

Comprehensive and Professional Solutions for all Heritage Related Matters

CK 2006/014630/23

VAT NO.: 4360226270

# A DESKTOP HIA REPORT FOR A PROSPECTING RIGHTS APPLICATION ON THE FARM HAARTBEESTSPRUIT 88JQ, MADIKWE MAGISTERIAL DISTRICT, NORTHWEST PROVINCE

For:

## **DEAN MURUVAN CONSULTING**

REPORT: APAC013/86

by:

A.J. Pelser Accredited member of ASAPA Professional Member SASCH

December 2013

P.O.BOX 73703 LYNNWOOD RIDGE 0040

Tel: 083 459 3091 Fax: 086 695 7247

Email: pelseranton@gmail.com

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

# ©Copyright APELSER ARCHAEOLOGICAL CONSULTING (APAC) cc The information contained in this report is the sole intellectual prope

The information contained in this report is the sole intellectual property of APAC cc. It may only be used for the purposes it was commissioned for by the client.

## **DISCLAIMER:**

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. APELSER ARCHAEOLOGICAL CONSULTING and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

The South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report and clients are advised not to proceed with any action before receiving these.

#### **SUMMARY**

APELSER ARCHAEOLOGICAL CONSULTING cc was requested by Dean Muruven Consulting, on behalf of Osho Contract Mining (Pty) Ltd, to conduct a Desktop level Heritage Assessment for a Prospecting Rights Application (PRA) for Vanadium mining on the farm Haartbeest/Hartebeestfontein 88JQ, located in the Rustenburg Magisterial District of the Northwest Province. The aim of the study was to determine if there are any known cultural heritage (archaeological & historical) resources in the Prospecting area and to provide an indication the type of sites and features that could possibly be present in the area.

Various sources were consulted as part of the study. From this it is clear that there are a number of known heritage resources in the larger geographical area and on farms directly bordering the farm that formed part of this study. There are no known sites on the farm where the prospecting is proposed, but it is envisaged that a number of previously unknown sites will be located and recorded here during physical field assessments and that could be impacted on negatively by future mining operations.

A number of recommendations are put forward at the end of this report. Most of these will be handled during a physical Field Assessment phase where after a Final Heritage Impact Assessment Report should be submitted.

# **CONTENTS**

page
SUMMARY3
CONTENTS4
1. INTRODUCTION
2. TERMS OF REFERENCE5
3. LEGALISLATIVE REQUIREMENTS
4. METHODOLOGY8
5. DESCRIPTION OF THE AREA 8
6. DISCUSSION11
7. CONCLUSIONS AND RECOMMENDATIONS
8. REFERENCES
9. APPENDIX A
10. APPENIDX B
11. APPENDIX C
12. APPENDIX D
13 ADDENINIY E 21

#### 1. INTRODUCTION

APELSER ARCHAEOLOGICAL CONSULTING cc was requested by Dean Muruven Consulting, on behalf of Osho Contract Mining (Pty) Ltd, to conduct a Desktop level Heritage Assessment for a Prospecting Rights Application (PRA) for Vanadium mining on the farm Haartbeest/Hartebeestfontein 88JQ, located in the Rustenburg Magisterial District of the Northwest Province. The aim of the study was to determine if there are any known cultural heritage (archaeological & historical) resources in the Prospecting area and to provide an indication the type of sites and features that could possibly be present in the area.

Various sources were consulted as part of the study. From this it is clear that there are a number of known heritage resources in the larger geographical area and on farms directly bordering the farm that formed part of this study. There are no known sites on the farm where the prospecting is proposed, but it is envisaged that a number of previously unknown sites will be located and recorded here during physical field assessments and that could be impacted on negatively by future mining operations.

#### 2. TERMS OF REFERENCE

The Terms of Reference for the study were to:

1. to conduct a Desktop level heritage assessment in order to determine the possible existence of known significant archaeological and historical (cultural heritage) sites and features in the area where the proposed prospecting is to take place, and which could be negatively impacted on by future mining operations

## 3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

# 3.1 The National Heritage Resources Act

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

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

The national estate includes the following:

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

A 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:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. 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
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

## **Structures**

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

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

## Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

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 that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

## **Human remains**

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

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

- a. destroy, damage, alter, exhume or remove from its original position of 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, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations** (**Ordinance no. 12 of 1980**) (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local

police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act** (**Act 65 of 1983 as amended**).

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

## 3.2 The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

## 4. METHODOLOGY

## 4.1 Survey of literature

A detailed survey of literature, archival and other sources of data was undertaken in order to obtain background archaeological and historical information regarding the area and the specific farms that will be impacted on by the proposed development. Sources consulted in this regard are indicated in the bibliography.

#### 4.2 Field survey

For this phase of the HIA no field assessments were undertaken.

#### 5. DESCRIPTION OF THE AREA

The study area is located on the farm Haartbeest/Hartebeestspruit 88JQ, in the Rustenburg Magisterial District of the Northwest Province. The area comprise around 3414.9934ha. It is situated approximately 30km northwest of the town of Rustenburg. Prospecting will be for vanadium.

The geological formation of the area is the Gabbro Norite Suite, Bierkraal Magnetite Suite and Rashoop Granophyre Suite of the Bushveld Complex. The Bierkraal Magnetite hosts Vanadium and Osho Contract Mining is interested in the Vanadium hosted in the Bierkraal magnetite.

Based on the topographic map and aerial views (Google Earth) of the study area the topography of the area is relatively flat, with some ridges and outcrops, while the Leragane river flows through the area as well. It is envisaged that archaeological remains such as Stone Age tools and later Iron Age material will be located next to the river and erosion caused by

it. Portions of the area has been agriculturally changed (ploughed for crop growing), while a number of rural villages such as Maile, Kopman and Monnakato-A also occurs here. Heritage sites and features (such as informal and more formal graveyards) could more than likely be associated with these settlements.

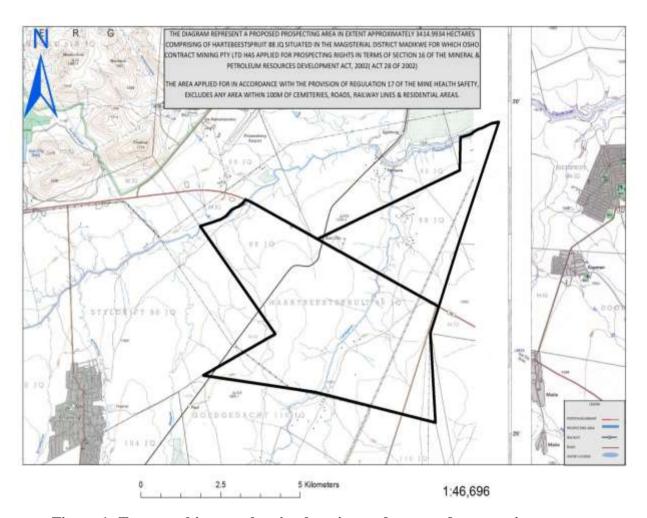


Figure 1: Topographic map showing location and extent of prospecting area (Map courtesy Osho Contract Mining).



Figure 2: Aerial view of approximate location and extent of study area (Google Earth 2013 – Image date 2013/01/25).



Figure 3: Closer view of section of area showing some of the rural villages (Google Earth 2013 – Image date 2013/01/25).



Figure 4: Closer view of section of study area showing agricultural plots & section of river drainage (Google Earth 2013 – Image date 2013/01/25).

#### 6. DISCUSSION

The first step in this Desktop level study was to look at existing maps (1:50 000 topographic maps and aerial images (Google Earth) of the study area in order to see if any possible heritage resources could be identified from these sources.

From the maps and aerial images of the area it is not possible to identify any archaeological or historical sites (monuments, graves, museums), but human settlements such as Maile, Kopman and Monakato-A (and others), as well as evidence of agricultural activities are clearly visible. It is therefore clear that some human impact has been taking place in the area over recent years, and if any sites of archaeological and historical significance did exist here in the past it could have been destroyed or disturbed to some degree. However, traces of their existence could still be identified when a physical assessment of the area is undertaken.

With human settlement historical structures (houses, churches and others) and more than likely informal and more formal cemeteries and grave sites should be expected. However, only a physical assessment of the area would be able to verify this and the possible impact of future mining activities on these possible resources. With the Leragane River running through the area it is possible that archaeological sites, especially Stone Age scatters and open-air sites could be located here. The topography of the area is fairly flat, although there are some rocky ridges and outcrops and small valleys created by the river. Erosion dongas caused by water erosion is visible and these areas would be especially prone to contain archaeological remains. During the Iron Age people would have settled close to the river (near the fertile floodplains), while Stone Age hunter gatherers would also have utilized the river during hunting.

A short, general, background to archaeology is given in the following section, after which the archaeology and history of the larger geographical area will be discussed. It must be mentioned that archaeologically speaking the specific study area is not that well known or researched, and that a physical survey in the area will have to be undertaken in order to determine if any sites of significance does exist here that might be impacted on potentially by any proposed mining activities. Archaeological research in the broader region has been conducted in the past, and some significant sites are known to exist on farms directly bordering the study area. This will be discussed in the next section.

A search on SAHRA'S database (<u>www.sahris</u>) also produced no results, although a number of HIA and other studies had been completed on neighbouring farms such as Styldrift 90JQ. Archaeological sites were recorded during these.

## 6.1 Stone Age

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

```
Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago Middle Stone Age (MSA) less than 300 000 – 20 000 years ago Later Stone Age (LSA) 40 000 years ago – 2000 years ago
```

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

No Stone Age sites (including rock art) are known to occur in the immediate study area. The closest known Stone Age sites are located Brits and in the so-called Magaliesberg Research area (Bergh 1999: 4). It is however predicted that open-air Stone Age sites and scattered stone tools will be located near the Leragane River and its tributaries flowing through the area, as well as in the erosion dongas caused by water erosion.

#### 6.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

```
Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.
```

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

```
Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.
```

There are no known Iron Age sites (EIA or LIA) in the immediate study area, although a very large number of LIA stone walled settlement sites are known to exist in the larger geographic landscape (Bergh 1999: 7). By the early 19<sup>th</sup> century BaFokeng, Tau and BaPo was residing in the larger area around Rustenburg (Bergh 1999: 10).

Tom Huffman's research work shows that Iron Age sites, features or material could possibly be found in the area. This could include the so-called Uitkomst facies of the Urewe Tradition dating to between AD1650 and AD1820 (Huffman 2007: 171); Rooiberg facies of the same tradition dating to between AD1650 and AD1750 (p.175); Olifantspoort facies of Urewe dating to between AD1500 and AD1700 (p.191); the Madikwe facies of the Urewe Tradition dating to between AD1500 & AD1900 (p.193) and finally the Buispoort facies of the same tradition dating to between AD1700 and AD1840 (Huffman 2007: 203).

## 6.3 Historical Age

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. The first European groups to pass close by the area were those of Schoon and McLuckie & Moffat & Archbell in 1829. Hume followed in 1830 and later on Cornwallis Harris's group in 1836, followed by the Voortrekkers after 1844 (Bergh 1999: 12-14).

During the Anglo-Boer War (1899-1902) there were a number of battles and smaller skirmishes in and around the Rustenburg and larger area (Bergh 1999: 51; 53-54).

After 1850 White settlement in the Rustenburg District was fairly intense and they occupied land that the BaFokeng regarded as traditionally theirs. However, they were able to buy back some of this land with the assistance of missionaries. In August 1883 the so-called Location Commission found that the Fokeng of Mogatle (comprising about 524 households) owned 9 farms which included Hartebeestspruit (then numbered as 643). By 1904 they had increased the number of farms they owned to 22. Apparently most of these were bought during the reign of the ZAR, although 2 of these were only obtained after the Anglo-Boer War of 1899-1902 (Bergh 1999: 217). It is therefore clear from this that the possibility of historical sites and features such as burials and homesteads dating to this time and related to the early Fokeng settlement in the area could be located in the study area. This would however only be possible to determine with a physical field assessment. The recording of oral records would form part of such a Phase 2 Heritage Impact Assessment.

A 2001 study by Pistorius for the Rasimone Platinum Mine on the farms Boschkoppie 104JQ & Styldrift 90JQ (bordering the Hartebeestspruit study area) indicated the presence of archaeological sites in the larger area. According to him the study area falls in the archaeologically-sensitive Bankenveld zone (Pistorius 2011: 4) and sites can therefore be expected to be found here.

A search in the Surveyor Generals' database (<u>www.dla.gov.za</u>) provided an 1887 map of the farm Hartebeestspruit 643, and indicated that it was situated in the District of Rustenburg and Ward of Hexrivier. It was surveyed (unknown date) for one H.C. Penzhorn by the Government Surveyor. The original owner is not indicated, but it was more than likely granted much earlier to a European farmer. No structures or features are shown on this map,

but what is of interest is the fact that the name BaFokeng is stamped on the document. This possibly refers to the earlier information when the farm was bought by the BaFokeng from the ZAR Government. President Paul Kruger's signature is also seen on the map (CSG Document 10G7X501).

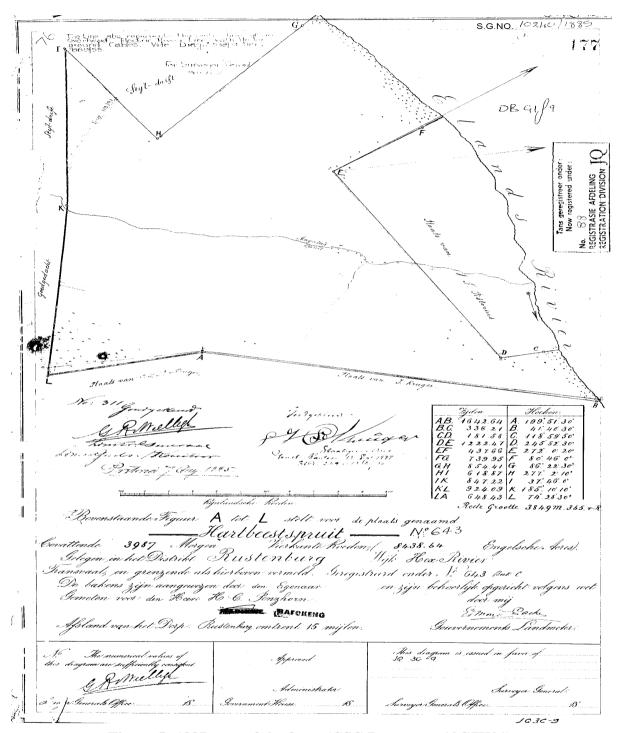


Figure 5: 1887 map of the farm (CSG Document 10G7X01).

#### 7. CONCLUSIONS AND RECOMMENDATIONS

Based on the Scoping/Desktop level Heritage Assessment undertaken for the proposed Prospecting Rights Application on the farm Haartebeest/Hartebeestspruit 88JQ it is clear that the immediate study area has not been studied archaeologically and historically in much detail, although more is known about the cultural heritage of the wider geographical area and the cultural heritage of the development area has to be interpreted within this context. Without a physical site assessment the presence or absence of Stone Age and Iron Age sites, features or objects can not be determined, but it is possible that these might be present, especially next to the Leragane River, its tributaries and erosion dongas caused by water erosion in the area.

It is clear from maps and aerial images of the area that it has been disturbed to some extent in the recent past by agricultural activities and other human activities, with a number of rural settlements being present. The presence of graves is always a distinct possibility when farmsteads, laborer structures and rural settlements are present. Sometime the graves are unmarked or only low, stone packed features. Furthermore, from historical information it is evident that the BaFokeng of Mokgatle had settled in the area historically so many sites and features related to their settlement might still be present as well.

In the light of the above the following recommendations are made:

1. that a full Phase 1 Heritage Impact Assessment for the area be undertaken before full-scale mining activities commence in the area in order to locate, record and assess any possible cultural heritage (archaeological & historical) sites of significance. The impacts of the proposed mining operations on these will then be determined and necessary mitigation measures to minimize these impacts will then be recommended.

## 8. REFERENCES

Aerial views of the study area: Google Earth 2013 – Image Date 2013/01/25).

Study area Topographic Map: courtesy Osho Contract Mining (Pty) Ltd

Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Huffman, T.N. 2007. Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa. Scotsville: University of KwaZulu-Natal Press.

Knudson, S.J. 1978. **Culture in retrospect.** Chicago: Rand McNally College Publishing Company.

Lombard, M., L. Wadley, J. Deacon, S. Wurz, I. Parsons, M. Mohapi, J. Swart & P. Mitchell. 2012. **South African and Lesotho Stone Age Sequence Updated (I).** South African Archaeological Bulletin **67** (195): 120–144, 2012.

Pistorius, Dr. J.C.C. 2001. An Archaeological Impact Assessment for the Rasimone Platinum Mine on the farms Boschkoppie 104JQ & Styldrift 90JQ in the Northwest Province of South Africa: Amendment of the Current Environmental Programme. Unpublished Report for Metago Environmental Engineers and BaFokeng Rasimone Platinum Mine. October 2001.

Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Chief Surveyor General Database (www.csg.dla.gov.za) Document Number 10G7X01

SAHRA Website: www.sahris

#### APPENDIX A

## **DEFINITIONS:**

Site: Means a large place with extensive structures and related cultural objects. It can also

be a large assemblage of cultural artifacts, found on a single location.

Structure: Means a permanent building found in isolation or which forms a site in

conjunction with other structures.

Feature: Means a coincidental find of movable cultural objects.

**Object**: Means an Artifact (cultural object).

(Also see Knudson 1978: 20).

#### APPENDIX B

#### **DEFINITIONS/STATEMENTS OF HERITAGE SIGNIFICANCE:**

**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.

**Aesthetic value:** Important in exhibiting particular aesthetic characteristics valued by a

community or cultural group.

**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.

#### APPENDIX C

#### SIGNIFICANCE AND FIELD RATING:

## 1. Cultural significance:

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

## 2. Heritage significance:

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance.
- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate.
- Grade III: Other heritage resources of local importance and therefore worthy of conservation.

## 3. Field ratings:

•	National Grade I significance: Provincial Grade II significance:	Should be managed as part of the national estate. Should be managed as part of the provincial estate.
•	Local Grade IIIA:	Should be included in the heritage register and not be mitigated (high significance).
•	Local Grade IIIB:	Should be included in the heritage register and may be mitigated (high/ medium significance).
•	General protection A (IV A):	Site should be mitigated before destruction (high/medium significance).
•	General protection B (IV B):	Site should be recorded before destruction (medium significance).
•	General protection C (IV C):	Phase 1 is seen as a sufficient recording of the existing structure and it may therefore be demolished of (low significance).

#### APPENDIX D

#### PROTECTION OF HERITAGE RESOURCES:

## 1. Formal protection:

Formal protection is applicable to the following:

- National heritage sites and Provincial heritage sites grades I and II
- Protected areas which is described as an area surrounding a heritage site
- Provisional protection described as protection for a maximum period of two years
- Heritage registers listings of grades II and III
- Heritage areas areas which include more than one heritage site
- Heritage objects heritage objects include inter alia archaeological, paleontological, meteorites, geological specimens, visual art, military, numismatic and books.

## 2. General protection:

General protection is applicable to:

- Objects protected by the laws of foreign states
- Structures older than 60 years
- Archaeology, paleontology and meteorites
- Burial grounds and graves
- Public monuments and memorials

#### **APPENDIX E**

#### HERITAGE IMPACT ASSESSMENT PHASES

- Phase 1: Pre-assessment or scoping phase the establishment of the scope of the project and the terms of reference.
- Phase 2: Baseline assessment the establishment of a broad framework of the potential heritage of an area.
- Phase 3: Assessment of potential impacts the identification of sites, assessment of their significance, commenting on the potential impact of the proposed development and recommending mitigation measures or the conservation thereof.
- Phase 4: Letter of recommendation for exemption –submitted in the event that no likelihood exists that any sites will be impacted upon.
- Phase 5: Mitigation or rescue planning the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
- Phase 6: Compilation of and implementation of a management plan in rare cases where sites are regarded as of high importance such that development cannot be permitted unconditionally.