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A DESKTOP HERITAGE IMPACT ASSESSMENT REPORT FOR THE HIGHLY BLUE TRADING (PTY) LTD MINING RIGHTS APPLICATION ON VARIOUS PORTIONS OF THE FARM ROODEKOPJES OR ZWARTKOPJES 427JQ MAGISTERIAL DISTRICT OF BRITS, NORTHWEST PROVINCE

For:

Gudani Consulting Environmental & Social Scientists PO Box 714 Faunapark, Polokwane 0787

#### REPORT: APAC022/65

by:

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#### July 2022

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#### SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Gudani Consulting Environmental & Social Scientists to conduct a Desktop-based Heritage Impact Assessment for the Highly Blue Trading (Pty) Ltd Mining Rights Application on various portions of the farm Roodekopjes or Zwartkopjes 427JQ. The study & application area is located in the Magisterial District of Brits in the Northwest Province.

Background research indicates that there are several known cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. None is known for the specific study area. This report discusses the results of the background research and provides recommendations on the way forward at the end.

It is recommended that the proposed Mining Rights Application be allowed, taking into consideration the measures and recommendations put forward at the end of the report.

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## 1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by Gudani Consulting Environmental & Social Scientists to conduct a Desktop-based Heritage Impact Assessment for the Highly Blue Trading (Pty) Ltd Mining Rights Application on various portions of the farm Roodekopjes or Zwartkopjes 427JQ. The study & application area is located in the Magisterial District of Brits in the Northwest Province.

Background research indicates that there are several known cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. None is known for the specific study area.

The client indicated the location and boundaries of the study area and the assessment concentrated on this portion.

## 2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

- 1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;
- 2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
- 3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
- 4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
- 5. Review applicable legislative requirements;

It should be noted that No Field-Based Assessment was conducted as part of this Appointment and that the results and recommendations made in this report are based on the scrutiny of previous research and assessments in the area, as well as archival research and aerial images of the study area.

## 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 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 of 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 paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, paleontological, 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  $5\ 000m^2$  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 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 the Act deals with archaeology, palaeontology and meteorites and 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 paleontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite;
- d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological 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.

## <u>Human remains</u>

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 to) 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)**.

# **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 survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

## 4.2. Field survey

The field assessment section of the study is normally conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

## No field work was undertaken as part of this assessment.

## 4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

## 4.4. Documentation

All sites, objects, features and structures identified are documented according to a general set of minimum standards. 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.

## 5. DESCRIPTION OF THE AREA & PROJECT

The study and Mining Rights Application Area (MRA) is located on Portions 853, 854 & 855 and the Remaining Extent of Portions 626, 627 & 707 of the farm Roodekopjes or Zwartkopjes 427JQ and in the Magisterial District of Brits in the Northwest Province. It is situated north-east of the town of Brits. The area covers a total of 322.8521 hectares and the MRA is for the mining/quarrying of granite & syenite.

The topography and general landscape of the study area can't be described in detail from a personal observation perspective as no physical fieldwork was undertaken for this study. However, based on aerial images (Google Earth) of the area it is clear that although it is flat and open in sections, there are a number of rocky ridges and hills in the area as well. It is around these areas that archaeological sites (stone-walled Late Iron Age settlements) could be located, although none was visible on the aerial images and on on-site photographs

provided to the Heritage Specialist by the client (Gudani). A section of the study & application area close to the town of Brits has been fairly heavily impacted by residential/urban-related settlement development, while some granite quarrying has also impacted on other portions. Dirt roads/access roads and Powerlines & servitudes have also had an impact in the past, although large sections have not been altered from its original natural landscape. Dense vegetation seems to cover parts of the study & application area footprint as well which would make identifying archaeological and/or historical sites and features from aerial images very difficult.



Figure 1: General location of the study & application area in the red polygon (Google Earth 2022). The areas in white are proposed infrastructure & mining/quarrying footprints related to the application.

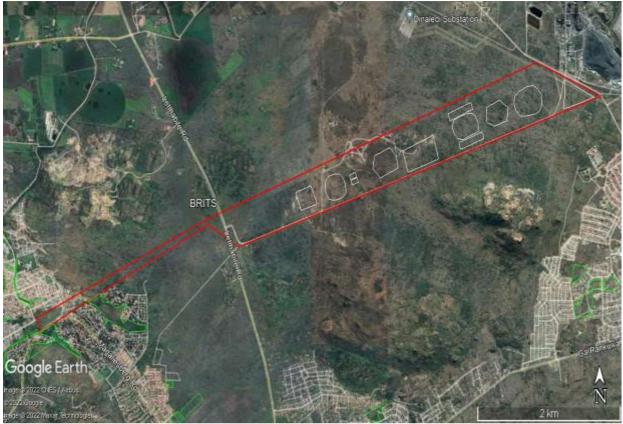


Figure 2: Closer view with the proximity of Brits in a section of the study/application area visible (Google Earth).

## 6. DISCUSSION

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).

There are no known Stone Age sites or features in the specific study area. The closest known Stone Age sites in the larger geographical area are located in the so-called Magaliesberg Research Area and include rock shelter sites dating to the Middle and Later Stone Age. There is also some rock engraving sites in this area (Bergh 1999: 4-5).

Finding Stone Age sites and finds in the study & application area is possible, but these would more specifically be individual artifacts and small scatters of artifacts in open-air contexts.

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

Late Iron Age sites have been identified in the larger geographical area. In a band stretching roughly from Brits in the east to Zeerust in the west many Iron Age sites have been discovered previously (Bergh 1999: 7-8). These all belong to the Later Iron Age (Bergh 1999: 8-9). A copper smelting site was identified along the Hex River to the northwest of the surveyed area (Bergh 1999: 8). A copper smelting site was identified along the Hex River to the northwest of the northwest of the surveyed area (Bergh 1999: 8). A copper smelting site was identified along the Hex River to the northwest of the surveyed area (Bergh 1999: 8). The closest Earlier Iron Age site is located at Broederstroom near Brits (Bergh 1999: 6).

During earlier times the area was settled by the Fokeng. In the 19th century this group inhabited this area with other Tswana groups including the Kwena and the Po (Bergh 1999: 9-10). During the *difaqane* these people moved further to the west, but they returned later on (Bergh 1999: 11).

According to the research of Tom Huffman the following Iron Age traditions could be present in the area: (a) the Mzonjani facies of the Urewe tradition (Broederstroom) dating to AD450 – AD750 (b) Olifantspoort facies of the same tradition AD1500 – AD1700 (c) Uitkomst facies of Urewe AD1650 – AD1820 and (d) Buispoort facies of Urewe dating to around AD1700 - AD1840 (Huffman 2007: 127; 171; 191 & 203). Late Iron Age stonewalled sites have been recorded during earlier surveys for mining development on Elandsdrift 467JQ, Buffelspoort 465JQ and Buffelsfontein 343JQ (Pelser 2009; 2012), and it is possible that similar sites could have been located in this area as well.

There are no known Iron Age sites, features or cultural material in the specific study area, but there is known sites in the larger region. Although none was visible from the aerial images (Google Earth) of the study & application area, it is possible the Late Iron Age stone-walled settlement features could be located close to and around some of the rocky ridges and hills noted in the area and on the on-site images close to an existing granite quarry provided by the client.

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. Early travelers have moved through this part of the Northwest Province. This included David Hume in 1825, Robert Scoon and William McLuckie in 1829 and Dr. Robert Moffat and Reverend James Archbell in 1829 (Bergh 1999: 12, 117-119). Hume again moved through this area in 1830 followed by the expedition of Dr. Andrew Smith in 1835 (Bergh 1999: 13, 120-121). In 1836 William Cornwallis Harris visited the area. The well-known explorer Dr. David Livingstone passed through this area between 1841 and 1847 (Bergh 1999: 13, 119-122). The area around Mooinooi, including the surveyed area was inhabited by white pioneers as early as 1839 (Bergh 1999: 15). The Battle of Buffelspoort (3 December 1900) was also fought in close vicinity of the development area during the Anglo-Boer War (1899-1902).

# There are no known historical sites, features or remains in the study & application area, but there is always a possibility that such could be located in the area. This would include previously unknown or unmarked grave sites or graves.

The Chief Surveyor General Database (<u>www.csg.dla.gov.za</u>) was scrutinized for old maps of Roodekopjes or Zwartkopjes 427JQ. The oldest map found dates to 1915 and is for Portion 2 (CSG Document 10GH7R01) and shows that the farm was then located in the District of Brits and Ward of Crocodile River in the Province of Transvaal. The map of Portion 2 of the farm was framed in July 1897 and relates to a Deed of Transfer dated 23.05.1898 in favor of the Estate of one M.H.P.Brits. Portion 2 was surveyed in April 1915.

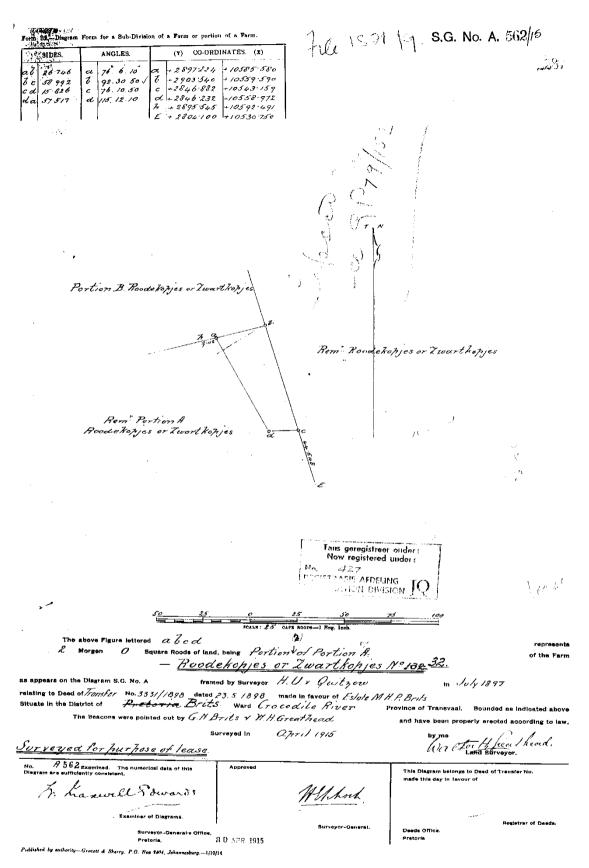


Figure 3: A 1915 map of Portion 2 of Roodekopjes or Zwartkopjes 427JQ (www.csg.dla.gov.za).

With no physical field assessments conducted in the study and Mining Rights Application Area it is difficult to determine if any sites, features or material of cultural heritage origin or significance are located here and if there will be any impacts on such sites as a result of planned future mining/quarrying. It is clear from the desktop study that archaeological/historical sites and finds do occur in the larger landscape within which the specific study and Application Area is located.

Google Earth images of the area were scrutinized to see if any possible sites or features are visible, and although none was evident there is a possibility that stone-walled Late Iron Age sites and features could be present on and around the rocky ridges or hill in parts of the area. Photographs provided by the client (Gudani Consulting) taken on-site at an area where granite quarrying has taken place shows some hills in close proximity and it is possible that stone-walled Iron Age settlement remains could be located here.



Figure 4: A closer view of a section of the study & application area close to Brits (Google Earth 2021). The impacts of urban settlement & related developments here is evident.



Figure 5: Closer view of another section of the study & application area showing some of the intended infrastructure and mining/quarrying areas. Some rocky ridges and hills are visible and it is possible that LIA sites could be located here (Google Earth 2022).



Figure 6: A view showing the impacts of granite quarrying in a section of the area (Google Earth 2022).



Figure 7: Another section of the area indicating some impacts of earlier quarrying. Roads & powerlines are also visible, while some of the hills and rocky ridges here could contain LIA sites as well (Google Earth 2022).



Figure 8: Picture of area with granite quarrying ongoing (courtesy Gudani Consulting).



Figure 9: A view of some hilly terrain and rocky ridges close to old quarrying. The dense nature of vegetation in the area is also evident (courtesy Gudani Consulting).



Figure 10: More rocky ridges and hills in the area (courtesy Gudani Consulting).



Figure 11: Another hill in the area where there is a high possibility of LIA stone-walled settlement sites being present (Google Earth 2022).

Based on the desktop study, aerial images of the area and photographs provided by the client the following is recommended on the way forward:

That the Mining Rights Application be allowed to continue, but that a detailed field assessment needs to be conducted in the area where any proposed future quarrying/mining activities (including prospecting) in the Highly Blue Trading (Pty) Ltd Area will be undertaken. The field assessment will focus on determining the location of possible archaeological and historical sites, features or material that could be negatively impacted by any related mining activities. Once this has been done and the way forward in terms of possible required mitigation measures have been presented the proposed future mining can continue.

## 7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was appointed by Gudani Consulting Environmental & Social Scientists to conduct a Desktop-based Heritage Impact Assessment for the Highly Blue Trading (Pty) Ltd Mining Rights Application on various portions of the farm Roodekopjes or Zwartkopjes 427JQ. The study & application area is located in the Magisterial District of Brits in the Northwest Province.

With no physical field assessments conducted in the study and Mining Rights Application Area it is difficult to determine if any sites, features or material of cultural heritage origin or significance are located here and if there will be any impacts on such sites as a result of planned future mining/quarrying. It is clear from the desktop study that archaeological/historical sites and finds do occur in the larger landscape within which the specific study and Application Area is located.

Google Earth images of the area were scrutinized to see if any possible sites or features are visible, and although none was evident there is a possibility that stone-walled Late Iron Age sites and features could be present on and around the rocky ridges or hill in parts of the area. Photographs provided by the client taken at an area where granite quarrying has taken place also shows some hills in close proximity and it is possible that stone-walled Iron Age settlement remains could be located here.

Finally, from a Cultural Heritage point of view, it is recommended that the Mining Rights Application be allowed to continue, but that a detailed field assessment needs to be conducted in the area where any proposed future quarrying/mining activities (including prospecting) will be undertaken. The field assessment will focus on determining the location of possible archaeological and historical sites, features or material that could be negatively impacted by any related mining activities. Once this has been done and the way forward in terms of possible required mitigation measures have been presented the proposed future mining can continue.

#### 8. REFERENCES

General and Closer views of Study Area location & Mining Rights Application footprint: Google Earth 2022.

On-site Photographs of a section of the study & application area: Provided by Gudani Consulting Environmental & Social Scientists

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

Chief Surveyor General Database (<u>www.csg.dla.gov.za</u>): Document 10GH7R01.

#### **APPENDIX A: DEFINITION OF TERMS:**

**Site**: 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**: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

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

(Also see Knudson 1978: 20).

#### **APPENDIX B: DEFINITION/ STATEMENT 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:**

#### **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.

#### 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

#### Field ratings:

i. National Grade I significance: should be managed as part of the national estate

ii. Provincial Grade II significance: should be managed as part of the provincial estate

iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)

iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/ medium significance)

v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)

vi. General protection B (IV B): site should be recorded before destruction (medium significance)

vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

#### APPENDIX D: PROTECTION OF HERITAGE RESOURCES:

#### Formal protection:

National heritage sites and Provincial heritage sites – Grade I and II Protected areas - An area surrounding a heritage site Provisional protection – For a maximum period of two years Heritage registers – Listing Grades II and III Heritage areas – Areas with more than one heritage site included Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

#### **General protection:**

Objects protected by the laws of foreign states Structures – Older than 60 years Archaeology, palaeontology and meteorites Burial grounds and graves Public monuments and memorials

#### **APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.

2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.

3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.

4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.

5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.

6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.