



Archaetnos Culture & Cultural  
Resource Consultants  
BK 98 09854/23

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**A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE  
PROPOSED DE GROOTE BOOM MINING RIGHT APPLICATION ON THE FARM  
DE GROOTEBOOM 373 KT, CLOSE TO STEELPOORT, LIMPOPO PROVINCE**

For:

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**GCS Project no.: 16-1487**

**REPORT NO.: AE01717V**

By:

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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.**

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## EXECUTIVE SUMMARY

### Purpose:

Archaetnos cc was requested GCS Water 7 Environment (Pty) Ltd to conduct a cultural heritage impact assessment (HIA) for the proposed mining activities on portion 1 and the remaining extent of the farm De Grooteboom 373 KT. This lies approximately 10 km to the south-west of the town of Steelpoort in the Limpopo Province.

### Project description:

The project was done as part of a mining right application for environmental authorisation. The proposed mining activities include the continuation of open cut mining activities along the south-western face of side of a hill, already impacted on by current mining activities. It further includes open cut mining on the southern and eastern faces of the hill, possible underground mining of the mentioned hill and the construction of new infrastructure. The latter includes a PCD, workshop and stockpile area

### Methodology:

The methodology for the study includes a survey of literature and a field survey. The latter 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.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS), 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. Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage.

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 GPS. The information was added to the description in order to facilitate the identification of each locality.

### Public consultation:

Public consultation will be done by GCS, but have not commenced yet.

### Findings:

During the survey three sites of cultural heritage significance were identified within the immediate project area.

### Recommendations:

- From a heritage perspective the description in the phase 1 heritage report is seen as sufficient recording of the three sites. Therefore no further mitigation is needed.

- It may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation.
- The proposed development may therefore continue after comments and instructions have been received from SAHRA.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Due to the density of vegetation it also is possible that some sites may only become known later on. Operating controls and monitoring should therefore be aimed at the possible unearthing of such features. 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.

## CURRICULUM VITAE OF SPECIALIST: PROF ANTON CARL VAN VOLLENHOVEN

### Tertiary education

- BA 1986, University of Pretoria
- BA (HONS) Archaeology 1988 (cum laude), University of Pretoria
- MA Archaeology 1992, University of Pretoria
- Post-Graduate Diploma in Museology 1993 (cum laude), University of Pretoria
- Diploma Tertiary Education 1993, University of Pretoria
- DPhil Archaeology 2001, University of Pretoria.
- MA Cultural History 1998 (cum laude), University of Stellenbosch
- Management Diploma 2007 (cum laude), Tshwane University of Technology
- DPhil History 2010, University of Stellenbosch

### Employment history

- *1988-1991*: Fort Klapperkop Military Museum - Researcher
- *1991-1999*: National Cultural History Museum. Work as Archaeologist, as well as Curator/Manager of Pioneer Museum (1994-1997)
- *1999-2002*: City Council of Pretoria. Work as Curator: Fort Klapperkop Heritage Site and Acting Deputy Manager Museums and Heritage.
- *2002-2007*: City of Tshwane Metropolitan Municipality. Work as Deputy Manager Museums and Heritage.
- *August 2007* – present – Managing Director for Archætnos Archaeologists.
- *1988-2003*: Part-time lecturer in Archaeology at the University of Pretoria and a part-time lecturer on Cultural Resources Management in the Department of History at the University of Pretoria.
- *2014*: Part-time lecturer for the Honours degree in Museum Sciences in the Department of History and Heritage Studies at the University of Pretoria
- *2015*: Appointed extraordinary professor in history at the Mafikeng Campus of the Northwest University

### Other

- Published 75 articles in scientific and popular journals on archaeology and history.
- Author and co-author of over 580 unpublished reports on cultural resources surveys and archaeological work. A list of reports can be viewed on [www.archætnos.co.za](http://www.archætnos.co.za)
- Published a book on the Military Fortifications of Pretoria.
- Contributed to a book on Mapungubwe.
- Delivered more than 50 papers and lectures at national and international conferences.
- Member of SAHRA Council for 2003 – 2006.
- Member of the South African Academy for Science and Art.
- Accredited professional member of Association for South African Professional Archaeologists.
- Accredited professional member of the South African Society for Cultural History (Chairperson 2006-2008; 2012-2014).
- Has been editor for the SA Journal of Cultural History 2002-2004.
- Member of the Provincial Heritage Resources Agency, Gauteng's Council.
- Member of Provincial Heritage Resources Agency, Gauteng's HIA adjudication committee (Chairperson 2012-2019).

ASAPA Accreditation number: 166

SASCH Accreditation number: CH001

## DECLARATION OF INDEPENDENCE

I, Anton Carl van Vollenhoven from Archaetnos, hereby declare that I am an independent specialist within the field of heritage management.

Signed:

A rectangular image showing a handwritten signature in black ink on a light-colored, textured background. The signature is cursive and appears to read 'Anton Carl van Vollenhoven'.

Date: 18 April 2017

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**LIST OF ACRONYMS:**

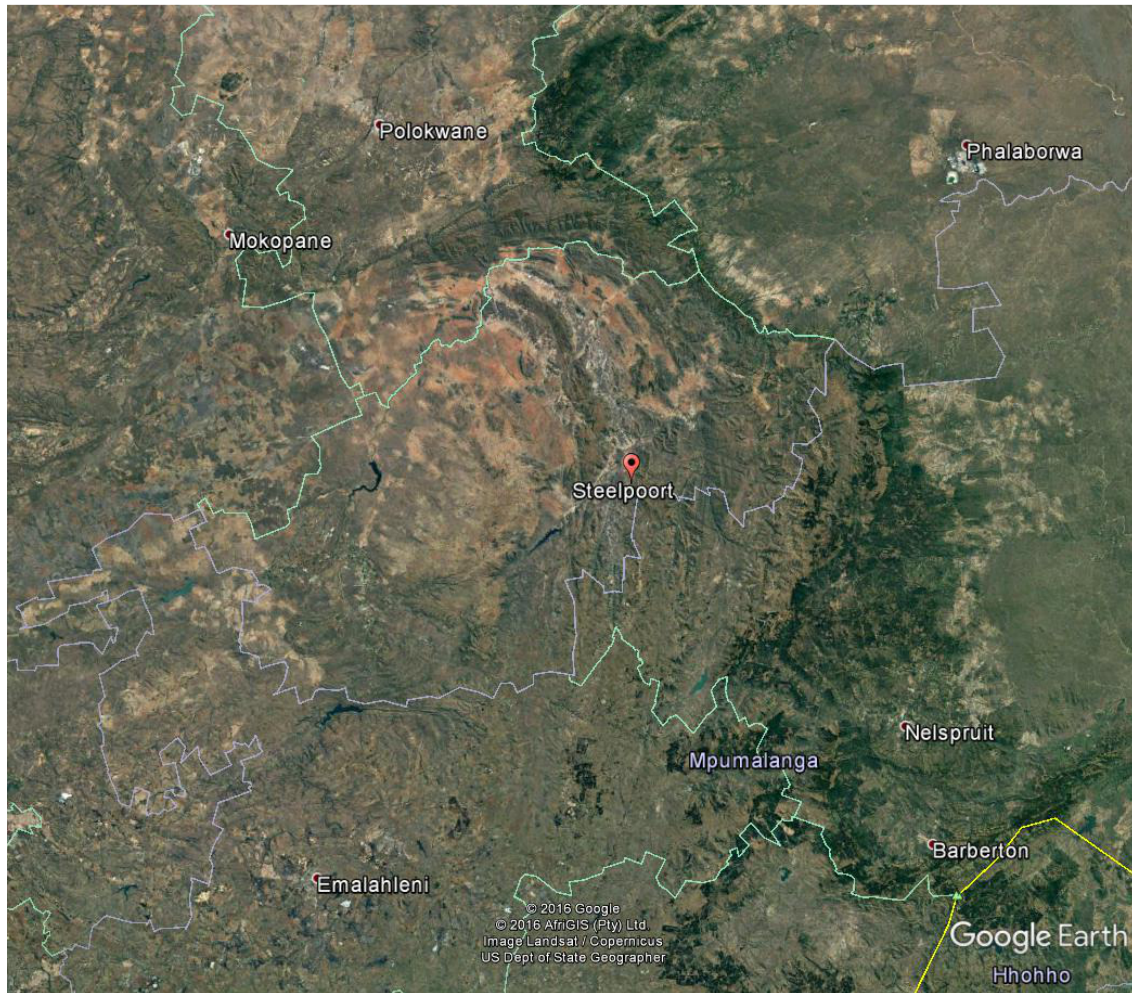
AIA – Archaeological Impact Assessment  
CMP – Cultural Management Plan  
EAP – Environmental Assessment Practitioner  
EIA – Environmental Impact Assessment  
HIA – Heritage Impact Assessment  
PIA – Palaeontological Impact Assessment  
SAHRA –South African Heritage Resources Agency



## 1. INTRODUCTION

Archaetnos cc was requested GCS Water 7 Environment (Pty) Ltd to conduct a cultural heritage impact assessment (HIA) for the proposed mining activities on portion 1 and the remaining extent of the farm De Grooteboom 373 KT. This lies approximately 10 km to the south-west of the town of Steelpoort in the Limpopo Province (Figure 1-2).

The project was done as part of a mining right application for environmental authorisation. The client indicated the area to be surveyed. It was surveyed via foot and off-road vehicle.



**FIGURE 1: LOCATION OF STEELPOORT IN THE LIMPOPO PROVINCE.**



**FIGURE 2: LOCATION OF THE SITE IN RELATION TO STEELPOORT.**

## **2. PROJECT INFORMATION**

### **2.1 LOCALITY**

The farm De Grootboom 373 KT is located close to Steelpoort. This is in the Greater Tobatse Local Municipality within the Sekhukhune District Municipality in the Limpopo Province.

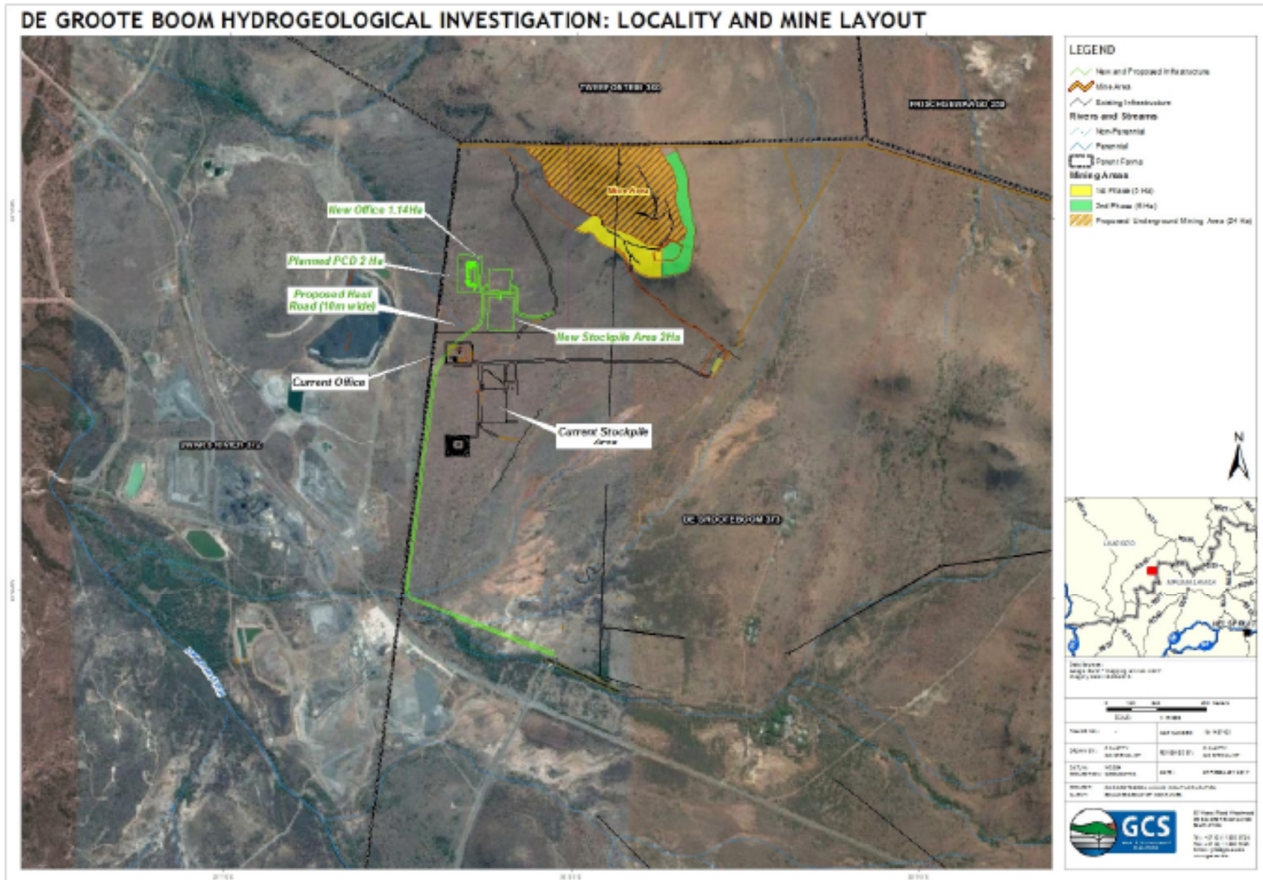
### **2.2 PROJECT DESCRIPTION**

The proposed mining activities include the continuation of open cut mining activities along the south-western face of side of a hill, already impacted on by current mining activities. It further includes open cut mining on the southern and eastern faces of the hill, possible underground mining of the mentioned hill and the construction of new infrastructure. The latter includes a PCD, workshop and stockpile area (Figure 3).



**TABLE 1: SUMMARY OF PROJECT SPECIFICS**

Type of development	Mining
Detail of proposed activities (NHRA section 38 triggers)	Area larger than 5 000m <sup>2</sup>
Size of project	10 Ha



**FIGURE 3: MINE LAYOUT PLAN.**

**2.3 APPLICANT AND EAP DETAILS**

The applicant is De Grootboom Minerals (Pty) Ltd and the EAP compiling the application is GCS Water & Environment (Pty) Ltd.

**3. 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. Document the found cultural heritage sites according to best practice standards for heritage related studies.
3. Study background information on the area to be developed.
4. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).
5. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
6. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.
7. Review applicable legislative requirements.

#### **4. LEGISLATIVE REQUIREMENTS**

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. The first of these are the National Heritage Resources Act (Act 25 of 1999) which deals with the cultural heritage of the Republic of South Africa. The second is the National Environmental Management Act (Act 107 of 1998) which inter alia deals with cultural heritage as part of the Environmental Impact Assessment process.

##### **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 (AIA) only looks at archaeological resources.

A Palaeontological Impact Assessment (PIA) is an assessment of palaeontological heritage. Palaeontology is a different field of study, and although also sometimes required by the South African Heritage Resources Agency (SAHRA)<sup>1</sup>, should be done by a professional palaeontologist.

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.

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<sup>1</sup> Please consult SAHRA to determine whether a PIA is necessary.

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.

#### **4.3 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). Any possible chance find, 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 includes the possible maintenance of such sites in situ, or when not possible, 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, this 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 affected communities. Again professionals should carry out the work and adhere to the best available techniques.

Consultation with affected communities should be conducted. This entails that such communities should be granted access 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 affected 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.

## **5. METHODOLOGY**

### **5.1 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.

### **5.2 Reference to other specialist desktop studies**

Various specialist reports were conducted related to the project. These include a Visual Impact Assessment, Social report, and a Soils Assessment report. These can all be made available on request by GCS. One HIA report is known from the immediate project area, with numerous other ones being done in the Steelpoort Valley. These will be referred to in the background discussion, later in this report.

### **5.3 Public consultation and stakeholder engagement**

Public consultation will be handled by GCS, but has not commenced yet.

### **5.4 Physical field survey**

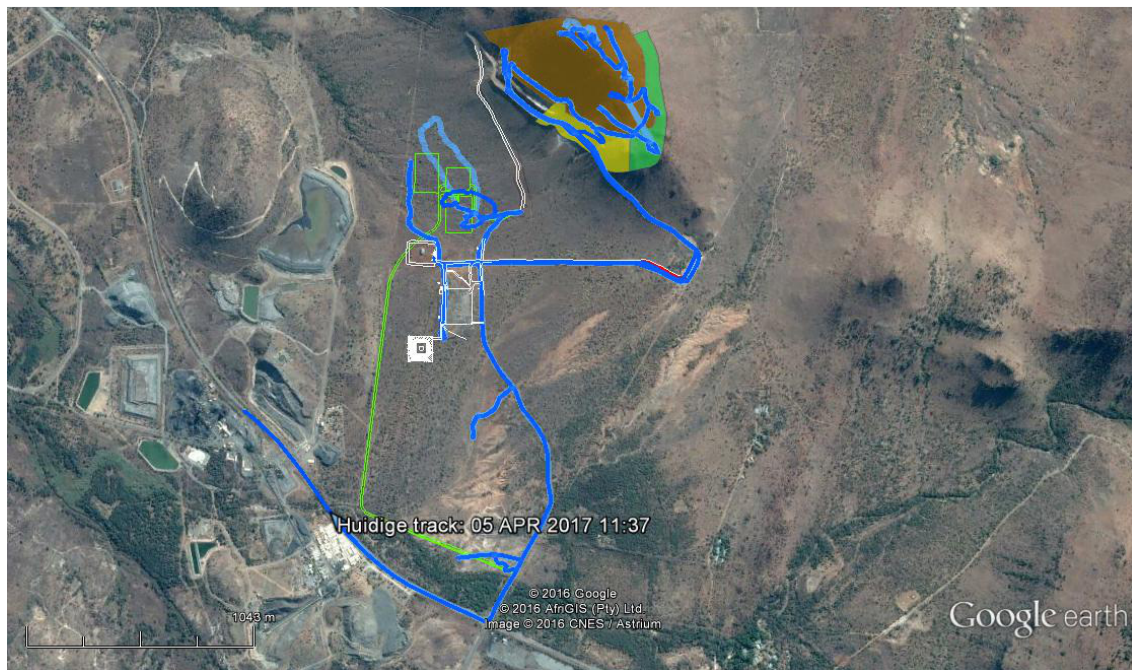
The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the



area of proposed development. One regularly 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>2</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 4).

Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. In this instance the under footing was extremely dense and the vegetation cover medium to high. Accordingly both the horizontal and the vertical archaeological visibility was influenced negatively. The survey took 5 hours to complete.



**FIGURE 4: GPS TRACK<sup>3</sup> OF THE SURVEYED AREA. NORTH REFERENCE IS TO THE TOP.**

### 5.5 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 GPS. The information was added to the description in order to facilitate the identification of each locality.

<sup>2</sup> A Garmin Oregon 550 with an accuracy factor of a few meters.

<sup>3</sup> Two people in radio contact did the survey and two GPS units were used – reflected in light and dark blue on the map.

## **5.6 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.

## **6. ASSUMPTIONS, GAPS, RESTRICTIONS, CONDITIONS AND LIMITATIONS**

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, structures 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.

7. In this particular case certain sections of the surveyed area has been disturbed by recent human activities, mainly mining infrastructure development. Accordingly these areas are seen as a low risk areas to reveal heritage sites due to it being disturbed.
8. The vegetation cover in certain areas was high and dense, which had a negative effect on both the vertical and the horizontal archaeological visibility.
9. The slope of the hill which was surveyed is extremely steep, making access difficult. However, this also means that no natural flattened surfaces are found, with the exception of the summit. Accordingly settlement on the slopes are extremely unlikely, making it a low risk area for finding heritage sites.

## **7. DESCRIPTION OF THE SOCIO-ECONOMIC ENVIRONMENT**

The highest concentration of people in the proposed Project's sphere of influence is in the town of Burgersfort. This town experienced a population boom due to an influx of job-seekers hoping to secure employment at Modikwe Platinum Mine and other nearby operations.

The population of Limpopo Province in 2011 was approximately 5.4 million and the province is divided into five municipal districts, namely Capricorn, Sekhukhune, Waterberg, Mopani and Vhembe. The Greater Sekhukhune District Municipality demonstrate age distributions that are typical of populations with a high growth rate, in that the largest proportions of the population are found in the youngest age brackets. The dominant language in both the local and regional study areas is Sepedi, with 89% of the people speaking this language.

The economy of the area depends largely on mining, agriculture, trade and government services. Although agriculture seems to dominate most land use, most of the land that is under cultivation is used for subsistence purposes, with only 30% of the land being under commercial farming. Mining is one of the more dominant economic activities. Tourism and eco-tourism has the potential to boost the economy in the regional study area, but has not been fully developed yet. The high unemployment rate in the regional study area is highlighted by the fact that as much as 88% of households survive on R6 400 or less per month, whilst 15% of households had no recorded income.

## **8. DESCRIPTION OF THE PHYSICAL ENVIRONMENT**

The surveyed area consist of two areas with entirely different topographical characteristics. However, the vegetation is very similar.

On the hill the vegetation cover is reasonably dense and between medium and high in height (Figure 5). This had a negative effect on especially the vertical archaeological visibility. Vegetation seems very natural consisting of grassland and small to medium sized trees. The summit is level, but the slopes extremely steep (Figure 6—8). This would have made permanent settlement on the slopes impossible. Signs of disturbance by former mining activities were visible (Figure 9).

The second area investigated is on the south-western slopes, almost at the bottom of the hill. Here the topography is reasonably level. A few non-perennial streams runs through the area. The vegetation cover seems reasonably natural, but signs of pioneer plant species were found (Figure 10-11). Large heaps of soil indicate disturbance by former mining activities (Figure 12). Another section has been cleared from vegetation (Figure 13).



**FIGURE 5: GENERAL VIEW OF VEGETAION ON THE HILL IN THE SURVEYED AREA.**





**FIGURE 6: ANOTHER VIEW, THIS TIME AGAINST THE SLOPE OF THE HILL.**



**FIGURE 7: ANOTHER VIEW OF VEGETATION AGAINST THE SLOPE OF THE HILL.**



**FIGURE 8: VIEW OF DENSE VEGETATION ON THE HILL.**



**FIGURE 9: INDICATION OF FORMER MINING ACTIVITIES ON THE HILL.**





**FIGURE 10: VIEW TAKEN FROM THE HILL OF THE LOWER AREA OF DEVELOPMENT.**



**FIGURE 11: GENERAL VIEW OF VEGETATION IN THE LOWER AREA OF THE DEVELOPMENT.**



**FIGURE 12: INDICATION OF FORMER MINING ACTIVITIES IN THE LOWER PART OF THE DEVELOPMENT.**



**FIGURE 13: AREA CLEARED FROM VEGETATION.**



## **9. PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT**

Still in progress.

## **10. HISTORICAL CONTEXT**

Three sites of cultural heritage significance were located during the survey. Some background information is given in order to place the surveyed area in a broad historical and geographical context and to contextualize possible finds that could be unearthed during construction activities.

A large number of heritage reports were completed around the towns of Steelpoort and Burgersfort previously. One of these was done on the farm De Grooteboom (SAHRA's SAHRIS database; Achaetnos database). These are included in the discussion below.

### **10.1 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.

No Stone Age sites are indicated in a historical atlas of this area. However one needs to take note that this may only indicate a lack of research in the area. The closest Stone Age sites indicated in the atlas is Middle and Late Stone Age sites close to Ohrigstad (Bergh 1999: 5).

Stone Age material was however found during various surveys in and around Burgersfort and Steelpoort. This includes rock paintings at the Two Rivers Mine (Archaetnos database). Higgitt et.al. (2015: 21-22) did identify MSA tools on De Grooteboom. These were however found in eroded areas, an indication that it likely were in a secondary context. It also were located towards the south of the current surveyed area.

The environment definitely would be supportive to Stone Age activities. The nearby mountains gives natural shelter and material to make stone tools from. The streams would lure animals to the area and these people would therefore have hunted here. The natural rock mostly includes shale, which is a soft stone, meaning that that there is very limited resources from which to make stone tools. This would most likely be

limited to the mountain tops. One should therefore be on the lookout for stone tools during construction work on the site.

## **10.2 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.

The nearest Early Iron Age site to the surveyed area is the sites at Lydenburg and Klingbeil to the south-east of the surveyed area. A large number of Late Iron Age sites have previously been identified in an area roughly stretching between Lydenburg, Nelspruit and Badplaas (Bergh 1999: 6-7).

Other sites have also been identified by Archaetnos during surveys in the area (Archaetnos database). Iron Age potshards and features have been located at De Grooteboom by Higgitt et.al. (2015: 22-24). These were towards the south of the current area being investigated.

During the current survey a hammer stone (Figure 14) was picked up on the plains beneath the mountain, but no other indication of Iron Age material was found. It therefore serves as proof that these people did utilize the area.

The general broader environment around the surveyed area is suitable for Iron Age people. The mountains would give shelter and building material and the valleys good grazing and ample water sources. One would therefore expect that Iron Age people may have utilized the area. The white settlers moved into this environment later on for the same reason.



**FIGURE 14: HAMMER STONE FOUND IN THE SURVEYED AREA.**

### **10.3 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.

It is known that one of the early trade routes passed along the Steelpoort River (Bergh 1999: 9). At the beginning of the 19<sup>th</sup> century the area was inhabited by the Koni, Tau, Pedi and Roka who are all of Sotho origin. During the Difaquane, in ca.1822, the Ndebele of Mzilikazi entered this area from the south. In 1825 a Zulu group under Zwide attacked the Ndebele here. As a result these other groups fled to the north. They returned later on (Bergh 1999: 10-11).

None of the early travellers who visited the old Transvaal visited this area. In 1836 the Voortrekker groups of Tregardt and Van Rensburg passed to the west of the

Steelpoort River (Bergh 1999: 13-14). The land around Lydenburg, including the Steelpoort River Valley was traded from the Swazi in 1846 and the first white settlers then started farming here (Bergh 1999: 16, 130-132).

Historical structures, such as farm houses and infrastructure may therefore be found in the area. Such buildings have been identified on neighboring farms during past surveys (Archaetnos database). Signs of the earliest historical mining activities were also identified on adjacent farms (Archaetnos database; Stegmann & Roodt 2012). Many graves from this period are also known from other nearby farms (Archaetnos database).

One Provincial Heritage site is known from the area. Towards the north of De Grooteboom, the Tšate Valley site is situated (Figure 15-16). It commemorates the rise of the Pedi Kingdom.



**FIGURE 15: COMMEMORATIVE STONE FOR BRITISH SOLDIERS WHO DIED IN THE WAR AGAINST THE PEDI STATE.**





**FIGURE 16: STATUE OF CHIEF SEKHUKHUNE.**

## **11. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY**

As indicated, three sites of cultural importance were identified in the surveyed area. All of these date to the Historical Age.

### **9.1 Historical Mine shafts**

All three sites found are historical mine shafts.

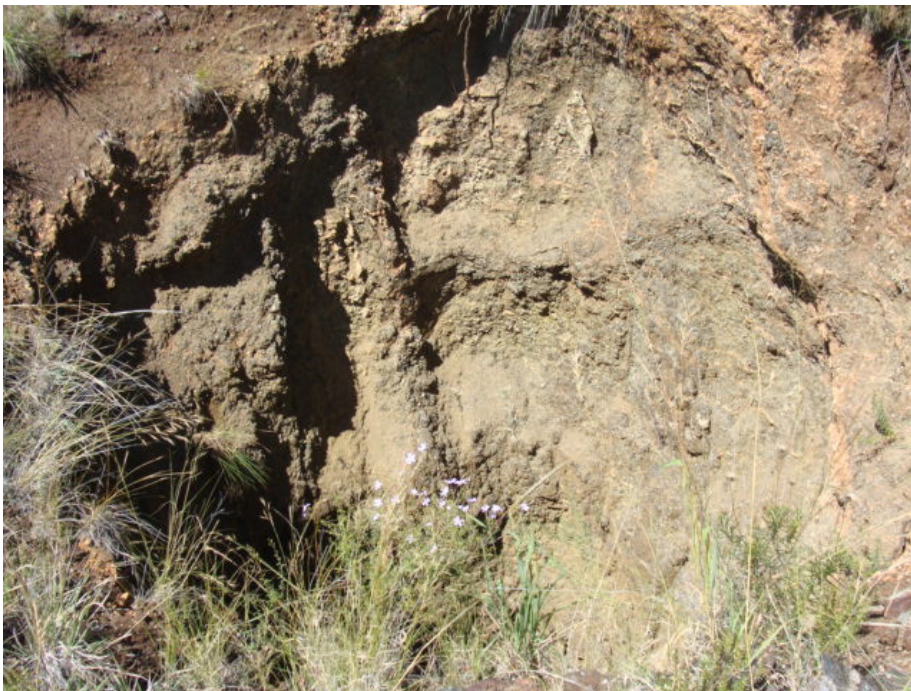
GPS:

Site 1 - 24°54'52.9"S; 30°08'09.3"E (Figure 17)

Site 2 - 24°54'49.8"S; 30°08'04.8"E (Figure 18)  
Site 3 - 24°54'51.7"S; 30°08'07.3"E (Figure 19)



**Figure 17: Site 1.**



**Figure 17: Site 2.**





**Figure 19: Site 3.**

All three sites are similar and consist of shafts covered with corrugated iron. It may be less than 60 years of age, but it is almost impossible to tell.

**Field-rating = Cultural significance x Integrity**

**Cultural significance Table:**

A place is considered to be part of the national estate if it has cultural significance because of -	Applicable or not	Rating: 1=Negligible/ 2=Low/ 3=Low-Medium/ 4= Medium/ 5=Medium- High/ 6=High/ 7=Very High
Its importance in the community or pattern of South Africa's history	Y	1=Negligible
Its possession of uncommon, rare, or endangered aspects of South Africa's natural or cultural history	N	
Its potential to yield information that will	N	

contribute to an understanding of South Africa's natural or cultural heritage		
Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	N	
Its importance in exhibiting particular aesthetic characteristics valued by a community cultural group	N	
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	Y	1=Negligible
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	N	
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	
Sites of significance relating to the history of slavery in South Africa	N	
<b>Reasoned assessment of significance using appropriate indicators outlined above:</b>		<b>1=Negligible</b>

**Integrity scale:**

- 1 – Bad state of preservation, but no contextual information
- 2 – Bad state of preservation and includes contextual information
- 3 – Reasonable state of preservation, but no contextual information
- 4 – Reasonable state of preservation and includes contextual information
- 5 – Good state of preservation, but no contextual information
- 6 - Good state of preservation and includes contextual information
- 7 – Excellent state of preservation, but no contextual information
- 8 – Excellent state of preservation and includes contextual information

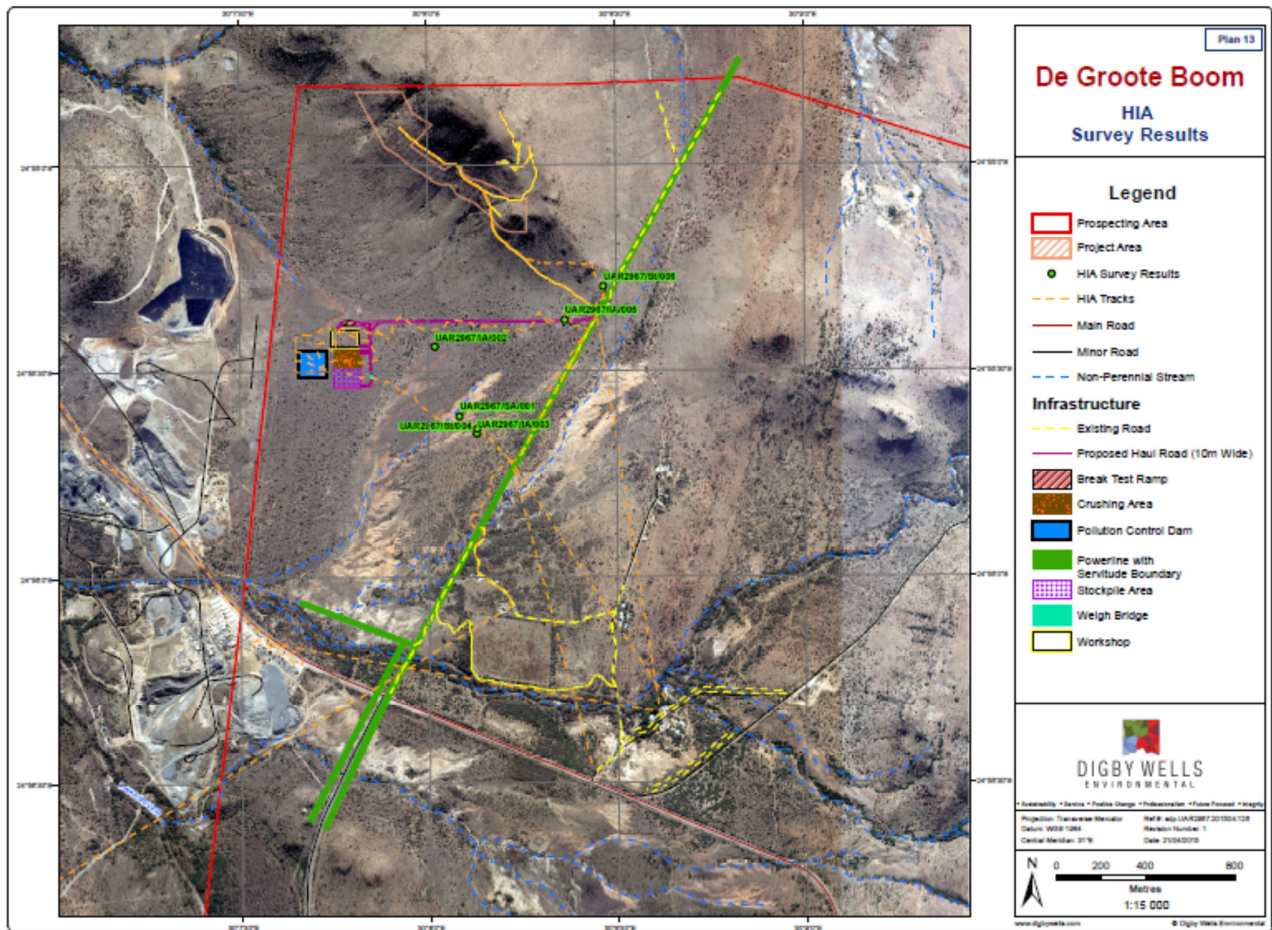


**Field-rating = Cultural significance x Integrity**  
 = 1 (Negligible) x 3  
 = 3

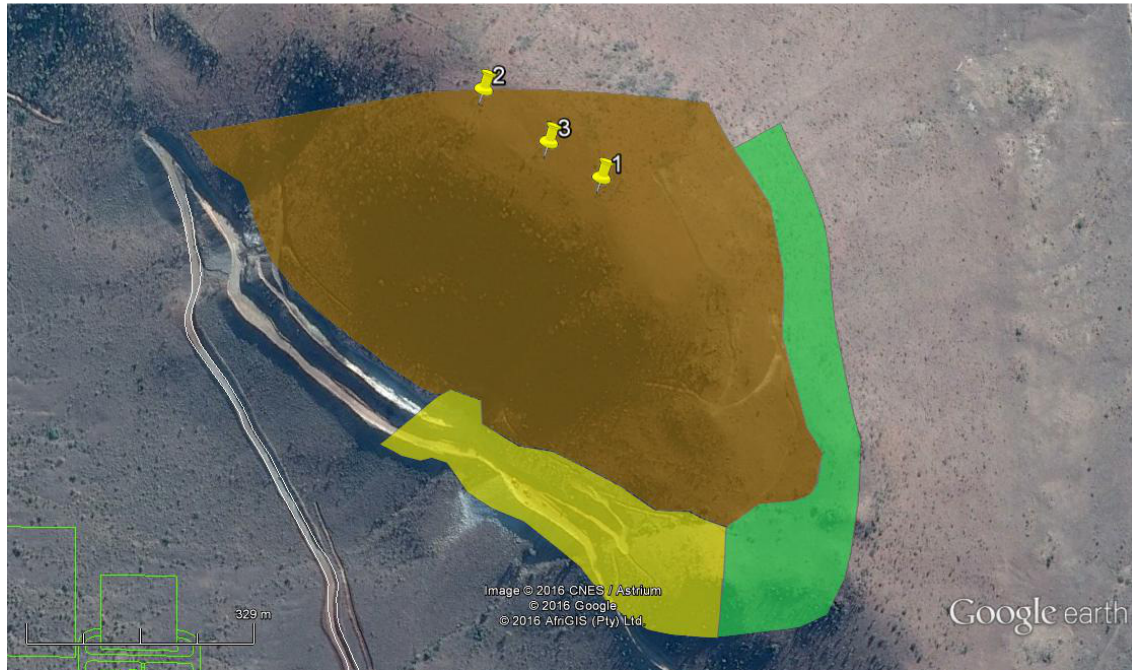
The field rating therefore is Local Grade IIIC. The description in the phase 1 heritage report is seen as sufficient recording (low significance) and it may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation.

**12. CONCLUSION AND RECOMMENDATIONS**

The survey of the indicated area was completed successfully. Six heritage features are known from a previous heritage report (Figure 20), but these are outside of the area of impact. Three new sites were identified in the area of impact (Figure 21).



**Figure 21 : Heritage features identified during the previous survey done by Higgitt et.al. (2015).**



**Figure 22: Location of the three sites identified during the survey.**

The following is recommended:

- From a heritage perspective the description in the phase 1 heritage report is seen as sufficient recording of the three sites. Therefore no further mitigation is needed.
- It may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation.
- The proposed development may therefore continue after comments and instructions have been received from SAHRA.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Due to the density of vegetation it also is possible that some sites may only become known later on. Operating controls and monitoring should therefore be aimed at the possible unearthing of such features. 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.

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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:**

- Negligible – The site has no heritage significance, although it may be older than 60 years.
- Low - A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings. A site with minimal importance which is decreased by its bad state of decay.
- Low-Medium - A site of lesser importance, which is increased by a good state of preservation and contextual importance (e.g. a specific community).
- 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.
- Medium-High - A site that has high importance due to its age or uniqueness, but which decreases due to its bad state of decay.
- High - Any site, structure or feature regarded as important because of its age or uniqueness. Also any important object found within a specific context.
- Very High - A site of exceptional importance due to its age, uniqueness and good state of preservation.

#### **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:**

National Grade I significance: The site should be managed as part of the national estate, should be nominated as Grad I site, should be maintained in situ with a protected buffer zone and a CMP must be recommended. Score above 50.

Provincial Grade II significance: The site should be managed as part of the provincial estate, should be nominated as Grade II site, should be maintained in situ with a protected buffer zone and a CMP must be recommended. Score between 40 and 50.

Local Grade IIIA: The site should be included in the heritage register and not be mitigated (high significance), should be maintained in situ with a protected buffer zone and a CMP must be recommended. Score between 36 and 40.

Local Grade IIIB: The site should be included in the heritage register and may be mitigated (high/ medium significance). Mitigation is subject to a permit application lodged with the relevant heritage authority. Score between 6 and 35.

Local Grade IIIC: The description in the phase 1 heritage report is seen as sufficient recording (low significance) and it may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation. Score below 5.

## **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.