portion 43 of the Farm Rooidraai 34 JT. A building with associated stone and cement platform, as well as a dam (Lyd 1 – 3) built between 25 and 30 years ago, however, was observed. It is unlikely that the building and its associated structures and features are important from a heritage perspective. It should also be noted that the building is located inside the boundary of Portion 43, while the stone & cement platform and dam fall outside of the area demarcated for development.

## 6.2 Recommendations

The archaeological and historical landscape around Mashishing infers a rich and diverse cultural horizon. Therefore, the following recommendations are made in terms with the National Heritage Resources Act (25 of 1999) in order to avoid the destruction of heritage remains in areas demarcated for development:

- Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material may be exposed during the development and construction phases, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist. Also, should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relevant heritage resources authority contacted (See National Heritage Resources Act, 25 of 1999 section 36 (6)).
- Should the need arise to expand the development beyond the surveyed area mentioned in this study, the following applies: a qualified archaeologist must conduct a full Phase 1 Archaeological Impact Assessment (AIA) on the sections beyond the demarcated areas which will be affected by the expansion, in order to determine the occurrence and extent of any archaeological sites and the impact development might have on these sites.
- It is recommended that the homestead and its associated structures and features be left intact as indicated on Figure 10. However, should the need arise to demolish any of the structures a destruction permit must be obtained from the National Heritage Resources Agency and the site be recorded through site drawings and photographs.
- Apart from the recent remains on Portion 43 of the Farm Roodraai 34 JT I did not observe any heritage material on the area demarcated for development. Therefore, from a heritage point of view, development may proceed on the demarcated portion, 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.

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**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:

There are two kinds: (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 ally, thus making the recording of finds more accurate.

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