



Archaetnos Culture & Cultural  
Resource Consultants  
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**A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE  
DEVELOPMENT OF A DE-STONING PLANT AT THE NEW DENMARK  
COLLIERY, CLOSE TO STANDERTON, MPUMALANGA PROVINCE**

For:

**SRK CONSULTING  
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**REPORT NO.: AE01346V**

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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. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.**

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## EXECUTIVE SUMMARY

Archaetnos cc was requested by SRK Consulting to conduct a cultural heritage impact assessment for a proposed de-stoning plant at the New Denmark Colliery. This is between Bethal and Standerton 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.

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

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.
2. Doing a baseline and desktop assessment of the historical background of 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.
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.

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.
2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value.
3. Cultural significance is site-specific and relates to the content and context of the site.
4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information.
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.

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).

According to the NHRA 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.

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

- 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.

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.

The evaluation of heritage sites is done by giving a field rating of each 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.

During the survey three sites of cultural heritage significance were located. These are discussed in the report and mitigation measures are proposed. After implementation of these, the proposed development may continue.

The following is recommended:

- For site no 1 (historical farm yard) the recommendation is to leave it in situ since it lies to the south of the river where no direct impact is expected. The structures can then rather deteriorate via natural processes.
- Should this not be possible, it may be demolished as this report is seen as ample mitigation. A destruction permit for this should be obtained from The Mpumalanga PHRA.
- For site no 2 (historical farm yard) the recommendation is similar. If possible it should be left as it is to deteriorate through natural processes.
- Should this not be possible, the buildings may be demolished. Before doing so, the smaller house should however be properly documented as indicated. The destruction of site can also only be done after a destruction permit has been obtained from The Mpumalanga PHRA.
- Site 3 is a grave site. There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.
- The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development. Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved. Unknown graves are handled similarly to heritage graves.

- The graves are outside of the development footprint and therefore no direct impact is foreseen. Therefore option 1 is recommended. The mere fact that mining will be done in close proximity to the site, will have an indirect impact..
- This means that the site should be left in situ. It should then be fenced in and a conservation management plan for the sustainable preservation and management thereof should be drafted and implemented.
- After implementation of the mitigation measures recommended, the proposed development may continue.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. 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.

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.

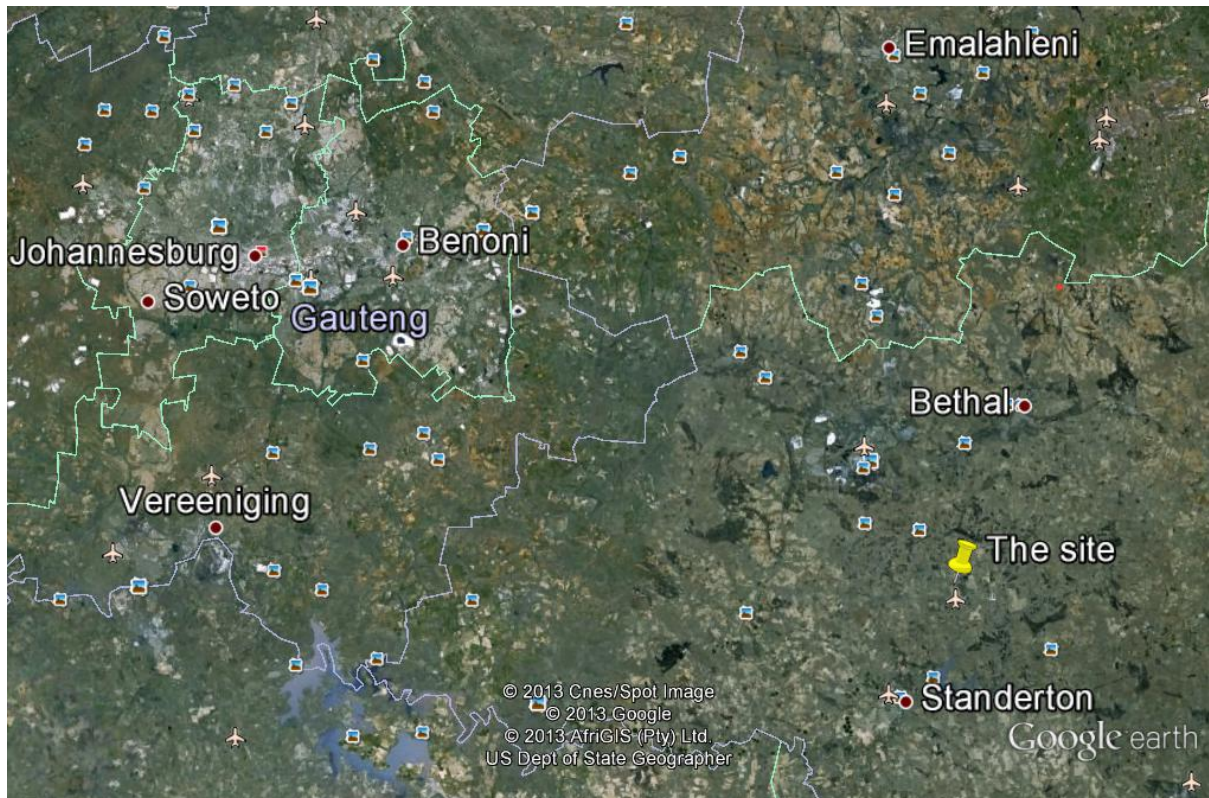
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## 1. INTRODUCTION

Archaetnos cc was requested by SRK Consulting to conduct a cultural heritage impact assessment for a proposed de-stoning plant at the New Denmark Colliery. This is between Bethal and Standerton in the Mpumalanga Province (Figure 1-4).

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 Standerton and Bethal. North reference is to the top.**



**Figure 3 Google image indicating the proposed area for the development. North reference is to the top.**



**Figure 4 Google image indicating the proposed development infrastructure. North reference is to the top.**

## **2. TERMS OF REFERENCE, SCOPE AND PURPOSE**

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. Doing a baseline and desktop assessment of the historical background of 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. DETAILS AND EXPERTISE OF THE PERSON WHO PREPARED THE REPORT

Dr. Anton Carl van Vollenhoven has the following tertiary qualifications:

- 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

He was previously employed in the following capacities applicable to heritage matters:

- *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 Archaetnos 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.

During this time he has published 72 articles in scientific and popular journals on archaeology and history and has been the author and co-author of over 400 unpublished reports on cultural resources surveys and archaeological work. He has also published a book on the Military Fortifications of Pretoria and contributed to a book on Mapungubwe. He has delivered more than 49 papers and lectures at national and international conferences.

He has also served or is currently serving in the following heritage related capacities:

- Member of SAHRA Council for 2003 – 2006.
- Member of the South African Academy for Science and Art.
- Member of Association for South African Professional Archaeologists.
- Member of the South African Society for Cultural History (Chairperson 2006-2008 and 2012-2014).
- Has been editor for the SA Journal of Cultural History 2002-2004.
- Member of the Provincial Heritage Resources Agency, Gauteng's Council.
- Convenor and member of Provincial Heritage Resources Agency, Gauteng's

HIA adjudication committee.

#### **4. DECLARATION OF INDEPENDENCE**

I, Anton C. van Vollenhoven, hereby declare that I am an independent consultant, working as heritage specialist on this project. I am a member of ASAPA and the SASCH which serves as professional bodies for archaeologists and cultural historians respectively. I have the necessary expertise to perform this work and adhere to the standard set by SAHRA.



A.C. van Vollenhoven

1 August 2013

#### **5. 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 where the vegetation cover was reasonably dense which had a negative effect on archaeological visibility.

## **6. 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).

### **6.1 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)**.

## **6.2 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.

## **7. 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.



## 8. METHODOLOGY

### 8.1 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.

### 8.2 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 5). Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. The size of the area that was surveyed is approximately 14 375 m<sup>2</sup> and the survey took eight hours to complete.



**Figure 5 GPS track of the surveyed area. North reference is to the top.**

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

### **8.3 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.

### **8.4 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.

### **8.5 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.

## **9. DESCRIPTION OF THE AREA**

The proposed development of the de-stoning plant is situated on farm land adjacent and to the south of the New Denmark Colliery. A large part of the environment of the surveyed area is disturbed by recent human activities, mainly agriculture. This consists of maize fields (Figure 6). Other disturbance visible is mining infrastructure in the north-eastern corner, a conveyor belt on the eastern boundary, a railway track that runs along the northern border and power lines running across a section in the east. Signs of old field were also present which could be seen in the pioneer plant species consisting of weeds and grass.

Almost half of the surveyed area does consist of natural grassland. The vegetation cover varies between short and long grass with the resulting variation in archaeological visibility between good and fair especially since the grass cover is very dense at present (Figure 7-8).

The topography of the area form part of the rolling hills of the surrounding landscape. There is a gentle slope from north to south towards a river that cuts through the

southern part of the area. The river runs from east to west. The vegetation around the river is typical of a marshland and denser than the rest.



**Figure 6 Maize fields and power lines in the surveyed area.**



**Figure 7 General view of the surveyed area showing a slight slope, long grass and pioneer plant species.**



**Figure 8 View of long grass and the conveyor belt in the surveyed area.**

## **10. HISTORICAL CONTEXT (BASELINE DATA)**

Three sites of cultural heritage significance were located in the surveyed area. In order to place this within context and to understand possible 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.

### **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.

The geographical area around the towns of Standerton and Bethal is not known as an area containing prehistoric sites dating to the Stone Age. For instance no such sites are indicated on maps contained in a historical atlas of this area (Bergh 1999: 4-5). However this may only be since no research has actually been done in this area. The closest known Stone Age occurrences are a Late Stone Age site at the town of Ermelo and rock art sites far to the west of Standerton (Bergh 1999: 4-5).

However, no natural shelters were seen during the survey and therefore it is possible that these people did not stay here for long periods. The good vegetation in the surrounding area and the rivers indicated that ample grazing and water may have been available, making it a prime spot for hunting in the past. Therefore one may assume that Stone Age people probably would have moved through the area.

## **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.

Also no sites from the Early Iron Age have been identified in the area (Bergh 1999: 6). Again it needs to be stated that this may only be a result of the lack of research done in this part of the country.

In contrast to the mentioned periods in time, it is known that Late Iron Age sites are found in a large area around the towns of Bethal and Standerton. It includes at least 585 such sites. At none of these indications of metal working has been found (Bergh 1999: 6-7), meaning that it would mostly consist of stone walled living complexes. It is also known that the early trade routes did not run through this area (Bergh 1999: 9).

However, during the survey no such sites were identified. The good grazing in the broader environment however would have provided a good environment for Iron Age people although building material would have been reasonably scarce. 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.

## **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.

At the beginning of the 19<sup>th</sup> century the Phuthing, a South Sotho group, stayed in the vicinity of modern day Bethal. During the Difaquane they fled to the south (Bergh 1999: 10-11; 109). In 1829 the traveler Robert Scoon passed through an area to the north of Bethal (Bergh 1999: 13). The first white farmers only settled here during the late 1850's. By the 1890's this area was inhabited by many white farmers (Bergh 1999: 18-20). The town of Standerton was established in 1879 although it already was a district in 1878. Bethal was established in 1880 and it became an independent district in 1898 (Bergh 1999: 20-21).

During the Anglo-Transvaal War (1880-1881) the British garrison in Standerton was beleaguered by the Boer forces (Bergh 1999: 46). The Highveld areas also saw much action consisting of various skirmishes between Boer and Brit during the Anglo-Boer War (1899-1902). It includes skirmishes on the farms Oshoek (4 December 1901), Trigaardsfontein (10 December 1901), Witbank (11 January 1902) and Nelspan (26 January 1902) (Bergh 1999: 51, 54). It however is not possible to indicate how close these came to the project area. At Standerton there was both a concentration camp for white and for black people (Bergh 1999: 54).

One may therefore expect to find farm buildings, structures and objects from this time period in the area. Many graveyards from this period in time have also been identified in surrounding areas during past surveys (Archaetnos database).

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

As indicated, three sites of cultural heritage importance were identified. Both date to the Historical Age. Due to the natural factors mentioned above, there always is a possibility that some sites may have been missed. In such a case it should be handled in accordance with the recommendations in this report.

### **11.1 Site 1 – historical farm yard**

The site consists of the ruins of a variety of buildings including a large farm house, at least three outbuildings, a dam and other small structures as well as a number of eucalyptus trees (Figure 9). The buildings were all rectangular in shape and originally built from stone, brick and cement, but it is in a very bad condition. The house and most of the structures was most likely originally built during the 1880's, but it is clear that many changes have been made to it in later years. One of the buildings, most likely a large shed, was built much later, probably during the 1960's.

GPS: 26°45'31.93"S  
29°20'51.71"E



**Figure 9 Remains of the main house at site no. 1.**

The site is regarded as having a **low** cultural significance. The farm yard is very common for the Highveld area and therefore it receives a field rating of General Protection C (IVC). It may be destroyed if needed and this report is seen as ample mitigation. Before destruction a permit would be needed from the Provincial Heritage Resources Agency (PHRA) of Mpumalanga. It however lies to the south of the river and therefore will most likely not be impacted on. It should therefore be left as it is.

## **11.2 Site 2 – historical farm yard**

This is another historical farm yard of more or less the same age as the first one. It also consists of the ruins of a variety of buildings including a large farm house, at least two outbuildings, two stone kraals and other small structures as well as a smaller house still in a reasonably good condition (Figure 10-11). The structures are all rectangular in shape and originally built from stone, brick and cement. Apart from the smaller house everything is in a bad condition. The houses and most of the structures were most likely originally built during the 1880's.

GPS: 26°45'19.45"S  
29°20'06.71"E



**Figure 10 The smaller house at site no. 2.**



**Figure 11 One of the outbuildings, most likely a wagon shed, at site no. 2.**

The site is regarded as having a **medium** cultural significance. The farm yard is very common for the Highveld area and therefore it receives a field rating of General Protection B (IVB) simply as a result of the one house still being in a reasonably good condition. It may be destroyed if needed, but needs to be mitigated first. This



would include the full documentation of the smaller house, which will include a photographic documentation and drawing a simple floor plan. Destruction may be necessary since it lies very close the footprint of the development.

Before destruction a permit would be needed from the Provincial Heritage Resources Agency (PHRA) of Mpumalanga. It however lies on the edge of the proposed development and if possible it should rather be left as it is.

### **11.3 Site 3 – graves**

Site 1 is a grave yard with at least 47 graves (Figure 12-13). These are mostly stone packed and none have headstones. Some of these have metal markers, but the information is illegible. However this may indicate that these graves are fairly recent. Two of the graves have granite headstones and dressing.

Two surnames were identified being Nkosi and Mngun. The date of death on both of these is 1966. This means that two of the three categories of graves are present being those younger than 60 years and those with an unknown date of death (to be handled as those older than 60 years, called heritage graves).



**Figure 12 Some of the stone packed graves at site no. 3.**



**Figure 13 One of the graves with a granite headstone, containing information about the deceased at site no. 3.**

GPS: 26°44'52.96"S  
29°21'0.51"E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a field rating of Grade IIIB. It may therefore be mitigated.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development. Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved. Unknown graves are handled similarly to heritage graves.

The graves are very close to the development footprint and therefore a definite impact is foreseen. Therefore option 2 is recommended. In order to be able to do this 2 the developer would have to motivate that this is the only available option.

However option 1 would also be a viable option. It means that the site should be left in situ. It should then be fenced in and a conservation management plan for the sustainable preservation and management thereof should be drafted and implemented.

## **12. POTENTIAL FATAL FLAWS AND SIGNIFICANT ISSUES OF CONCERN**

The only possible issue may be that the vegetation cover prevented the finding of some heritage sites. However, the report clearly indicate how deal with such matters should other sites be identified later.

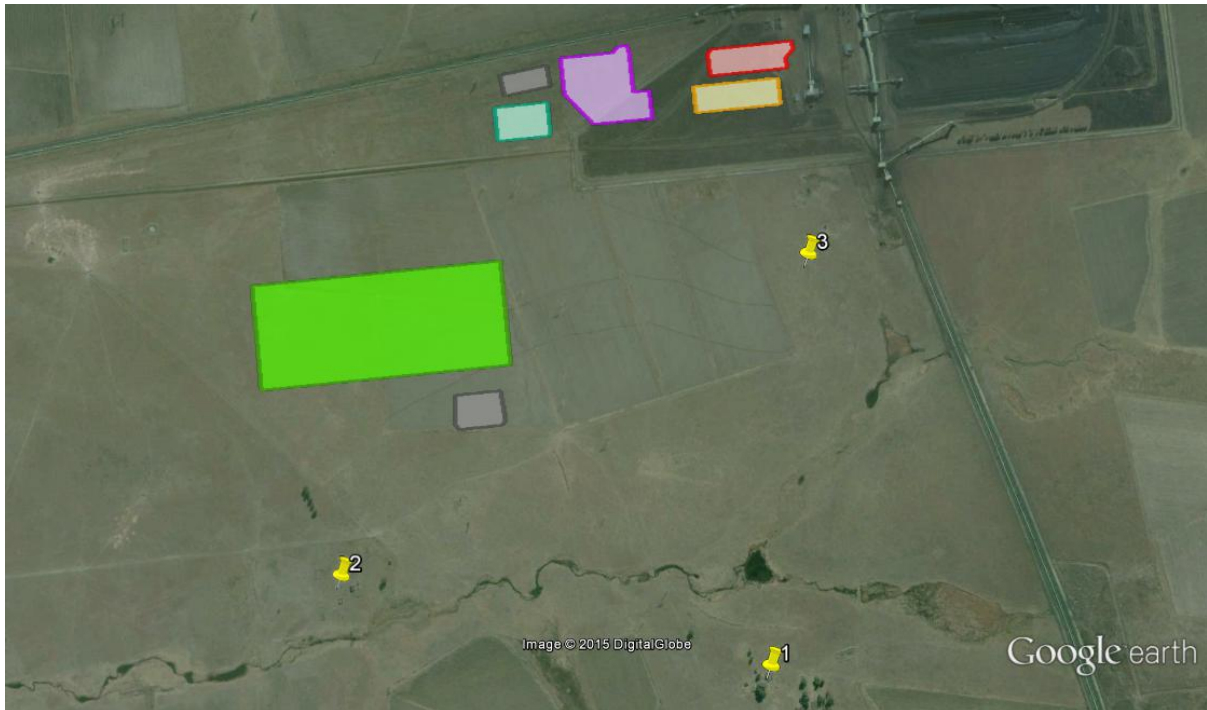
## **13. CONCLUSION, MITIGATION MEASURES AND RECOMMENDATIONS**

As indicated, three sites of cultural importance were identified during the survey (Figure 14). The survey of the indicated area was completed successfully.

The following is recommended:

- For site no 1 (historical farm yard) the recommendation is to leave it in situ since it lies to the south of the river where no direct impact is expected. The structures can then rather deteriorate via natural processes.
- Should this not be possible, it may be demolished as this report is seen as ample mitigation. A destruction permit for this should be obtained from The Mpumalanga PHRA.
- For site no 2 (historical farm yard) the recommendation is similar. If possible it should be left as it is to deteriorate through natural processes.
- Should this not be possible, the buildings may be demolished. The site is very close to the footprint of the development. Before doing so, the smaller house should however be properly documented as indicated. The destruction of site can also only be done after a destruction permit has been obtained from The Mpumalanga PHRA.

- Site 3 is a grave site. There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.
- The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development. Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved. Unknown graves are handled similarly to heritage graves.
- The graves are outside of the development footprint and therefore no direct impact is foreseen. Therefore option 1 is recommended. The mere fact that mining will be done in close proximity to the site, will have an indirect impact..
- This means that the site should be left in situ. It should then be fenced in and a conservation management plan for the sustainable preservation and management thereof should be drafted and implemented.
- After implementation of the mitigation measures recommended, the proposed development may continue.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. 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.



**Figure 14 Location of the three sites identified during the survey. North reference is to the top.**

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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:

National Grade I significance	should be managed as part of the national estate
Provincial Grade II significance	should be managed as part of the provincial estate
Local Grade IIIA	should be included in the heritage register and not be mitigated (high significance)
Local Grade IIIB	should be included in the heritage register and may be mitigated (high/ medium significance)
General protection A (IV A)	site should be mitigated before destruction (high/ medium significance)
General protection B (IV B)	site should be recorded before destruction (medium significance)
General protection C (IV C)	phase 1 is seen as 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.