



Archaetnos Culture & Cultural  
Resource Consultants  
BK 98 09854/23

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**A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE  
PROPOSED HOPE NO. 4 SEAM MINING PROJECT, CLOSE TO KRIEL,  
MPUMALANGA PROVINCE**

For:

**GEOVICON**  
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**REPORT NO.: AE01521V**

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***May 2015***

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## **SUBMISSION OF REPORT**

**Please note that the South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report.**

**It is the client's responsibility to do the submission via the SAHRIS System on the SAHRA website.**

**Clients are advised not to proceed with any action before receiving the necessary comments from SAHRA.**

## **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. Access to certain areas is also sometimes limited. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof. Any additional sites identified can be visited and assessed afterwards and the report amended, but only upon receiving an additional appointment.**

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## SUMMARY

Archaetnos cc was requested by Geovicon to conduct a cultural heritage impact assessment (HIA) for an amendment of the approved EIA/EMP to include an additional underground mining area called the Hope No. 4 Seam Project. The project includes an associated decline shaft.

The Hope 4 Seam Project is spanned over different portions of the following farms: Goedehoop 46 IS, Komati Power Station 56 IS, Bultfontein 187 IS, Geluk 26 IS, Haasfontein 28 IS and Willmansrust 47 IS. This is between Emalahleni and Kriel in the Mpumalanga Province.

A survey of the available literature was undertaken in order to obtain background information regarding the area. This was followed by the field survey which was conducted according to generally accepted HIA practices, aimed at locating all possible objects, sites and features of cultural significance in the area of the proposed development.

During the survey, which formed part of a larger survey for the Goedehoop Colliery, thirteen sites of cultural heritage significance were located. Four of these are within the Hope 4 Seam Project. Mitigation measures for these sites are proposed, after implementation of which the development may continue.

It should be noted however that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Care should therefore be taken when the development commences further that if any of these are discovered, a qualified archaeologist be called in to investigate and that the HIA be amended if necessary.

It is also important to take cognizance that it is the client's responsibility to do the submission of this report via the SAHRIS System on the SAHRA website. No work on site may commence before receiving the necessary comments from SAHRA.

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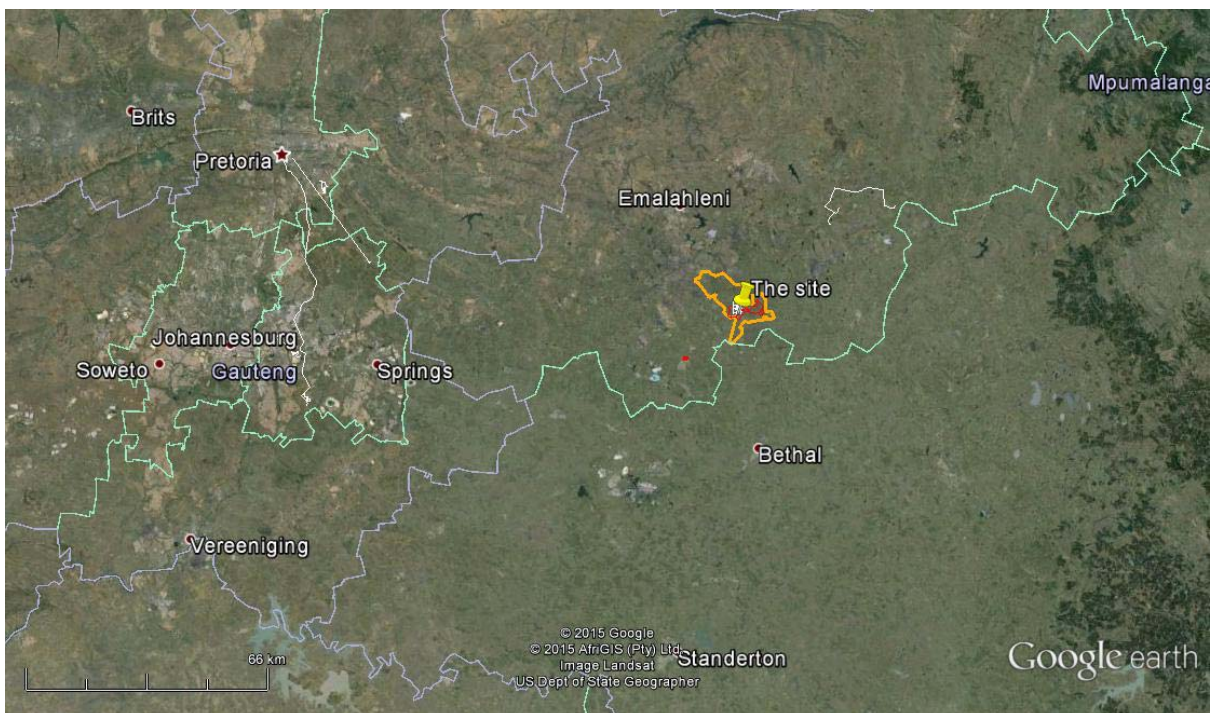
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## 1. INTRODUCTION

Archaetnos cc was requested by Geovicon to conduct a cultural heritage impact assessment (HIA) for an amendment of the approved EIA/EMP to include an additional underground mining area called the Hope No. 4 Seam Project. The project includes a decline shaft and associated infrastructure.

The Hope No. 4 seam Project is spanned over different portions of the following farms: Goedehoop 46 IS, Komati Power Station 56 IS, Bultfontein 187 IS, Haasfontein 28 IS, Geluk 26 IS and Willmansrust 47 IS. This is between Emalahleni and Kriel in the Mpumalanga Province (Figure 1-5).

The client indicated the area to be surveyed. The field survey was confined to this area.

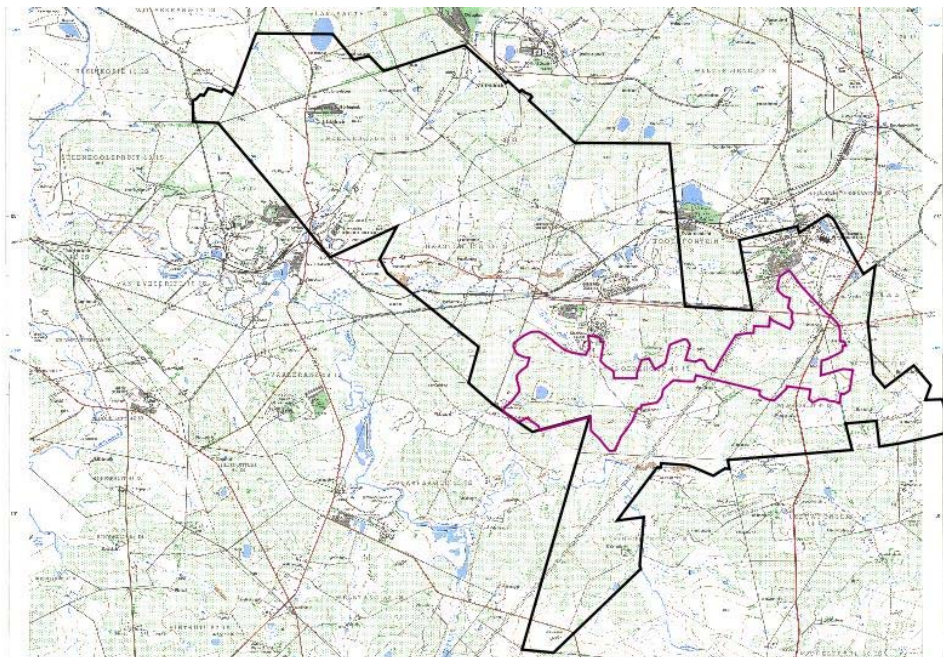


**Figure 1: Location of the surveyed site in the Mpumalanga Province. North reference is to the top.**



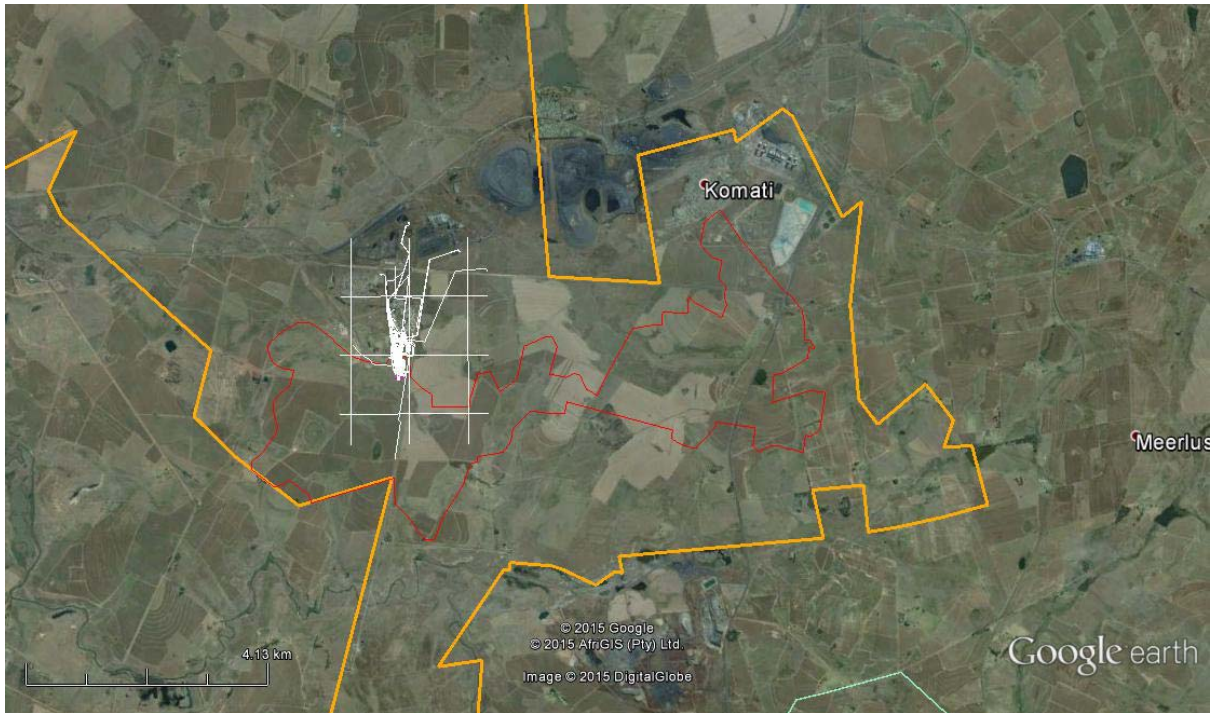


**Figure 2: Location of the site in relation to Emalahleni and Kriel. North reference is to the top.**



**Figure 3: Map indicating the Hope No. 4 Seam project area (purple) within the larger Goedehoop project area (black).**





**Figure 4: Location of the Hope No. 4 Seam project (red and white area) within the Goedehoop project (orange area). North reference is to the top.**



**Figure 5: Detail of proposed options for shaft positions at the Hope No. 4 Seam project. North reference is to the top.**

## **2. TERMS OF REFERENCE**

The Terms of Reference for the survey were to:

1. Identify objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A).
2. Study background information on the area to be developed.
3. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).
4. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
5. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.
6. Review applicable legislative requirements.

## **3. CONDITIONS & ASSUMPTIONS**

The following conditions and assumptions have a direct bearing on the survey and the resulting report:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structure and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.
2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix C).



4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.
5. All recommendations are made with full cognizance of the relevant legislation.
6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur. In this case there were certain areas that were inaccessible due to locked gates as well as areas where the vegetation cover was reasonably dense which had a negative effect on archaeological visibility.

#### **4. 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).

##### **4.1 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 of scientific or technological value.

The national estate (see Appendix D) 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. 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 only looks at archaeological resources. The different phases during the HIA process are described in Appendix E. 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 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; or
- 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.

### **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 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, or any equipment which assists in the detection or recovery of metals.

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

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)**).

#### **4.2 The National Environmental Management Act**

This act (Act 107 of 1998) 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.

### **5. THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE**

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Possible chance finds, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This include the possible maintenance of such sites in situ, or when impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artifacts and structures need to be removed is should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may however only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the effected communities. Again professionals should carry out the work and adhere to the best available techniques.

Consultation with affected communities should be engaged in. This entails that access to such communities should be granted to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the effected communities in



order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

## **6. METHODOLOGY**

### **6.1 Survey of literature**

A survey of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the bibliography.

### **6.2 Field survey**

The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the area of proposed development. One sometimes looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS)<sup>1</sup>, while photographs were also taken where needed. The survey was undertaken by doing a physical survey via off-road vehicle and on foot and covered as much as possible of the area to be studied (Figure 6-7). Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. The size of the area that was surveyed is approximately 1800 Ha and the survey took twelve hours to complete.

### **6.3 Oral histories**

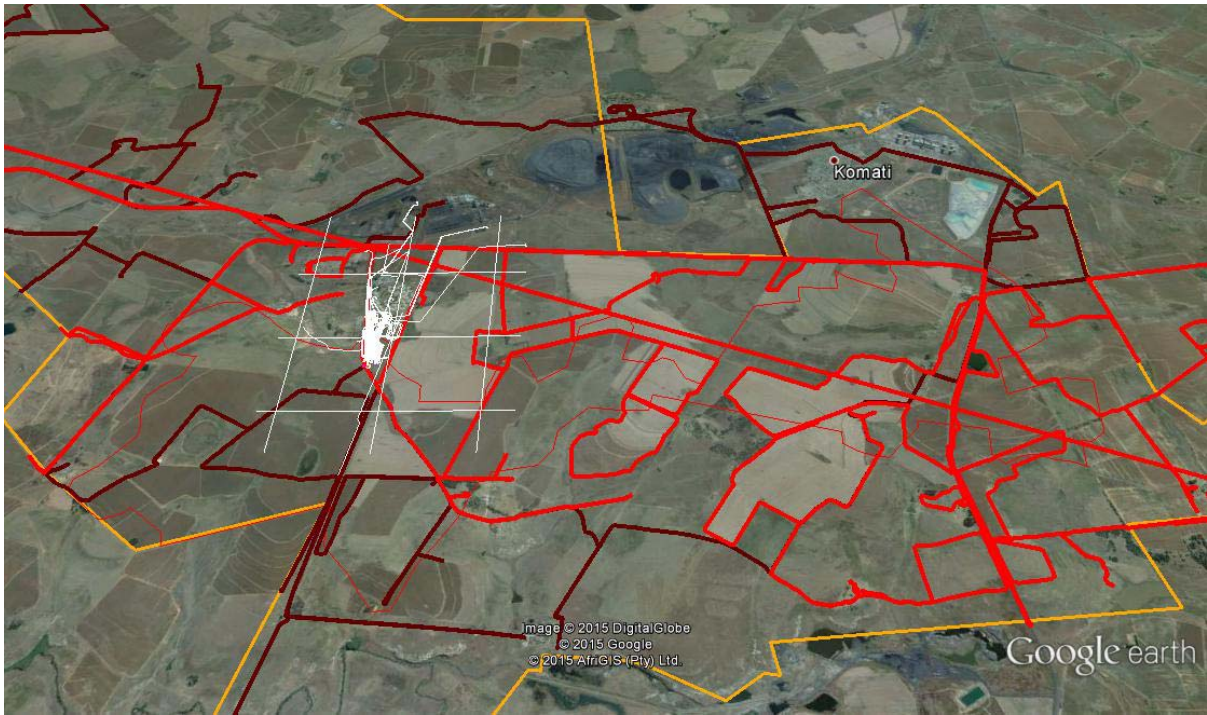
People from local communities are interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

### **6.4 Documentation**

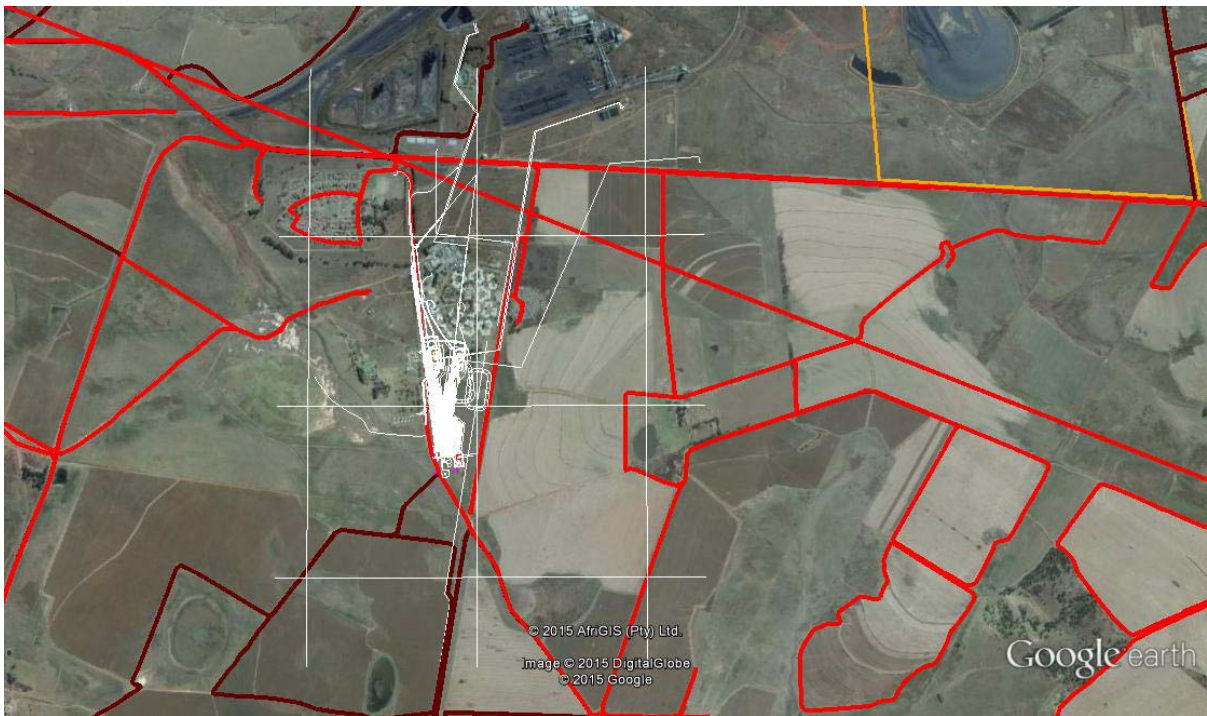
All sites, objects features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities were determined by means of the Global Positioning System (GPS). The information was added to the description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

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<sup>1</sup> A Garmin Oregon 550 with an accuracy factor of a few meters.



**Figure 6: GPS track of the surveyed area. North reference is to the top.**



**Figure 7: Detail of track route of the area where the shaft is planned at the Hope No. 4 Seam project. North reference is to the top.**

## 6.5 Evaluation of Heritage sites

The evaluation of heritage sites is done by giving a field rating of each (see Appendix C) using the following criteria:

- The unique nature of a site
- The integrity of the archaeological deposit
- The wider historic, archaeological and geographic context of the site
- The location of the site in relation to other similar sites or features
- The depth of the archaeological deposit (when it can be determined or is known)
- The preservation condition of the site
- Uniqueness of the site and
- Potential to answer present research questions.

## 7. DESCRIPTION OF THE AREA

A large part of the environment of the surveyed area is disturbed by recent human activities, mainly agriculture. This mainly consists of maize and soya bean fields as well as ploughed fields (Figure 8-9). Former mining/ prospecting activities are also visible (Figure 10). Signs of old field were also found in abundance which could be seen in the pioneer plant species consisting of weeds and grass. However, certain areas of the surveyed land consisted of natural grassland.

The vegetation cover varies between short, medium and long grass and is very dense with the resulting variation in both the vertical as the horizontal archaeological visibility between good and fair (Figure 11-12). Only a few large trees are found in the area.

The topography of the area consists of rolling hills with slopes towards water courses and bodies (Figure 13-14). The latter consists of pans, dams and rivers throughout the surveyed area. The Olifants River does flow outside and towards the southern side of the project area.





**Figure 8: Maize field in the project area.**



**Figure 9: Soya bean field in the project area.**





**Figure 10: Unnatural landscape in the surveyed area, caused by former mining and rehabilitation activities.**



**Figure 11: View of short grass, part of a grass farm, and a mine heap in the project area.**



**Figure 12: One of many pans in the surveyed area. Also note the long dense vegetation cover.**



**Figure 13: General view of rolling hills and medium high, but dense vegetation in the surveyed area.**



**Figure 14: View along one of the rivers in the surveyed area.**

## **8. HISTORICAL CONTEXT**

In order to understand the sites identified during the survey as well as possible additional finds that could be unearthed during construction activities, it is necessary to give a background regarding the different phases of human history in the area.

Many heritage reports were done in the vicinity of the Hope No. 4 Seam project (SAHRA's SAHRIS database). This information is also included below.

### **8.1 Stone Age**

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in three periods. It is, however, important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

Early Stone Age (ESA) 2 million – 150 000 years ago  
Middle Stone Age (MSA) 150 000 – 30 000 years ago  
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

This geographical area is not known as an area containing prehistoric sites. No Stone Age sites are for instance indicated on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrence is a Late Stone Age site at Groenvlei, close to Carolina and that of rock art close to the Olifants River to the south of Witbank (Bergh 1999: 4-5). This may however only indicate a lack of research in the area.

The environment is such that it does not provide much natural shelter and therefore it is possible that Stone Age people did not settle here for long periods of time. They would have however been lured to the area due to an abundance of wild life as the natural vegetation would have provided ample grazing. One may therefore find small sites or occasional stone tools.

## **8.2 Iron Age**

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (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.

Iron Age sites have been identified to the south of the area, around Bethal which lies far to the south-east of the surveyed area (Bergh 1999: 7). These all are dated to the Late Iron Age. Sites such as these are known for extensive stone building forming settlement complexes. No indication of metal smelting was identified at any of these sites (Bergh 1999: 8).

It is also known that the early trade routes did not run through this area (Bergh 1999: 9). However one should bear in mind that many of these areas may not have been surveyed before and therefore the possibility of finding new sites is always a reality. Some Iron Age sites have been identified during previous surveys in the broader geographical environment (Archaetnos database).

The type of environment in the surveyed area definitely is suitable for human habitation. There is ample water sources and good grazing. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers later on moved into this environment. However, during the survey no such sites were identified.

## **8.3 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. This era is sometimes called the Colonial era or the recent past.



Due to factors such as population growth and a decrease in mortality rates, more people inhabited the country during the recent historical past. Therefore and because less time has passed, much more cultural heritage resources from this era have been left on the landscape. It is important to note that all cultural resources older than 60 years are potentially regarded as part of the heritage and that detailed studies are needed in order to determine whether these indeed have cultural significance. Factors to be considered include aesthetic, scientific, cultural and religious value of such resources.

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.

At the beginning of the 19<sup>th</sup> century the Phuthing, a South Sotho group, stayed to the east of where Komati is situated. During the Difaquane they fled to the south as Mzilikazi's impi moved in from the southeast (Bergh 1999: 10-11; 109).

The first white traveler to visit these surroundings was Robert Scoon in 1829. The first Voortrekker groups of Hans van Rensburg and Louis Tregardt also passed close to this area in 1836 (Bergh 199: 13-14). The first white farmers only settled here during the late 1850's (Bergh 1999: 18-20).

During the Anglo-Boer War the Highveld areas saw much action consisting of various skirmishes between Boer and Brit (Bergh 1999: 51, 54). It includes skirmishes on the farms Oshoek (4 December 1901), Trigaardsfontein (10 December 1901), Witbank (11 January 1902) and Nelspan (26 January 1902). It however is not possible to indicate how close these came to the project area.

One may therefore expect to find remains of buildings as well as graves dating to this period in time. In fact, graves were identified close to the Komati Substation during previous surveys by Archaetnos (Archaetnos database) as was graves and various farm buildings found on the surrounding farms during other surveys (Fourie 2012).

## **9. DESCRIPTION OF HERITAGE SITES FOUND DURING THE SURVEY**

During the survey, which formed part of a larger survey for the Goedehoop Colliery, thirteen sites of cultural heritage significance were located. Four of these are within the Hope No. 4 Seam Project area and are discussed below. The four sites are sites number 5, 6, 7 and 13. The numbers correspond with those of the Goedehoop report (see reference list) of and therefore the same numbers have been kept.

The coordinates for the thirteen sites are:

1. 26°01'17.3"S; 29°19'07.2"E
2. 26°08'06.3"S; 29°30'16.9"E
3. 26°06'49.7"S; 29°29'04.4"E
4. 26°08'49.2"S; 29°27'09.9"E
5. 26°07'23.3"S; 29°27'57.8"E

6. 26°08'19.1"S; 29°25'07.8"E
7. 26°06'54.8"S; 29°24'40.9"E
8. 26°05'26.7"S; 29°22'18.5"E
9. 26°02'44.6"S; 29°20'19.5"E
10. 26°04'56.2"S; 29°20'29.8"E
11. 26°10'45.4"S; 29°25'03.0"E
12. 26°04'25.2"S; 29°22'07.6"E
13. 26°07'20.1"S; 29°24'37.3"E

### 9.1 Site 5 – Grave yard

The site consists of at least 5 graves (Figure 15). All the graves have cement borders and headstones.

Only one surname could be identified, being Masango. Graves are divided into three categories, being unknown, heritage (older than 60 years) and younger than 60 years. No date of death could be identified. Therefore all graves are unknown and should be handled similar to heritage graves (older than 60 years) until more information become available.

GPS: 26°07'23.3"S  
29°27'57.8"E



**Figure 15: Some of the graves at site no. 5.**

Graves are always regarded as having a high cultural significance. The field rating is Local Grade IIIB. It may be mitigated, and should be included in the heritage register.

Two possibilities exist. The first option would be to fence<sup>2</sup> the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact<sup>3</sup> due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

In this case the graves will not be impacted directly by the mining development as it is too far from any of the possible sites for the placement of the shaft. There always is a secondary impact due to the possible transport of coal, blasting and other mining activities or since access to the site may be limited for descendants. Therefore Option 1 is recommended.

## **9.2 Site 6 – grave yard**

The site consists of at least 7 graves neatly fenced in by stone walling (Figure 16). All the graves have granite borders and headstones.

Two surnames could be identified, being Honeyborne and Van Niekerk. Graves are divided into three categories, being unknown, heritage (older than 60 years) and younger than 60 years. The oldest date of death identified is 1917 and the youngest 2012. All dates were identified and four of the graves are heritage graves (older than 60 years) and three younger than 60 years.

GPS: 26°08'19.1"S  
29°25'07.8"E

Graves are always regarded as having a high cultural significance. The field rating is Local Grade IIIB. It may be mitigated, and should be included in the heritage register.

Two possibilities exist. The first option would be to fence<sup>4</sup> the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger

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<sup>2</sup> It is standard protocol to fence in sites in order to clearly demarcate it and assist with the management and preservation thereof.

<sup>3</sup> Secondary impact refers to any mining activity that may impact on the graves indirectly. It is impossible to give a full list, but it will include issues like dust pollution, blasting impacts and the limitation of access to descendants to the graves.

<sup>4</sup> It is standard protocol to fence in sites in order to clearly demarcate it and assist with the management and preservation thereof.

of being damaged, but where there will be a secondary impact<sup>5</sup> due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

In this case the graves will not be impacted directly by the mining development as it is too far from any of the possible sites for the placement of the shaft. There always is a secondary impact due to the possible transport of coal, blasting and other mining activities or since access to the site may be limited for descendants. Therefore Option 1 is recommended.



**Figure 16: Some of the graves at site no. 6.**

### **9.3 Site 7 – Old church at demolished New Town Village**

This is a beautiful building used as church at the demolished New Town Village close to Hope Village (Figure 17). It is in a reasonably good condition and may be older than 60 years of age. The mine however indicated that it was built during the 1980's, but could give no documentary evidence thereof.

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<sup>5</sup> Secondary impact refers to any mining activity that may impact on the graves indirectly. It is impossible to give a full list, but it will include issues like dust pollution, blasting impacts and the limitation of access to descendants to the graves

GPS: 26°06'54.8"S  
29°24'40.9"E



**Figure 17: The church at the demolished New Town Village.**

It has low heritage significance. The field rating given for the site is General protection C (IV C). This means that this report is seen as ample mitigation and that the site may be demolished if necessary.

Looking at the mine plan it seems that the site may be in the way. However, if it is possible not to demolish the site, this should rather be considered.

#### **9.4 Site 13 – single grave**

This is a single grave with a brick border a cement headstone (Figure 18). No surname or date of death was legible.

Graves are divided into three categories, being unknown, heritage (older than 60 years) and younger than 60 years. This is therefore an unknown grave.

GPS: 26°07'20.1"S  
29°24'37.3"E





**Figure 18: The graves at site no. 13.**

Graves are always regarded as having a high cultural significance. The field rating is Local Grade IIIB. It may be mitigated, and should be included in the heritage register.

Two possibilities exist. The first option would be to fence<sup>6</sup> the grave in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact<sup>7</sup> due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

In this case the grave will be impacted on directly by the mining development. If at all possible, the mine plans should be changed so that the site is not directly impacted on. In this case Option 1 will have to be implemented. However, if not possible to change the mine plan, Option 2 will have to be implemented.

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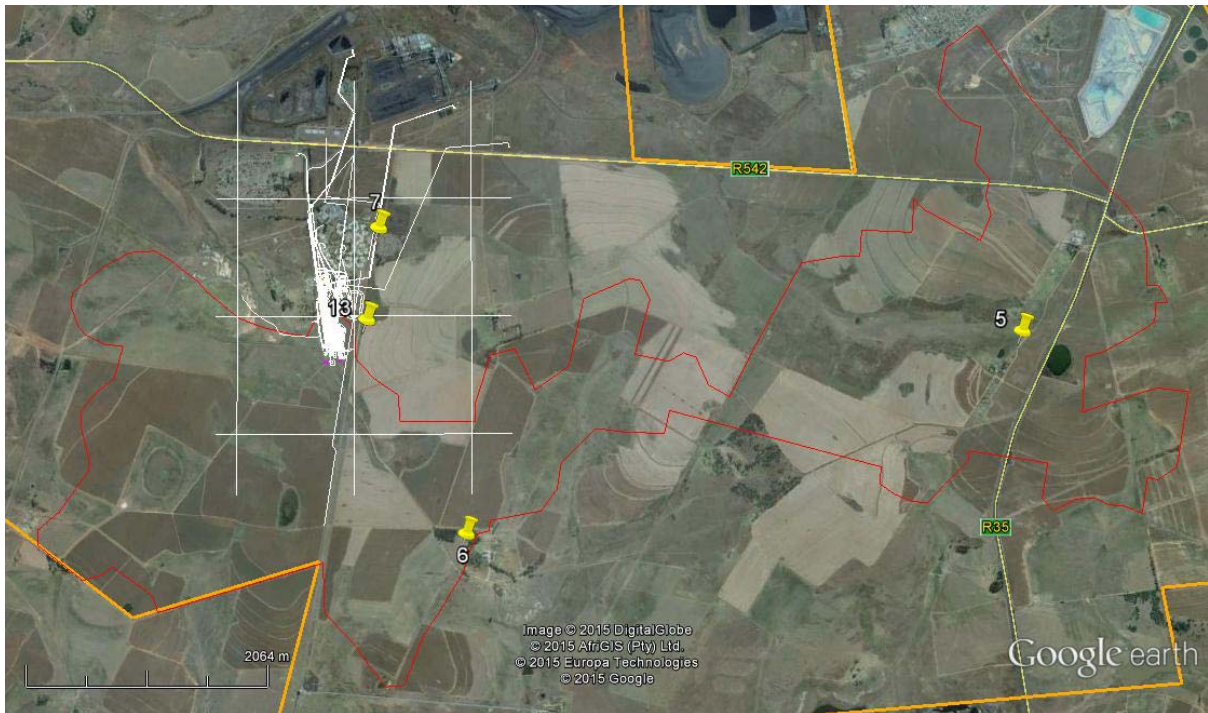
<sup>6</sup> It is standard protocol to fence in sites in order to clearly demarcate it and assist with the management and preservation thereof.

<sup>7</sup> Secondary impact refers to any mining activity that may impact on the graves indirectly. It is impossible to give a full list, but it will include issues like dust pollution, blasting impacts and the limitation of access to descendants to the graves



## 10. CONCLUSION AND RECOMMENDATIONS

As indicated, four sites of cultural heritage importance were identified during the survey (Figure 19-20). The survey of the indicated area was completed successfully.



**Figure 19: Location of the four sites identified in the Hope No. 4 Seam project area. Note that only site no. 7 and 13 will be impacted on directly.**



**Figure 20: Location of site no. 7 and 13 within the development. It will definitely be impacted on.**

The following is recommended:

- Four sites have been identified in the project area. Two of these will be impacted on indirectly and the third directly. Therefore mitigation measures should be implemented.
- Sites no 5 and 6 are grave yards and site no 13 a single grave. Two possibilities exist in dealing with graves:
  - The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact<sup>8</sup> due to the activities of the mine. The fencing in of graves is standard protocol in order to clearly demarcate it as assistance for preservation and management.
  - The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves

<sup>8</sup> Secondary impact refers to any mining activity that may impact on the graves indirectly. It is impossible to give a full list, but it will include issues like dust pollution, blasting impacts and the limitation of access to descendants to the graves

younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

- With regards to sites no 5 and 6 the graves will not be impacted directly by the mining development as it is too far from any of the possible sites for the placement of the shaft. There always is a secondary impact due to the possible transport of coal, blasting and other mining activities or since access to the site may be limited for descendants. Therefore Option 1 is recommended.
- In this case of site no 13 the grave will be impacted on directly by the mining development. If at all possible, the mine plans should be changed so that the site is not directly impacted on. In this case Option 1 will have to be implemented. However, if not possible to change the mine plan, Option 2 will have to be implemented.
- Site no. 7 will be impacted on directly. It however received a low significance and therefore this report is seen as ample mitigation. It may be demolished, but if it is possible not to demolish the site, this should rather be considered.
- In case of demolition a permit will be required from the Mpumalanga Provincial Heritage Resources Agency. Only after receiving the permit the site may be demolished.
- After implementation of the mitigation measures indicated, the development may continue. Proof of implementation will have to be provided to SAHRA.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. The state of the environment also makes it possible that not all sites were identified. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence and adapt this report.

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## **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.