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**PHASE 1 HERITAGE IMPACT ASSESSMENT SPECIALIST STUDY FOR THE PROPOSED  
PREVENTATIVE MAINTENANCE OF D192 ROAD AND ASSOCIATED BORROW-PITS  
WITHIN MOGALAKWENA LOCAL MUNICIPALITY OF WATERBERG DISTRICT  
MUNICIPALITY OF LIMPOPO PROVINCE**

**PROJECT NO: RAL/T1255**

*Prepared for:*

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## Executive Summary

Item	Description
<b>Propose Development and Location:</b>	Heritage impact assessment specialist study for the Proposed preventative maintenance of D192 road and associated Borrow-pits within Mogalakwena Local Municipality of Waterberg District Municipality of Limpopo Province.
<b>Purpose of the Study</b>	Phase 1 Heritage Impact Assessment
<b>Map reference</b>	1:250 000 Topographic Map
<b>Coordinates</b>	S23.977067°E28.665664° S23.815498°E28.614624°
<b>Local Authority</b>	Mogalakwena Local Municipality
<b>District Municipality</b>	Waterberg District Municipality
<b>Developer</b>	Roads Agency Limpopo (RAL)
<b>Predominant land use of surrounding area</b>	Residential
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<b>Heritage Consultant</b>	Vhufa Hashu Heritage Consultants
<b>Status of the Report</b>	Final Report
<b>Date of field work</b>	11 August 2022
<b>Date of report</b>	September 2022

**Purpose of the Study:** The aim of the survey was to investigate the availability of archaeological sites, cultural Heritage resources, sites associated with oral histories, graves, cultural landscapes, and any structures of historical significance that may be affected by the proposed road maintenance, assess their significance, the impact of the development on the heritage resources and to provide relevant mitigation measures to alleviate impacts

to the heritage resources. The proposed Road maintenance will affect Lesodi/Rantlakane, Basterpad, Kobeana and Jakkalskuil Villages which are situated along road.

Vhufa Hashu Heritage Consultants was appointed by Mamadi & Company S.A (Pty) Ltd to undertake a phase 1 Heritage Impact Assessment for the proposed maintenance of road D192 starting from road R518 to Jakkalskuil Village within Waterberg District Municipality of Limpopo Province, in compliance with Section 38 of the National Heritage Resources Act 25 of 1999.

South Africa's historical, archaeological and paleontological heritage resources are unique and non-renewable as defined in section 3 of the NHRA. Heritage Resources as defined in section 3 of the NHRA are given "formal" protection in terms of section 27-29 and 31-32 of the NHRA and "general" protection in terms of sections 33,34,35,36 and 37 of the NHRA. Therefore, no damage, destruction or alteration may occur to heritage resources without a permit issued by a relevant heritage authority.

An assessment of impacts on heritage resources of a development is required in terms of section 38(1 and 8) of the NHRA. Where possible, heritage resources should be preserved *in situ* and conserved for future generations. This can be achieved through a monitoring and management plan that may be stipulated in the conditions issued on a development by an authority as per section 38(4)c of the NHRA. Where it is not possible to retain the heritage resources *in situ*, and the heritage resources are not deemed significant, the loss of information can be reduced by recording and mitigation of the heritage resources through a process of excavation (or sampling) as a condition on the development in terms of section 38(4)d and e, after obtaining a permit from the relevant Heritage Resources Authority (HRA), at the cost of the developer. This allows us to record a part of the history of the place as part of the national inventory. Assessment and mitigation in the early phase of the development may save the developer considerable delays and related costs. Based on an interdisciplinary methodology, that combined ICOMOS methodology with several techniques from various discipline, the impact of the proposed road maintenance was considered.

### **Heritage Resources Descriptions and Significance**

No heritage/archaeological resources was identified within the proposed seven (07) borrow pit sites and on the both sides of the road reserve of road D192 starting on 0km from road R518 to 20.3km in Jakkalskuil Village. The Rantlakane Village Community grave yard **BG/D192/01** was recoded next to the proposed borrow pit site N0.02 (Figure 22).

### **Conclusion**

No Heritage or Archaeological site was identified within the proposed site of development. From Heritage perspective, the development should be allowed to continue.

### **Acknowledgements:**

The authors acknowledge Mamadi & Company S.A (Pty) Ltd for their assistance with project information, and the associated project background information as well as responding to technical queries related to the project. Many thanks and appreciation also go to the community members George Nxube, ME Dolo, LA Rachele, FL Mabakallo, MD Lebelo and Hulisani Netshisaulu, Luambo Nevhuramba of Mamadi & Company S.A (Pty) Ltd who made our work easy by accompanying us to the sites.

**Acknowledgements:**

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A handwritten signature in black ink, appearing to read 'R. Munyai', with a stylized flourish at the end.

.....  
Archaeologist and Heritage Consultant

## **EXPLANATION OF ABBREVIATIONS USED IN THIS DOCUMENT**

<b>AIA</b>	Archaeological Impact Assessment
<b>ASAPA</b>	South African Archaeological Professional Association
<b>CMP</b>	Conservation Management Plan
<b>EIA</b>	Early Iron Age
<b>EMP</b>	Environmental Management Plan
<b>ESA</b>	Early Stone Age
<b>GPS</b>	Geographical Positioning System
<b>HIA</b>	Heritage Impact Assessment
<b>HMP</b>	Heritage Management Plan
<b>ICOMOS</b>	International Council of Monuments and sites
<b>LIA</b>	Late Iron Age
<b>LSA</b>	Late Stone Age
<b>MIA</b>	Middle Iron Age
<b>MSA</b>	Middle Stone Age
<b>NASA</b>	National Archives of South Africa
<b>NHRA</b>	National Heritage Resources Agency
<b>PRHA</b>	Provincial Heritage Resources Authority
<b>SAHRA</b>	South African Heritage Resources Agency
<b>SAHRIS</b>	South African Heritage Resources Information System
<b>VHHC</b>	Vhufa Hashu Heritage Consultants

## DEFINITIONS

**"Aesthetic value"** Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

**„Alter"** any action affecting the structure, appearance or physical properties of a place or object, whether by a way of structural or other works, by painting plastering or other decoration or any other means;

**"Conservation"** in relation to heritage resources, includes protection maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance

**"Conservation Management Plan"** A policy aimed at the management of a heritage resource and that is approved by the Heritage Resources Authority setting out the manner in which the conservation of a site, place or object will be achieved

**"Cultural Significance"** As defined in the NHRA means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

**"Development"** means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future wellbeing, including-

- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carrying out any works on or over or under a place;
- (c) subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- (d) construction or putting up for display signs or hoardings;
- (e) any change to the natural or existing condition or topography of land; and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil.

**"Heritage agreement"** means an agreement referred to in section 42,

**"Heritage Impact Assessment"** A report compiled in response to a proposed development that must meet the minimum requirements set out in the NHRA and should be submitted to a heritage resources authority for consideration.

**"Heritage site"** means a place declared to be a national heritage site by SAHRA or site declared to be a provincial Heritage site by a PHRA

**"Historic value"** Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

**"Improvement"** in relation to heritage resources includes repair, restoration and rehabilitation of a place protected in terms of this Act.

**"Interested and Affected Parties"** Individuals, organisations or communities that will either be affected and/or have an interest in a development or the resulting impacts of a development.

**"Management"** in relation to heritage resources includes the conservation, presentation and improvement of a place protected in terms of this Act.

**"Scientific value"** Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period.

**"Social value"** Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

**"Rarity"** Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

**"Representivity"** Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

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## **1. INTRODUCTION**

Roads Agency Limpopo (RAL) commissioned studies for seven borrow pit sites and the proposed maintenance part of road D192 starting from road R518 which start from Mokopane going to Marken and end at Jakkalskuil Village within Waterberg District Municipality of Limpopo Province. Mamadi & Company S.A (Pty) Ltd was appointed to handle the Environmental Management and monitoring of the proposed project. They appointed Vhufahashu Heritage Consultants to conduct Phase 1 Heritage Impact Assessment Scoping surveys to establish the presence of archaeological and heritage materials and to evaluate heritage resources in a given area.

The National Heritage Resources Act (NHRA - Act No. 25 of 1999) protects all structures and features older than 60 years (section 34), archaeological sites and material (section 35) graves and burial sites (section 36). In order to comply with the legislations, the Applicant requires information on the heritage resources, and their significance that occur in the demarcated area. This will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on such heritage resources.

## **2. TERMS OF REFERENCE**

The terms of reference for the study were to conduct heritage impact assessment for the proposed seven borrow pit sites and maintenance part of road D192 starting from road R518 to Jakkalskuil Village in the Waterberg District Municipality of Limpopo Province.

- ❖ the identification and mapping of all heritage resources in the area affected;
- ❖ an assessment of the significance of such resources in terms of heritage assessment criteria set out in regulations;
- ❖ an assessment of the impact of the development on heritage resources;
- ❖ an evaluation of the impact of the development on heritage resources relative to the interested parties regarding the impact of the development on heritage resources;
- ❖ if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- ❖ plans for mitigation of any adverse effects during and after completion of the proposed development.

### 3. DESCRIPTION OF THE AFFECTED AREA

The proposed study area is located within the Waterberg District Municipality of Limpopo Province. The Waterberg District Municipality is located in the western part of the Limpopo Province. It is strategically located in sharing its borders with Capricorn District Municipality in the north and Sekhukhune District Municipality in the east. The south-western boundary abuts North West, while the Gauteng Province lies on the south-eastern side. The municipality is the biggest district in the province, making up just more than a third of its geographical area. It shares its five-border control points with Botswana, namely Groblersburg, Stockpoort, Derdepoort, Zanzibar and Platjan. It is comprised of five local municipalities: Bela-Bela, Lephalale, Modimolle-Mookgophong, Mogalakwena and Thabazimbi. The proposed maintenance will affect Lesodi/Rantlakane, Basterpad, Kobeana and Jakkalskuil Villages which are situated along the road to Marken. The road will start on road R518 near Lesodi-Matlana Village from 0km at GPS (S23.977067° E28.665664°) and it will end at 20.3km in Jakkalskuil Villages GPS (S23.815498° E28.614624°). The project area could be accessed via road R518 from Mokopane to Marken.

Topography of the study area is much varied influenced by the presence of undulating rocky outcrop hills towards the southern section, the northern limb platinum belts transverse through the area, dominated by platinum mines at Ga Mapela, towards Sekuruwe. A concentric belts of mountain range exist further towards the western section of the village. The area is dominated by flat plains and open valleys between the chains of hills and the Waterberg mountain range. The area is predominately dominated by shrubby bushveld with poorly developed graminoids. With short open to closed thornveld dominated by acacia and *Dichrostachys cineria* bushes. The vast region south of a perennial stream is heavily degraded region, dominated by borrow pits which recently collected rain runoff water, while the vast land has been previously and recently exploited as seasonal cultivating land.

Geological the study area is underlain by gneiss and migmatite of the Hout River Gneiss (Radian Erathem) and the potassium deficient Gneiss of the Goudplaats. Sand stone and Mud stone of the Matlabas subgroup (Mokolian Waterberg Group) are common in the area. The soils are dominated by freely drained red apedal with high base status. The vegetation of the study area is dominated by sweet bushveld complex, with numerous floristic links and grass cover, important plant taxa include: *Acacia Karoo*, *acacia tortillis*, *Rhus Lancea*, *Boscia albitrunca*, *Commifora pyracanthoides*, *sp Acacia Eurobenses*, *Acacia*

*Karoo, Acacia tortilis, Dichrostachys cineria, schlerocarya birrea combretum apiculatum, A melifera* and grass *etc* (Acocks 1975; Mucina and Rutherford 2006).



**Figure 1:** Locality map showing road D192 and the borrow pit sites.



**Figure 2:** View of the area where road D192 maintenance will start at R518.



**Figure 3:** View of the road reserve.



**Figure 4:** View of the turn off to George Masebe Hospital at 1.6 km.



**Figure 5:** View of the Geo-tech test pit on the road reserve.



**Figure 6:** View of the turn off of Rantjie Village at 3.8 km.



**Figure 7:** View of the cattle drinking trough on the right hand side of the road from the start at 5.3 km.



**Figure 8:** View of the house remains on the left hand side of the road at 5.4 km.



**Figure 9:** View of the road reserve at Rantlakane Village.



**Figure 10:** View of water pipe line manhole along the road.



**Figure 11:** View of the Survey Point along the road.



**Figure 12:** View of the hand water pump next to the road.



**Figure 13:** View of Mabuladihlare turn off at 10.9 km in Basterspad Village.



**Figure 14:** View of Mokgalakwena River Bridge at 11.3 km.



**Figure 15:** View of Schuurmanshoogte turn off to the left at 11.7 km.



**Figure 16:** View of Jakkalskuil Clinic next to Sekanekamoyi at 18.1 km.



**Figure 17:** View of Small stock dip 32 meters on the right hand site of the road.



**Figure 18:** View of the area where the proposed maintenance is going to end at 20 km from the start.

## **4. ASSESSMENT OF SITES AND FINDS**

### **4.1 Results of the Fieldwork**

This section contains the results of the heritage site/find assessment. The phase 1 heritage scoping assessment program as required in terms of section 38 of the National Heritage Resource Act (Act 25 of 1999) done for the proposed development.

No cultural heritage (archaeological or historical) sites, features or objects were found within the proposed site for the road upgrade. If any did exist here in the past it would have been destroyed or disturbed through various developments.

## **5. BORROW PIT SITES**

### **5.1 Borrow Pit No.01**

Borrow Pit No.01 is situated on the Northern side of road R518 and western side of road D192 next to the turn off of George Masebe Hospital in Lesodi/Rantlakane Village (GPS S23.964821° E28.661757°).

#### **5.1.1 Results**

This study has been informed by comprehensive review of relevant literature and consultation with the local communities. No archaeological or any other cultural heritage resources was located within the direct path of the proposed borrow pit site. The proposed extraction of gravel material can continue as planned.



**Figure19:** Aerial Photo map showing the borrow pits positions.



**Figure 20:** General view of borrow pit No.01 next to George Masebe Hospital turn off.

## 5.2 Borrow Pit No.02

Borrow Pit No.02 is situated in Rantlakane Village (GPS S23.937007° E28.633748°). The proposed site is situated at the edge of the hill to the eastern side and grave yard on the south of the borrow pit.

### 5.2.1 Results

This study has been informed by comprehensive review of relevant literature and consultation with the local communities. The borrow pit is situated on the northern side of Rantlakane community grave yard **BG/D192/01**. No archaeological or any other cultural heritage resources were located within the direct path of the proposed borrow pit site.

Rantlakane Village Community Graveyard was recorded next to the borrow pit N0.2.



**Figure 21:** General View of borrow pit No.02.



**Figure 22:** View of the grave yard next to the borrow pit N0.2.

### **5.3 Borrow Pit No.03**

Borrow Pit No.03 is situated in Rantlakane Village on the eastern side of road D192 (GPS S23.924323° E28.633262°).

#### **5.3.1 Results**

No archaeological or any other cultural heritage resources was located within the direct path of the proposed borrow pit site.



**Figure 19:** General view of borrow pit No.03 at Rantlakane Village.

#### **5.4 Borrow Pit No.04**

Borrow Pit N0.04 is situated on the eastern side of Basterspad Village (GPS S23.903700° E28.634584°).

##### **5.4.1 Results**

No archaeological or any other cultural heritage resources was located within the direct path of the proposed borrow pit site.



**Figure 20:** View of borrow pit No.4 at Basterspad Village.

### **5.5 Borrow Pit No.05**

Borrow Pit No.05 is situated in Kobeana Village (GPS S23.845824° E28.617860°). The proposed site is situated at the eastern side of the proposed road. The site was previously used for subsistence farming.

#### **5.5.1 Results**

No archaeological or any other cultural heritage resources were located within the direct path of the proposed borrow pit site.



**Figure 21:** General view of borrow pit No.5.

## **5.6 Borrow Pit No.06**

Borrow Pit No.06 is situated in Jakkalskuil Village on the western side of road D192 (GPS S23.843135° E28.608116°).

### **5.6.1 Results**

No archaeological or any other cultural heritage resources was located within the direct path of the proposed borrow pit site.



**Figure 22:** General view of Borrow pit No.6.

## **5.7 Borrow Pit No.07**

Borrow Pit No.07 is situated in Jakkalskuil Village on the eastern side of borrow pit N0.6 and western side of road D192 (GPS S23.842632° E28.601528°).

### **5.7.1 Results**

No archaeological or any other cultural heritage resources was located within the direct path of the proposed borrow pit site.



**Figure 23:** General view of borrow pit No. 7

## **6. LEGISLATIVE REQUIREMENTS**

Two sets of legislation are relevant for the study with regards to the protection of heritage resources and graves. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

### **6.1. The National Heritage Resources Act**

According to the above-mentioned act the following is protected as cultural heritage resources:

- Archaeological artifacts, structures and sites older than 100 years
- Ethnographic art objects (e.g. Prehistoric rock art) and ethnography
- Objects of decorative and visual arts
- Military objects, structures and sites older than 75 years

- Historical objects, structures and sites older than 60 years
- Proclaimed heritage sites
- Grave yards and graves older than 60 years
- Meteorites and fossils
- Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

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

Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- A construction of a bridge or similar structure exceeding 50m in length
- Any development or other activity that will change the character of a site and exceed 5 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- Any other category provided for in the regulations of SAHRA or a provincial heritage authority.

## **6.2. The National Heritage Resource Act (25 of 1999)**

This act established the South African Heritage Resource Agency (SAHRA) and makes provision for the establishment of Provincial Heritage Resources Authorities (PHRA). The Act makes provision for the undertaking of heritage resources impact assessments for various categories of development as determined by Section 38. It also provides for the grading of heritage resources and the implementation of a three tier level of responsibilities and functions for heritage resources to be undertaken by the State, Provincial authorities and Local authorities, depending on the grade of the Heritage resources. The Act defines cultural significance, archaeological and palaeontological sites and material (Section 35), historical sites and structures (Section 34), graves and burial sites (Section 36) which falls under its jurisdiction. Archaeological sites and material are generally those resources older than a hundred years, while structures and cultural landscapes older than 60 years, including gravestones, are also protected by Section 34. Procedures for managing grave and burial grounds are clearly set out in Section 36 of the NHRA. Graves older than 100 years are legislated as archaeological sites and must be dealt with accordingly. Section 38 of the NHRA makes provision for developers to apply for a permit before any heritage resource may be damaged or destroyed.

## **6.3. The Human Tissues Act (65 OF 1983)**

This Act 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 Heritage Authorities.

Graves 60 years or older fall under the jurisdiction of the National Heritage Resources Act as well as the Human Tissues Act, 1983.

## **7. METHODOLOGY**

### **7.1. Source of information**

#### **7.1.1. Survey of Literature**

The methodological approach used for the study is aimed at meeting the requirements of the relevant heritage legislation. As such a desktop study was undertaken followed by a survey of the impact areas. Most of the information was obtained through the site visit made on the 11 August 2022. In practice, most archaeological and historical sites are found through systematic survey of the target landscapes. The survey therefore, sought to identify cultural heritage sites including graves, burial grounds and contemporary religious or sacred ceremonial sites associated with the proposed road upgrade. VHHC heritage specialists conducted the reconnaissance survey and impact assessment by transecting the affected landscape on foot looking for indicators of archaeological and any other cultural materials in the affected areas. In part the field officer also inspected soil profiles for potential archaeological materials that may still be trapped *in situ* in an area disturbed by human activities as well the burrowing animals.

#### **7.1.2. Field Survey**

Standard archaeological observation practices were followed; Visual inspection was supplemented by relevant written sources, and oral communications with local communities from the surrounding area. In addition, the site was recorded by hand held GPS Garmin Oregon 65 and plotted on 1:50 000 topographical map. Archaeological/historical material and the general condition of the terrain were photographed with EOS M50 Garmin Camera.

The field assessment section of the study was conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of archaeological significance in the area of the proposed development.

#### **7.1.3. Documentation**

All sites, objects and features identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

## 8. RESULTS OF THE FIELDWORK

No cultural heritage (archaeological or historical) sites, features or objects were found within the proposed site for seven borrow pits and proposed road maintenance. There is no structures/buildings on site which are older than 60 years.

## 9. CHRONOLOGICAL SEQUENCE OF THE STONE AND IRON AGE

The Stone Age is the period in human history when lithics (or stone) was mainly used to produce tools. In South Africa the Stone Age can be divided basically into three periods. It is important to note that these dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age is as follows:

Early Stone Age (ESA):	Predominantly the Acheulean hand axe industry complex dating to + 1Myr yrs-250 000 yrs. Before present.
Middle Stone Age (MSA):	Various lithic industries in SA dating from $\pm 250\,000$ yr.- 30 000 yrs. before present.
Late Stone Age (LSA):	The period from $\pm 30\,000$ -yr.to contact period with either Iron Age farmers or European colonists.

There are no known Stone Age sites in the area including rock art. No Stone Age sites or objects were recorded during the assessment of the area.

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts:

Early Iron Age (EIA):	Most of the first millennium AD
Middle Iron Age:	10 <sup>th</sup> to 13 <sup>th</sup> centuries AD
Late Iron Age (LIA):	14 <sup>th</sup> century to colonial period. The entire Iron Age represents the spread of Bantu speaking peoples.

## 10. ASSESMENT CRITERIA

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

- The unique nature of a site

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

### **10.1. Archaeological**

No archaeological materials were found in the study area.

### **10.2. Historical**

No historical sites/materials found on site.

### **10.3. Burial grounds and graves**

No burial grounds and graves within the site which will be affected by the proposed project. The legislation also protects the interests of communities that have an interest in the graves: they should be consulted before any disturbance takes place. The graves of victims of conflict and those associated with the liberation struggle are to be identified, cared for, protected and memorials erected in their honor.

Graves older than 60 years, but younger than 100 years, fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissue Act (Act 65 of 1983) and are under the jurisdiction of the South African Heritage Resources Agency (SAHRA). The procedure for Consultation regarding Burial Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administered by a local authority. Graves in the category located inside a formal cemetery administered by a local authority will also require the same authorization as set out for graves younger than 60 years, over and above SAHRA authorization.

In terms of the Section 36 (3) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) no person may, without a permit issued by the relevant heritage resources authority:

(a) destroy, damage, alter, exhumate 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 or 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; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment, which assists in the detection or recovery of metals.

Therefore, in addition to the formal protection of culturally significance graves, all graves which are older than 60 years and which are not already located in a cemetery (such as ancestral graves in rural areas), are protected. Communities, which have an interest in the graves, must be consulted before any disturbance can take place. The graves of victims of conflict and those associated with the liberation struggle will have to be included, cared for, protected and memorials erected in their honor where practical. Regarding graves and burial grounds, the NHRA distinguishes between the following:

- Ancestral graves
- Royal graves and graves of traditional leaders
- Graves of victims of conflict
- Graves of individuals designated by the Minister by notice in the Gazette
- Historical graves and cemeteries
- Other human remains, which are not covered in terms of the Human Tissue Act, 1983 (Act No.65 of 1983).

#### **10.4. Significance valuation Burial Ground, Historic Cemeteries and Graves**

The significance of burial grounds and gravesites is closely tied to their age and historical, cultural and social context. Nonetheless, every burial should be considered as of high significance. Should any grave previously unknown be identified during construction, every effort should be made not disturb them. Road alignment should be shifted to ensure the grave or burial ground is not disturbed.

#### **10.5. Previously unidentified burial sites/graves –**

Although the possibilities of this occurring are very limited, should burial sites outside the NHRA be accidentally found during the proposed development, they must be reported to the nearest police station to ascertain whether or not a crime has been committed. If there is no evidence for a crime having been committed, and if the person cannot be identified so that their relatives can be contacted, the remains may be kept in an institution where

certain conditions are fulfilled. These conditions are laid down in the Human Tissue Act (Act No. 65 of 1983). In contexts where the local traditional authorities give their consent to the unknown remains to be re-buried in their area, such re-interment may be conducted under the same regulations as would apply for known human remains.

## 11. THE SIGNIFICANCE OF GRAVES AND BURIAL SITES

The significance of burial grounds or graves has been indicated by means of stipulations derived from the National Heritage Resources Act (Act No 25 of 1999)

Heritage Significance	:	GP.A; High/Medium Significance
Impact	:	Negative
Impact Significance	:	High
Certainty	:	Probable
Duration	:	Permanent
Mitigation	:	C

- *Informal graves and Formal grave yards (Cemeteries)*

Informal and formal grave yards (Cemeteries) can be considered to be sensitive remains of high significance and are protected by various laws. Legislation with regard to graves includes the National Heritage Resources Act (no 25 of 1999) this act applies whenever graves are older than sixty years. The act also distinguishes various categories of graves and burial grounds. Other legislation with regards to graves includes those which apply when graves are exhumed and relocated, namely the Ordinance on exhumation (Ordinance no 12 of 1980) and the Human Tissue Act (Act no 65 of 1983 as amended).

### 11.1 Site significance

The site significance classification standards as prescribed and endorsed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used as guidelines in determining the site significance for the purpose of this report.

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

Grading and rating systems of heritage resources

## 11.2. Impact rating

### **VERY HIGH**

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or cultural) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.

**Example:** The loss of a species would be viewed by informed society as being of VERY HIGH significance.

**Example:** The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with VERY HIGH significance.

### **HIGH**

These impacts will usually result in long term effects on the social and /or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

**Example:** The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated.

**Example:** The change to soil conditions will impact the natural system, and the impact on affected parties (e.g. farmers) would be HIGH.

### **MODERATE**

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by the public or the specialist as constituting a fairly unimportant and usually short term change to the (natural and/or social) environment. These impacts are real, but not substantial.

**Example:** The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant.

**Example:** The provision of a clinic in a rural area would result in a benefit of MODERATE significance.

### **LOW**

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

**Example:** The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels.

**Example:** The increased earning potential of people employed as a result of a development would only result in benefits of LOW significance to people living some distance away.

### **NO SIGNIFICANCE**

There are no primary or secondary effects at all that are important to scientists or the public.

**Example:** A change to the geology of a certain formation may be regarded as severe from a geological perspective, but is of NO SIGNIFICANCE in the overall context.

## **11.3 CERTAINTY**

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

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

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

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

#### **11.4 DURATION**

*SHORT TERM* : 0 – 5 years

*MEDIUM* : 6 – 20 years

*LONG TERM* : more than 20 years

*DEMOLISHED* : site will be demolished or is already demolished

#### **11.5 MITIGATION**

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

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

### **12. CONCLUSIONS AND RECOMMENDATIONS**

In conclusion it is possible to say that the Phase 1 HIA for the proposed maintenance part of road D192 and seven (07) borrow pit sites has been conducted successfully. The landscape proves to be fairly uniform and lacking other features that might have focused past activities. The objective of the HIA is to limit primary and secondary impacts on archaeological and cultural heritage in the path of the proposed development and infrastructure footprint.

Development projects that involve any form of earth-moving are potential threats to archaeological materials and sites. Archaeological sites are buried under the soil surface where they are relatively safe until natural forces such as erosion and human development actions such as road construction expose them. These sites are usually identified by

exposed bone materials, pottery remains, burnt daga house remains, ash middens etc. The most sensitive of these are human remains.

The constructors should always respect and be conscious all the time when they are working next to the grave yards. Grave yard next to the borrow pit N0-02 should be demarcated with a danger tape to alert the workers when they are working close to it.

From a cultural heritage point of view the development should be allowed to continue taking careful attention of the above. Should any be uncovered during the development process the Archaeologist should be called in to investigate and recommend on the best way forward.

### 13. REFERENCE

Deacon, J. 1997. Report: Workshop on Standards for the Assessment of Significance and Research Priorities for Contract Archaeology. *South African Association of Archaeology*. No. 49,

Huffman, T.N. (2007). *Handbook to the Iron Age: The archaeology of pre-colonial farming societies in southern Africa*, Scottsville, South Africa, University of Kwazulu Natal Press.

Holm, S.E. 1966. *Bibliography of South African Pre- and Protohistoric archaeology*. Pretoria: J.L. van Schaik

Klapwijk, M. 1973. An Early Iron Age site near Tzaneen North eastern Transvaal. *South African Journal of Science*, vol.69, pp.324.

Inskeep, R. R & Maggs, T.M. O'C. 1975. Unique objects in the Iron Age of the Transvaal, South Africa. *Archaeological Bulletin* vol. 30, pp. 114-134.

Mason, R.J. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

Mönnig, H.O. 1967. *The Pedi*. Pretoria: J.L. van Schaik.

Van Warmelo, N. J. 1935. *Preliminary survey of the Bantu Tribes of South Africa*. Ethnological Publications No. 5. Pretoria: Government Printer.

## **APPENDIX A: TYPES AND RANGES AS OUTLINED BY THE NATIONAL HERITAGE RESOURCE ACT (ACT 25 OF 1999)**

The National Heritage Act (Act No 25 of 1999, Art 3) outlines the following types and ranges of the heritage resources that qualify as part of the national estate, namely:

- (a) Places, buildings structures and equipment of cultural significance;
- (b) Places to which oral tradition are attached or which are associated with living heritage;
- (c) Historical settlement and townscapes
- (d) Landscape and natural features of cultural significance;
- (e) Geological sites of scientific or cultural importance
- (f) Archaeological and paleontological sites
- (g) Graves and burial ground including-
  - (I) Ancestral graves
  - (II) Royal graves and graves of traditional leaders
  - (III) Graves of victim of conflict
  - (IV) Graves of individuals designated by the minister by notice in the gazette;
  - (V) Historical graves and cemeteries; and
  - (VI) Other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No 65 of 1983)
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including-
  - (I) object recovered from soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;
  - (II) objects to which oral traditions are attached or which are associated with living heritage
  - (III) ethnographic art and objects;
  - (IV) military objects;
  - (V) objects of decorative or fine art;
  - (VI) object of scientific or technological interest; and
  - (VII) books, records, documents, photographs, positive and negatives, graphic, film or video material or sound recording, 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).

The National Heritage Resource Act (Act No 25 of 1999, Art 3) also 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 the following:

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- (h) Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa
- (i) Sites of significance relating to the history of slavery in South Africa.

## **APPENDIX B: PROCESS OF GRAVE EXHUMATION**

**Application of a permit from SAHRA's BGG Unit or PHRA** in terms of Section 36 of the National Heritage Resources Act for **graves older than 60 years.**

- **Graves of known identity:** Proof of thorough consultative process:
  - Locate next of kin and obtain letter of consent from next of kin.
  - Obtain a letter of consent or statement of no objection from the local traditional authority.
  - Determine a place for the re-burial of each grave in consultation with next of kin. In addition, also determine the arrangement of reburial, i.e., by the next of kin/community or a funeral undertaker.
  - Submit documentation of the above with the permit application to SAHRA.
  - Inform SAPS of intent to relocate the grave/s and submit a copy of the permit to SAPS.

- **Graves of unknown identity:** Proof of thorough consultative process:
  - Place advertisement in a local and national newspaper with description and location of graves and full contact detail of consultant and developer. A waiting period of 60 days applies.
  - If no reaction to advertisement follows, then apply for permit from SAHRA after the waiting period of 60 days with proof of advertisement and any other consultative process.
  - If in rural area obtain a letter of consent or statement of no objection from local traditional authority must be submitted with permit application.
  - If advertisement leads to a claim from next of kin or from a community who by tradition has an interest, then written consent from relevant party must be obtained.
  - Determine a place for the re-burial of each grave
  - Submit documentation of the above with the permit application to SAHRA.
  - Inform SAPS of intent and process of re-burial and submit a copy of the permit to SAPS.

**Graves less than 60 years old** in terms of the Human Tissues Act (Act no. 65 of 1983) and the Removal of Graves and Dead Bodies Ordinance No. 7 of 1925

- Locate the next of kin of the buried persons and obtain consent from the next of kin for the relocation of the graves.
- Determine a place for the re-burial of each grave.
- Obtain a letter of consent or statement of no objection from the local traditional authority.
- Submit above documentation to the Department of Health and obtain permission for the relocation of the graves – which process would most probably be regulated by the District Municipality.
- Inform the Local South African Police Service and provide documentation from relevant heritage authority.
- The graves are to be exhumed under the supervision of an archaeologist.