



Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

**A REPORT ON THE HERITAGE IMPACT ASSESSMENT RELATED TO THE
EXXARO MATLA PROJECT NEAR KRIEL IN THE MPUMALANGA PROVINCE**

For:

GCS
PO Box 2597
Rivonia
2128

On behalf of:

Exxarro

GCS Project No.: 10-430

REPORT: AE01201V

By:

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EXECUTIVE SUMMARY

Archaeos cc was appointed by GCS to conduct a heritage study for the Exxaro Matla Project. This is for a coal mining operation on various farms, close to Kriel in the Mpumalanga Province. The project will be a coal mining operation, including opencast and underground mining as well as associated infrastructure. The mining right area covers approximately 22 000 ha.

The Scope and purpose for the survey were to do an archaeological and heritage survey and assessment according to generally accepted HIA practices endorsed by SAHRA and ASAPA. In the process the aim was to identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property and to assess the significance of these cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value. These were to be documented, and the possible impact of the proposed development on these was to be described. In addition suitable mitigation measures to minimize possible negative impacts on the cultural resources were to be proposed.

Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity and include all sites, structures and artifacts of importance. Graves and cemeteries are included in this.

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 particular case there were certain areas with dense vegetation which made archaeological visibility difficult. In some instances gates were closed making it impossible to view certain areas.

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 National Heritage Resources 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.

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.

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

The evaluation of heritage sites is done by 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.

Before doing the physical survey, a survey of literature was undertaken in order to obtain background information regarding the area. This was followed by the field survey. People from local communities are also interviewed in order to obtain information relating to the surveyed area.

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.

The surveyed area is mostly disturbed due to previous human activities on the site. This includes mainly agricultural activities such as ploughing and the planting of maize and other crops, as well as grazing. Certain areas are covered by grass, which were of different lengths. Some plantation areas (blue gum, poplar, wattle etc.) are also found, in certain cases reasonably inaccessible.

The Matla Power Station dominates the landscape and current mining operations and infrastructure are also to be found nearby. The topography of the area consists of rolling hills with a gentle slope. Declinations are found close to rivers. The main water source is the Riet Spruit which runs from the south-west to the north-east. A number of pans are also found.

The fieldwork undertaken revealed thirtysitesof cultural heritage significance. Twenty-six of these are given a rating of high cultural significance, two medium and two low. The recommended mitigation and management measures for these are summarized as follows:

1. For site numbers 1 and 2 (house ruins), this report is seen as ample mitigation and the sites identified may be demolished without a destruction permit.
2. Site number 9 falls outside of the project area and should only be taken note of.

3. Sites number 15 and 16 may be re-used for offices or another appropriate purpose. For any changes to be made to these structures a permit needs to be issued by the Provincial Heritage Resources Agency (PHRA) of Mpumalanga. As these buildings falls within the underground mining area, it may be damaged during mining activities. Therefore the recommendation is that both should also be documented during a phase II investigation in order to preserve basic information. Should any damage then occur, the mine may apply for a demolition permit from the Mpumalanga PHRA.
4. No visible evidence of site number 30 (Battle of Bakenlaagte) was found and therefore the site cannot be preserved. It however remains an important part of the history of South Africa and should be commemorated, perhaps by placing a plaque next to the road, as close as possible to the site. It is also recommended that, should any artifact related to the battle be unearthed or found during activities on site, an archaeologist should immediately be contacted to investigate the find.
5. The fencing and management plan option for graves is recommended for sites number 4, 5, 6, 13, 19, 26, 27, 28 and 29. This would be possible should there be no direct impact on the graves. The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA).
6. However, the mine may decide upon studying the risk assessment table that it would be better for their operations to have these sites exhumed and relocated. This may be allowed upon SAHRA approval.
7. The option to exhume graves and have the bodies reburied is usually only allowed if there is a direct impact on the site. This option is recommended for sites number 3, 7, 8, 10, 11, 12, 14, 17, 18, 20, 21, 22, 23, 24 and 25.
8. Due to constraints indicated in this report it is possible that all heritage sites may not have been identified. Such sites found later on should be handled in accordance with this report which inter alia includes summoning an archaeologist to site to assess these. It should also be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. This includes graves. 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.
9. It is difficult to do a sensitivity assessment of the area as heritage sites usually only covers a small amount of land. One should be on the lookout for clumps of trees or grass within ploughed fields which may indicate graves or ruins. In this area it seems as if graves were particularly found in plantations, close to houses or ruins and in wetland areas and therefore these areas will also have a high sensitivity rating. The problem is that a few graves were found inside of ploughed fields without any vegetation around it – this basically means that one can found graves anywhere. The bottom line is that the nature of heritage sites is such that predicting its locations is almost impossible.
10. Once the recommended mitigation measures have been implemented, the mining activities may continue.

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1. INTRODUCTION AND BACKGROUND

Archaetnos cc was appointed by GCS to conduct a heritage study for the Exxarro Matla Project. The project will be a coal mining operation, including opencast and underground mining as well as associated infrastructure.

The mining right area covers approximately 22 000 ha. These are situated on the following farms: Bakenlaagte 84 is, Haasfontein 85 IS, Kruisementfontein 95 IS, Moedverloren 88 IS, Nooitgedacht 94 IS, Onverwacht 97 IS, Schaapkraal 93 IS, Weltevreden 307 IR, Matla Power Station 141 IS, Vierfontein 61 IS, Grootpan 86 IS, Kortlaagte 67 IS, Uitvlugt 225 IS, Nasmanus 132 IS, Onverwacht 66 IS, Rietvlei 62 IS, Strehla 261 IR, Vaalpan 68 IS and Vlakpan 89 IS. This is close to the town of Kriel in the Mpumalanga Province.

The client indicated the area where the proposed development is to take place, and the survey was confined to this area.

2. TERMS OF REFERENCE, SCOPE AND PURPOSE

The Scope and purpose and terms of reference for the survey were to:

1. Do an archaeological and heritage survey and assessment according to generally accepted HIA practices endorsed by SAHRA and ASAPA.
2. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A).
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. Documenting possible heritage sites by GPS co-ordinates and photographs.
5. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
6. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources.
7. Review applicable legislative requirements.

Social consultation relating to the heritage report is to be handled by the client.

3. CONDITIONS, ASSUMPTIONS AND KNOWLEDGE GAPS IDENTIFIED

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 B).
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 there were certain areas with dense vegetation which made archaeological visibility difficult. In some instances gates were closed making it impossible to view certain areas.

4. DETAILS AND EXPERTISE OF THE PERSON WHO PREPARED THE REPORT

Dr. 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

Relevant positions held

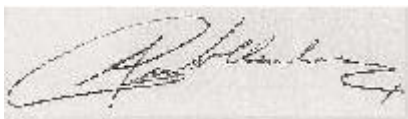
- *1988-1991*: Fort Klapperkop Military Museum - Researcher
- *1991-1999*: National Cultural History Museum. Work as Archaeologist, as well as Curator/Manager of Pioneer Museum (1994-1997)
- *1999-2002*: City Council of Pretoria. Work as Curator: Fort Klapperkop Heritage Site and Acting Deputy Manager 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.

Experience and professional affiliations

- Has published 71 articles in scientific and popular journals on archaeology and history.
- Has been the author and co-author of over 360 unpublished reports on cultural resources surveys and archaeological work.
- Has published a book on the Military Fortifications of Pretoria.
- Has delivered more than 40 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.
- Member of Association for South African Professional Archaeologists.
- Member of the South African Society for Cultural History (Chairperson 2006-2008).
- Has been editor for the SA Journal of Cultural History 2002-2004.
- Member of the Gauteng PHRA's HIA adjudication committee.

5. 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

Date: 13 January 2012

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 palaeontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

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

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

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

Archaeology, palaeontology and meteorites

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

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

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

Human remains

Graves and burial grounds are divided into the following:

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

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

- a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

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

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place.

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

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

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. METHODOLOGY

7.1 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.

7.2 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. 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 done on foot and by off road vehicle.

7.3 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.

7.4 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.

7.5 Evaluation of Heritage sites

The evaluation of heritage sites is done by 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.

8. LOCATION AND DESCRIPTION OF THE AREA

The Exxarro Matla Project forms part of the development of Matla Coal. The mine and power plant is situated to the south of the town of Emahlaleni (Witbank), to the south-west of Kriel and to the north-west of Bethal in the Mpumalanga Province (Figure 1-2).The project area includes many farms, which were indicated earlier (Figure 3).

The area is mostly disturbed due to previous human activities on the site. This includes mainly agricultural activities such as ploughing and the planting of maize and other crops, as well as grazing. Certain areas are covered by grass, which were of different lengths (Figure 4). Some plantation areas (blue gum, poplar, wattle etc.) are also found, in certain cases reasonably inaccessible.

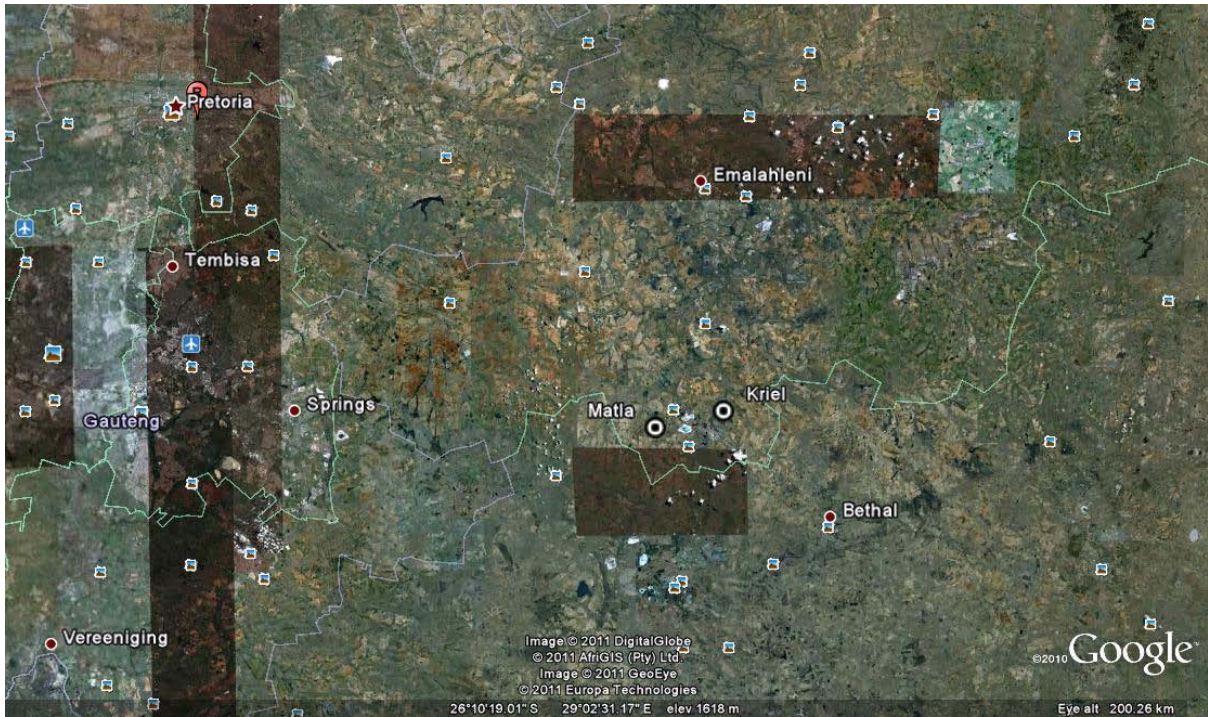


Figure 1 Google image indicating the location of Matla.

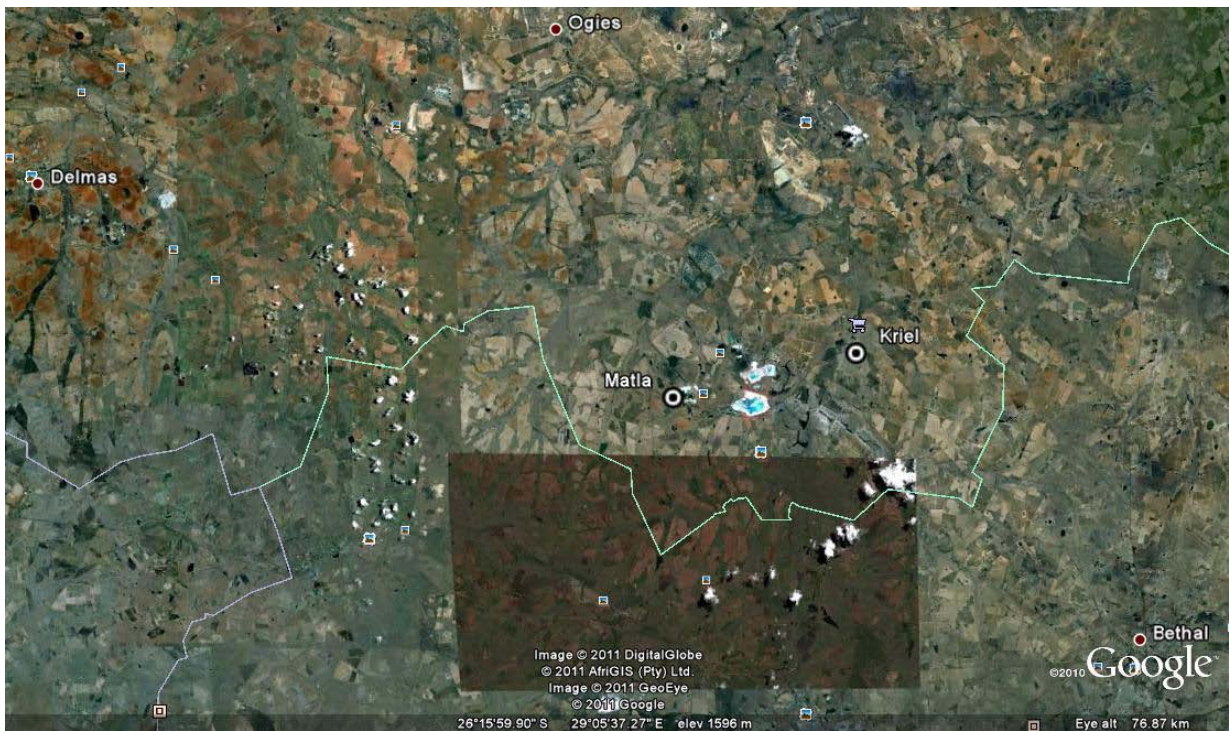


Figure 2 Closer view of the location of Matla.

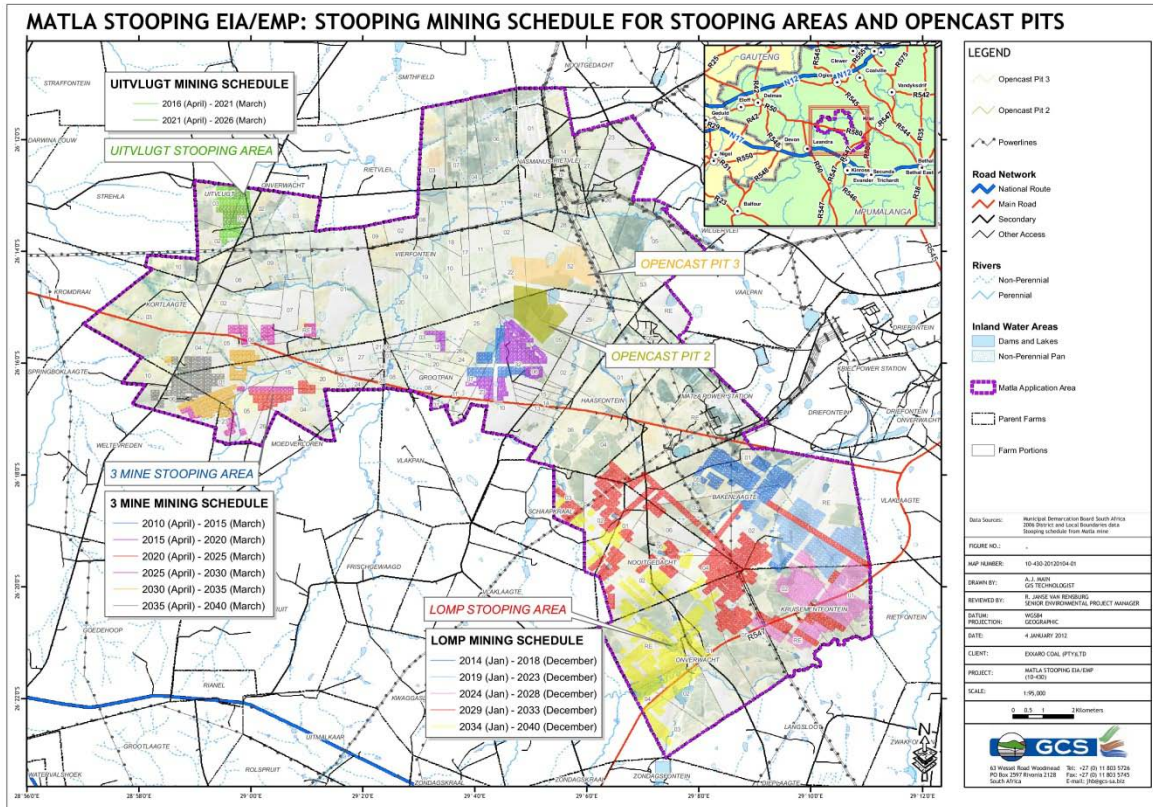


Figure 3 Map indicating the surveyed area.

The Matla Power Station dominates the landscape (Figure 5-6). Current mining operations and infrastructure are also to be found nearby. Other man-made features include many buildings, ruins and structures of farming origin (Figure 7).

The topography of the area consists of rolling hills with a gentle slope. Declinations are found close to rivers. The main water source is the Riet Spruit which runs from the south-west to the north-east. It has a few tributaries which also drains the area. A number of pans are also found (Figure 8).



Figure 4 General view of one of the areas with impenetrable natural vegetation.



Figure 5 The Matla Power Station with natural grassland in the forefront.



Figure 6 Maize field in the vicinity of the Matla Power Station.



Figure 7 Old farm building in the surveyed area. Many similar examples exist and therefore it is not seen of high heritage value and subsequently not discussed in detail.



Figure 8 One of the pans in the surveyed area, showing a maize field in the foreground and natural vegetation in the background.

9. DISCUSSION (FINDINGS OF STUDY)

During the survey thirty sites of cultural heritage significance were located in the area to be developed. It nevertheless is important to consider that sites may also become known later during construction and mining work and that those need to be dealt with in accordance with the legislation discussed above.

In order to enable the reader to better understand the cultural heritage sites as well as possible archaeological and cultural features that may be unearthed during construction activities, it is necessary to give a background regarding the different phases of human history. This gives a background context to the history of the area.

This geographical area is not well-known as one containing many prehistoric sites. One however has to realize that this most likely only indicates that not much research has been done here before. On the existing SAHRA Database no such sites are indicated here.

9.1 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 for instance indicated on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrences are Late Stone Age sites at Carolina and Badplaas, and rock painting sites close to Machadodorp, Badplaas and Carolina. Rock art is also found close to the Olifants River to the south of Witbank (Bergh 1999: 4-5).

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

9.2 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.

No Iron Age sites have been identified around the town of Witbank, but again this may only indicate a lack of research. The closest known Iron Age occurrences to the surveyed area are Late Iron Age sites that have been identified to the west of Bronkhorstspuit and in the vicinity of Bethal. In an area around Belfast, including Lydenburg, Nelspruit, Machadodorp and Badplaas a number of 1 792 Iron Age sites have been identified (Bergh 1999: 7). These all are dated to the Late Iron Age. Sites such as these are known for extensive stone building forming settlement complexes. No indication of metal smelting was identified at any of these sites (Bergh 1999: 7-8).

It is also known that the early trade routes did not run through this area (Bergh 1999: 9). However one should bear in mind that many of these areas may not have been surveyed before and therefore the possibility of finding new sites is always a reality.

The type of environment around Matla definitely is suitable for human habitation. There is ample water sources and good grazing. It therefore comes as no surprise that Iron Age people utilized the area. This is the same reason why white settlers later on moved into this environment.

9.3 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. It is also known that one of the early trade routes passed along the Steelpoort River (Bergh 1999: 9).

At the beginning of the 19th century the Phuthing, a South Sotho group, stayed to the east of the Matla area. The Koni of Makopole stayed to the north-east and the Ndzundza Ndebele to the west. During the Difaquane they fled to the south, south-west and north-west as Mzilikazi's impi moved in from the southeast. During this time the Swazi also moved into this area (Bergh 1999: 10-11; 109). They however did not settle here.

The first white people in this area were the party of the traveler Robert Scoon in 1836 (Bergh 1999: 13). White farmers only settled here after 1850 (Bergh 1999: 16).

During the Anglo-Boer War (1899-1902) four known skirmishes took place in the broader geographical area of Matla (Bergh 1999: 54). These were the Battles of Bakenlaagte (30 October 1901) – which were the only influential battle in this area, Trigaardsfontein (10 December 1901), Klippan (18 February 1902) and Boschmanskop (1 April 1904).

At Bakenlaagte, which is within the mining area, the forces of the Zuid-Afrikaansche Republiek (ZAR or Transvaal) under command of Commandant-General Louis Botha defeated the British forces commanded by Lieutenant-General G.E. Benson. The British commander lost his life during the battle (Bergh 1999: 251).

Many grave sites, dating from the last 100 years, have however been found on neighbouring farms (Archaeos database). One can therefore expect to find such graves here.

9.4 Sites identified during the survey

Site 1

This is a ruin of an old farm building which may be part of an old farm yard (Figure 9). The building is not very unique although it may be older than 60 years. It therefore is regarded as having **low** cultural significance.

GPS: 26°16.769'S
29°05.278'E

The site may be demolished during mining activities on site. This report is seen as ample mitigation in this regard.



Figure 9 **Farm building at site no 1.**

Site 2

This is the remains (ruins) of an old farm yard (Figure 10-11). The buildings and old farm dams are not very unique although it may be older than 60 years. It therefore is regarded as having **low** cultural significance.

GPS: 26°16.675'S
29°04.265'E

The site may be demolished during mining activities on site. This report is seen as ample mitigation in this regard.



Figure 10 Farm building at site no 2.



Figure 11 other structures at site no. 2.

Site 3

This is a grave yard consisting of at least 30 graves (Figure 12). Various types of graves are evident – stone dressing with and without headstones, as well as cement borders with cement headstones and brick borders. The site has been damaged and needs maintenance.

The oldest date identified is 1942, but the graves mostly are not marked and the dates of death are therefore unknown. One surname was identified namely Mahlangu.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°16.004'S
29°03.012'E



Figure 12 Graves at site no. 3.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for

descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Even though the graves are in an area earmarked for underground mining, the area may cave in which will damage the graves. It therefore seems as if this should be the way to go.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 4

This is a grave yard consisting of at least 9 graves. The oldest date identified is 1919 and the youngest 1955 (Figure 13-14). Various types of graves are evident – cement dressing with cement headstones, granite slabs, heaps of soil, brick borders and some with metal barriers etc. Some of the surnames identified include Mabena, Hlowu and Mloka.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°12.211'S
28°35.469'E



Figure 13 One of the graves at site no. 4.



Figure 14 More graves at site no. 4

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

In this case the graves seem to be outside of the area to be mined. The fencing in and management of the site therefore would be the way to go.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Should the mine decide it best to go this route, it has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 5

This is a grave yard consisting of at least 9 graves (Figure 15). There is most likely to be more as the grass cover is quite dense. A few of the graves needs repair.

Some have slate and others granite headstones, whereas the grave dressing consist of either cement or stone. The oldest date identified is 1940. The surnames identified are Postma and Strydom.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°14.671'S
29°01.656'E



Figure 15 Graves at site no. 5.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed. The graves seem to be outside of the area to be directly impacted on and therefore this option is recommended.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Should the mine decide to go this route, it has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 6

This is a grave yard consisting of at least 28 graves (Figure 16). Various types of graves are evident – stone dressing and headstones, cement borders with cement headstones and granite borders with headstones.

The oldest date identified is 1965, but some graves are not marked and the dates of death are therefore unknown. Some of the surnames identified include Kabini, Tsoba and Mahlangu.



Figure 16 One of the graves at site no. 6.

GPS: 26°15.131'S
29°02.314'E

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed. As this site also falls outside of the area to be directly impacted on, this option is recommended.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Should the mine wish to follow this option, it has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 7

This is a grave yard consisting of 2 graves, but the one is a double grave (Figure 17). Both graves have granite headstones and borders. The oldest date identified is 1927. Only one surname was identified, being Meyer.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°15.450'S
29°02.398'E



Figure 17 Graves at site no. 7.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site, which seem to be the case here. This option is therefore recommended. Although this is an underground mining area, the graves may collapse and therefore this option is preferred.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 8

This is a grave yard consisting of at least 40 graves (Figure 18). Various types of graves are evident – stone headstones with or without grave dressing, heaps of soil, cement and brick borders with cement headstones, granite borders and headstones etc.

The oldest date identified is 1972 and the youngest 1996. It seems as if the site might still be in use. Some of the graves are not marked and the dates of death are therefore unknown. Some of the surnames identified is Mokoena, Mkwena and Mahlangu.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°15.990'S
29°00.753'E



Figure 18 Graves at site no. 8.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. The graves are within the underground mining area. As it may collapse during mining activities, this option is recommended.

This usually is only allowed if there is a direct impact on the site. Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 9

This is a grave yard consisting of at least 18 graves (Figure 19). The graves all have either cement or granite borders as well as headstones.

The graves mostly seem to be older than 60 years. One surname was identified, being Jansen.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.044'S
28°58.007'E



Figure 19 Graves at site no. 9.

Usually there are two options when dealing with graves. Although these are indicated below it needs to be stated that these graves are just outside of the mining area. Therefore no action is necessary.

The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 10

This is a grave yard consisting of at least 9 graves (Figure 20). The graves all have cement borders and headstones, but some re without headstones.

The oldest date identified is 1922 and the youngest 1985. One surname was identified, being Mahlangu.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter.Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°16.572'S
28°59.740'E



Figure 20 Some of the graves at site no. 10.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. Usually this option is only allowed if there is a direct impact on the site. This option is recommended. Although this area would be an underground mining area, it may collapse resulting in damage to the graves.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 11

This is a grave yard consisting of at least 27 graves (Figure 21). Four types of grave features are visible – stone dressing and headstones, heaps of soil, cement dressing or borders and headstones and granite dressings or borders and headstones.

The oldest date identified is 1951 and the youngest 1990. Some have no dates indicated. The only surname identified is Nkosi.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°15.940'S
29°00.302'E



Figure 21 Graves at site no. 11.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Although the graves are in an area where underground mining is planned, it may collapse as a result of these activities. Therefore this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 12

This is a graveyard with at least 12 graves (Figure 22). One of the graves has a steel fence around it. Some have granite headstones, stone headstones or cement headstones and most have cement or stone borders.

The oldest date identified is 1958, but some are without dates. Two surnames that were identified are Mthombe and Kumalo.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°16.727'S
28°58.778'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.



Figure 22 Graves at site no. 12.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Since the graves may collapse during underground mining activities, this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 13

This is a grave yard consisting of at least 3 graves (Figure 23). Two of the graves have cement borders with granite headstones. The third only has a cement slab on top of it.

The oldest date identified is 1937 and the youngest 1943. There were two surnames identified, being Skeen and Pretorius. The third grave had no information.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°16.888'S
29°01.401'E



Figure 23 the graves at site no. 13.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for

management plans and these will have to be followed. This option is proposed as the graves falls outside of the area to be impacted on, but within the mine rights area.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Should the mine wish to go for this option, the process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 14

This is a grave yard consisting of at least 15 graves between (Figure 24). Various types of graves are evident – brick borders, cement dressing with cement headstones etc.

Only one grave has legible information on its headstone. The date of death on this grave is 1991 and the surname is Mputi.



Figure 24 Graves at site no. 14.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°18.717'S
29°08.931'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Although the mining will be underground, this may cause the graves to collapse and therefore this option is recommended. Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 15

Site no. 15 is the farm house on the farm Bakenlaagte, belonging to Mr. JH Jacobs (Figure 25). The house seems to have been built shortly after the Anglo-Boer War and therefore is older than 100 years. The style is Edwardian.

The building is given a rating of **medium** cultural significance due to it not being very unique and due to it having been changed over the years. It nevertheless is a typical example of farm houses from this era.

GPS: 26°19.137'S
29°09.482'E



Figure 25 **The farm house on the farm Bakenlaagte.**

The first option would be to re-use the house for instance for offices or something similar. However, any change thereto should be communicated to the Provincial Heritage Resources Agency (PHRA) of Mpumalanga, who will issue the necessary permits in this regard.

The house falls within the underground mining area which may result in it being damaged, for instance if the soil would cave in. Therefore the recommendation is that the house be documented in full so that the information is preserved. Should any damage then occur, the mine may apply for a demolition permit from the Mpumalanga PHRA.

Site 16

Site no. 16 is an outbuilding on the farm yard of Bakenlaagte, belonging to Mr. JH Jacobs (Figure 26). It used to be a wagon house and is very likely older than 100 years. Some other outbuildings, which might be slightly younger is also found here.

The building is given a rating of **medium** cultural significance. It is a very good example from this era and still is in a good condition.

GPS: 26°19.062'S
29°09.580'E



Figure 26 Outbuilding (wagon house) named site no. 16.

The first option would be to re-use the building. However, any change thereto should be communicated to the Provincial Heritage Resources Agency (PHRA) of Mpumalanga, who will issue the necessary permits in this regard.

As the building falls within the underground mining area, it may be damaged during mining activities. For instance, the soil may cave in. Therefore the recommendation is that the house be documented in full so that the information is preserved. Should any damage then occur, the mine may apply for a demolition permit from the Mpumalanga PHRA.

Site 17

This is a grave yard consisting of at least 2 graves (Figure 27). Both are covered with cement slabs. No dates or biographical information are indicated.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.915'S
29°09.305'E



Figure 27 Graves at site no. 17.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. In this case the area will be used for underground mining which may eventually lead to the caving in of the graves. Therefore this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 18

This is a graveyard consisting of at least three graves. However the vegetation cover is very dense and there may be more. A proper photograph could also not be taken due to this vegetation. Both graves have cement headstones and borders.

The date of death on one of the graves is 1891 and on another one 1933. The surnames identified are Oosthuysen and Du Toit.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.813'S
29°08.818'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. This option is recommended as the graves may cave in as a result of it being located on the underground mining area.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 19

This is a graveyard containing at least 13 graves (Figure 28). Some graves have brick dressings, other cement borders and headstones and others granite borders and headstones.

The oldest date identified is 1924 and the youngest 1979. One of the surnames identified is Sibiya.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.634'S
29°09.064'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.



Figure 28 The graves at site no. 19.

The site is right on the edge of the underground mining activities. It is therefore recommended that the fencing option is taken.

However, should there be fears that the site may be damaged by mining activities (since it is very close thereto), the second option may be taken. This option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

In this particular case one will also have to do some test excavations in order to determine whether there is more graves. This however is standard procedure.

Site 20

This is a grave yard consisting of at least 188 graves (Figure 29). Various types of graves are evident – stone packed, granite headstones and borders, cement borders with cement headstones, brick borders and some with metal fences.

The oldest date identified is 1906 and the youngest 1981. Most of the graves however are not marked and the dates of death are therefore unknown. Some of the surnames identified include Mutau, Sebanda, Mahlangu, Tholo, Masuku and Kabini.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°18.611'S
29°06.607'E



Figure 29 Very large graveyard named site no. 20.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other

measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. As this is the case here, this option is recommended. The graveyard falls within the underground mining area and may therefore be damaged should the area cave in.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 21

This is a grave yard consisting of 9 graves (Figure 30). The graves have either cement borders and headstones or granite headstones and borders. Some also have metal fencing around it.

The oldest date identified is 1943 and the youngest 2002. Two surnames were identified, being Van den Berg and Van den Heever.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°19.106'S
29°07.213'E



Figure 30 The graves at site no. 21.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. The site lies within the underground mining area. The mining activities may cause the site to cave in and therefore this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 22

This is a grave yard consisting of at least 7 graves (Figure 31). Some of the graves are stone packed, with or without headstones. Others have cement borders and headstones.

Only one date was identified, being 1938. No biographical information was legible on any of the graves.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°21.050'S
29°09.659'E



Figure 31 One of the graves at site no. 22.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. This option is recommended as the site may cave in during mining activities. It is situated in the underground mining area.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 23

This is a grave yard consisting of at least 41 graves. Due to the dense vegetation no photograph was taken. The graves have different grave dressings – stone packed, cement or granite headstones and borders and some only have a stone headstone.

The site seem quite recent – the oldest date identified being 1979 and the youngest 1997. However some of the graves does not indicate a date of death. Only one surname was identified being Mgcina.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°20.449'S
29°10.323'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. In this case there most likely will be such an impact as the site is within the underground mining area, which may cave in during mining activities. Therefore this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 24

This is a grave yard consisting of at least 9 graves (Figure 32). The graves have different dressings being granite dressings or borders and headstones, stones with masonry and brick borders with tile dressings.

The oldest date identified is 1915 and the youngest 1952. Three surnames were identified namely Oosterhuis, Van den Berg and Geldenhuys.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°20.274'S
29°10.157'E



Figure 32 Graves at site no. 24.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. As the graves are inside of the underground mining area, direct impact is expected as the soil may cave in. Therefore this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 25

This is a grave yard consisting of at least 8 graves (Figure 33). The graves either have cement borders and headstones or brick borders.

The oldest date identified is 1981 and the youngest 1987, but some do not have legible information and are therefore unknown. Only one surname was identified namely Mtsweni.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°18.998'S
29°06.216'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as

cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.



Figure 33 Graves at site no. 25.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. As the graves are inside of the underground mining area, direct impact is expected as the soil may cave in. Therefore this option is recommended.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 26

This is a grave yard consisting of at least 9 graves (Figure 34). The graves have different dressings being stone dressings or cement headstones and borders. Only one date was identified, being 1990. The only surname identified is Masango.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.529'S
29°06.737'E



Figure 34 Graves at site no. 26.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other

measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

This site seems to be outside of the area to be effected by the mining, but it is close-by and within the mine boundary. Therefore option one is recommended.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. However the mine may decide that it would be better to rather have the graves exhumed as it may be less problematic.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 27

This is a grave yard consisting of 4 graves (Figure 35). The graves all have granite borders and headstones.

The oldest date identified is 1934 and the youngest 1948. Surnames that were identified are Opperman, Slabber, Potgieter and Van der Spuy.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.446'S
29°06.779'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

These graves fall within the mine boundary, but outside of the area to be directly impacted by mining activities. Therefore this option is recommended.



Figure 35 Graves at site no. 27.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. However the mine may want to go for this option as the site is quite close to the mining activities.

If so, the process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 28

This is a grave yard consisting of at least 15 graves. No photograph was taken due to the density of the vegetation. Two types of grave dressing were identified being cement borders and headstones and stone headstones without any dressing.

The oldest date identified is 1944 and the youngest 1959. One surname was identified namely Madela.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°17.427'S
29°06.800'E

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

This option is recommended as it seems as if there will be no direct impact on the graves. Although it falls within the mine boundary it falls outside of the area to be mined.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. The mine may however go for this option as the site is reasonably close to mining activities.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 29

This is a grave yard consisting of at least 46 graves (Figure 36). The graves have different dressings being cement borders and headstones, brick borders and ones with stone headstones without dressing.

The oldest date identified is 1908 and the youngest 1975. Surnames identified are Phokojoe and Malaza.

Graves are always given a rating of **high** cultural significance due to it being a sensitive matter. Graves with an unknown date are always handled as if older than 60 years. Graves older than 60 years are regarded as heritage graves.

GPS: 26°16.501'S
29°07.048'E



Figure 36 Graves at site no. 29.

Usually there are two options when dealing with graves. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.

The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.

The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.

This option is recommended as the graves falls outside of the area to be directly impacted on by the mining activities. It does however fall within the mine boundary.

The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Due to these graves being reasonably close to mining activities, the mine may go for this option.

Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain permission from descendants or at least proof that a concerted effort has been made to do such consultation.

Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process.

Site 30

This is the main area where the Battle of Bakenlaagte was fought (Personal communication: B. Roux). One however needs to realize that a battle is fought over a large area and that almost the entire mining area may have been part of this particular battle. No photograph was taken as no feature or structure from the battle remains. A map of the battle is however included (Figure 37).

As the Anglo-Boer War was an important event in the history of South Africa, the site is given a rating of **high** cultural significance. However the lack of features has to be taken into consideration.

GPS: 26°19.800'S
29°07.365'E

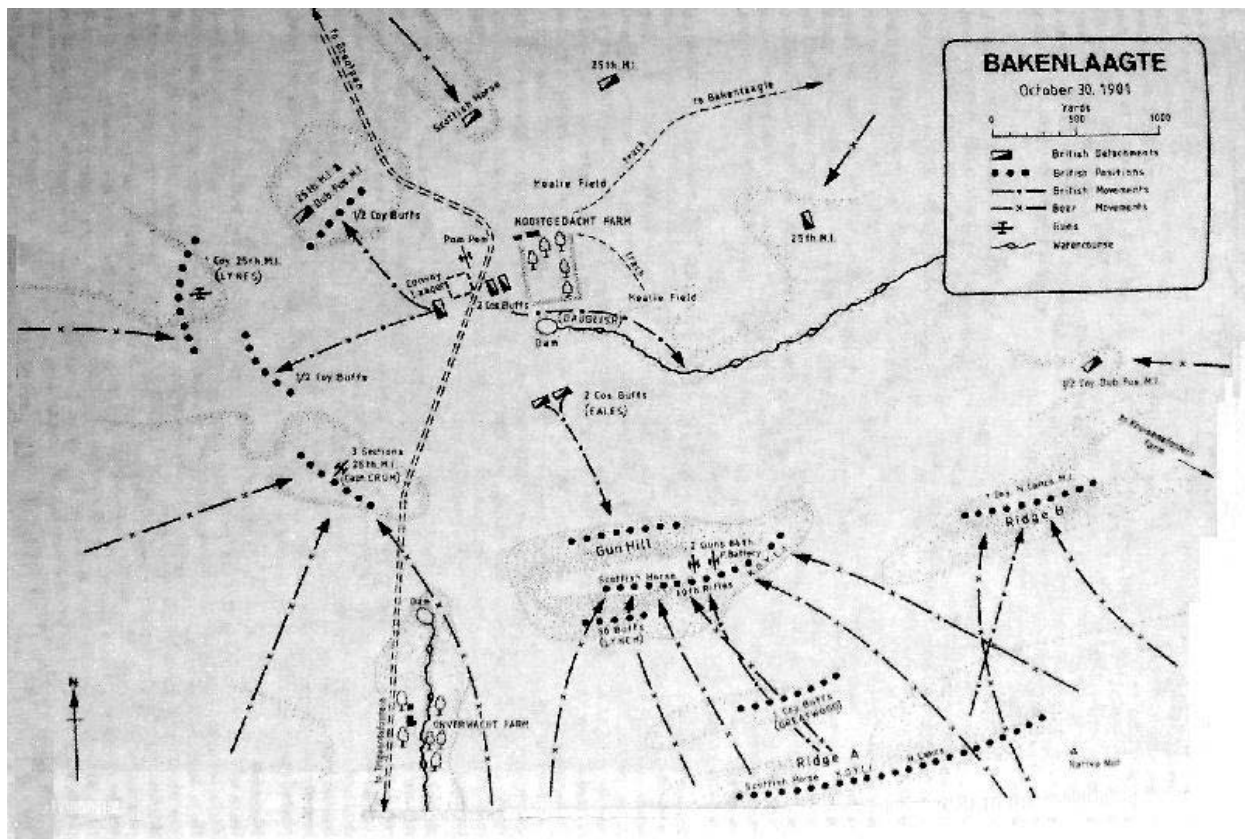


Figure 37 Map of the Battle of Bakenlaagte.

The site lies right within the underground mining area. However there is no visible evidence of the battle and therefore the site cannot be preserved. The battle can be commemorated via a plaque as close as possible to the site. It is also recommended that, should any artifact related to the battle be unearthed or found during activities on site, an archaeologist should immediately be contacted to investigate the find.

10. CONSULTATION

The following farmers and farm workers were consulted with during the field work survey:

- Mr. N de Vos
- Mr. IM Boshoff
- Mr. E Muller
- Mr. JH Jacobs
- Mr. JCJ Bezuidenhout
- Mr. B Roux
- Mr. HJF Venter
- Mr. CJH Erasmus

- Mr. JD Streicher
- Mr. MM Erasmus
- Mr. J Venter
- Mr. F Myburgh
- Mr. DJ Venter
- Mr. DM Steyn
- Mr. J. Cameron
- Mrs. SP Cameron
- Mr. P Mbombi
- Mr. W Oosterhuis

11. SENSITIVE AREAS AND REHABILITATION OPTIONS

It is difficult to indicate sensitive areas as the sites found are spread out over almost the whole of the planned mining area. However, sites number 15 and 16 is sensitive but may be changed if needed (see recommendations). Graves are always seen as being sensitive, but they may be exhumed in accordance with the legislation indicated in this report. This option is recommended for sites number 3, 7, 8, 10, 11, 12, 14, 17, 18, 20, 21, 22, 23, 24 and 25. The other grave sites, seem to be outside of the area of direct imoact and therefore the fencing and management plan option is recommended sites number 4, 5, 6, 13, 19, 26, 27, 28 and 29.

12. CONCLUSIONS ANDRECOMMENDATIONS

The survey of the area where the Matla Project is planes was completed successfully. A number of 30 sites were identified (Figure 38-39). The impact rating and management plan for these are included in Appendix E. Notes on sensitive areas and rehabilitation options are included below. It however needs to be indicated that there may be more, but due to the circumstances described earlier, these may not have been found.



Figure 38 Google image indicating the 30 heritage sites found in the surveyed area.

- R – Ruins**
- G- Graves**
- B- Buildings**
- W - Battlefield**

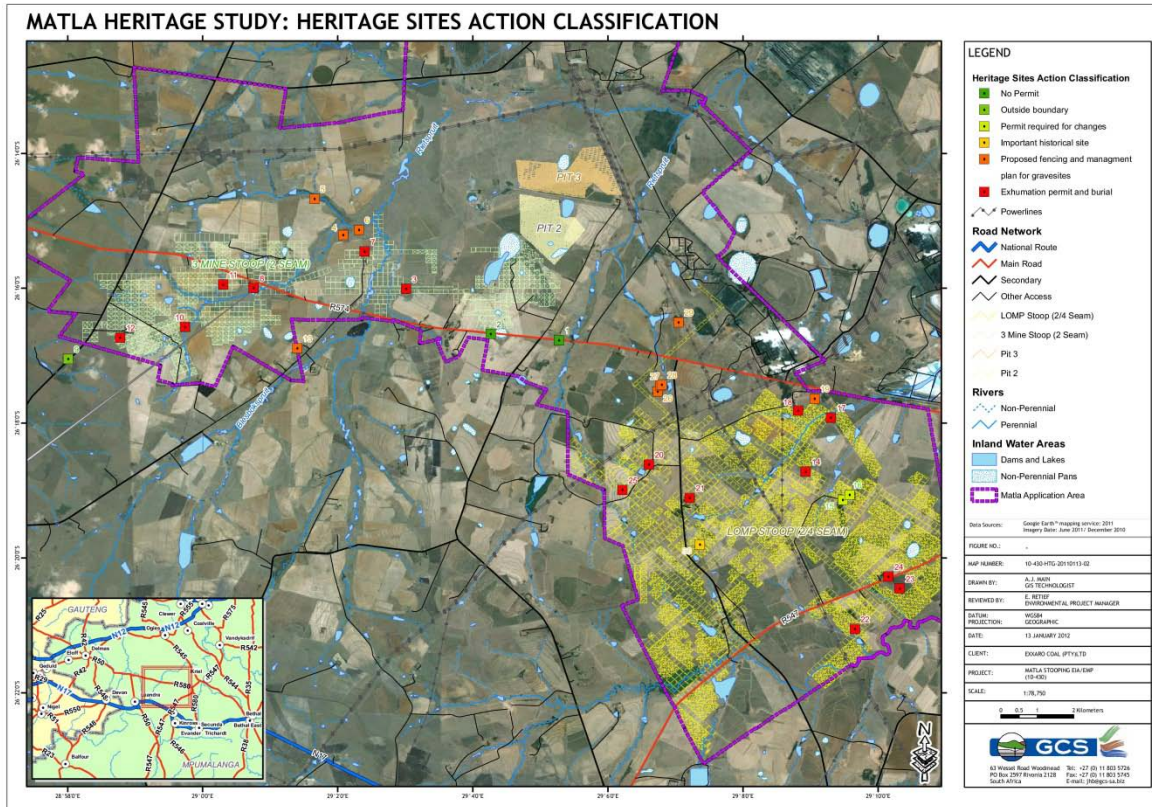


Figure 39 Location of heritage sites found in relation to the planned mining activities. (Map to be blown up in order to see numbers.)

The final recommendations are as follows:

1. Relating to site numbers 1 and 2 (house ruins), this report is seen as ample mitigation and the sites identified may be demolished without a destruction permit due to it being of low cultural significance.
2. As site number 9 falls outside of the project area no action is needed. It should however be taken note of.
3. Sites number 15 and 16 may be re-used for offices or another appropriate purpose. However, for any changes to be made to the structures a permit needs to be issued by the Provincial Heritage Resources Agency (PHRA) of Mpumalanga. These structures should be preserved if at all possible.
4. As these buildings falls within the underground mining area, it may be damaged during mining activities. For instance, the soil may cave in. Therefore the recommendation is that both should also be documented during a phase II investigation in order to preserve basic information. Should any damage then occur, the mine may apply for a demolition permit from the Mpumalanga PHRA.
5. No visible evidence of site number 30 (Battle of Bakenlaagte) was found and therefore the site cannot be preserved. It however remains an important part of the

history of South Africa and should be commemorated, perhaps by placing a plaque next to the road, as close as possible to the site.

6. It is also recommended that, should any artifact related to the battle be unearthed or found during activities on site, an archaeologist should immediately be contacted to investigate the find.
7. The threat of the ground collapsing under heritage sites is very real as similar incavings as a result of mining activities have been seen throughout the survey area.
8. Graves are always given a rating of **high** cultural significance due to it being a sensitive matter.
9. Usually there are two options when dealing with graves. Table 1 can be used to assist in determining the risks involved with both options.
10. The first option is to leave the graves *in situ*. This would be possible should there be no direct impact on the graves. However, there always is a secondary impact as descendants may find it difficult to visit the site once mining has commenced. Therefore the site should be fenced in and a management plan should be written for the preservation and maintenance thereof. Such a fence should be erected at least 50 m from the perimeter of the site as blasting closer than that will definitely have a negative impact on the graves.
11. The Management Plan would detail aspects such as the fence and site management and maintenance. In addition, the plan would provide details on how it will be possible for descendants that might wish to visit the graves, when access will be granted as the mine is compelled to grant access. The fence and site will need to be managed and maintained. The management plan includes inter alia arrangements for security and safety measures. Other measures would include the preservation and maintenance of the site where aspects such as cleaning and upkeep will be dealt with. Such a plan should be written and then monitored annually by an independent heritage specialist.
12. The plan will have to be approved by the Burial Grounds and Graves Unit (BGG) of the South African Heritage Resources Agency (SAHRA). SAHRA has specific guidelines for management plans and these will have to be followed.
13. The fencing and management plan option is recommended sites number 4, 5, 6, 13, 19, 26, 27, 28 and 29).
14. However, the mine may decide upon studying the risk assessment table (Table 1) that it would be better for their operations to have these exhumed and relocated (option 2). This may be allowed upon SAHRA approval and is discussed below.
15. The second option is to exhume the graves and have the bodies reburied. This usually is only allowed if there is a direct impact on the site. Such a process has to be motivated to SAHRA and permits needs to be applied for. It is a lengthy process and includes social consultation in accordance with legislation in order to obtain

permission from descendants or at least proof that a concerted effort has been made to do such consultation.

16. This option is recommended for sites number 3, 7, 8, 10, 11, 12, 14, 17, 18, 20, 21, 22, 23, 24 and 25.
17. This would mean that the mining activities could go on undisturbed.
18. Graves younger than 60 years are handled by a registered undertaker. Graves older than 60 years and those of an unknown date is regarded as heritage graves. In such a case an archaeologist is also involved in the process. Graves with an unknown date are always handled as if older than 60 years.
19. It is standard procedure in such cases to also do some test excavations as there usually are more graves than what can be seen from grave dressings and headstones.
20. Due to constraints indicated in this report it is possible that all heritage sites may not have been identified. Such sites found later on should be handled in accordance with this report which inter alia includes summoning an archaeologist to site to assess these.
21. It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. This includes graves. 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.
22. It is difficult to do a sensitivity assessment of the area as heritage sites usually only covers a small amount of land. One should be on the lookout for clumps of trees or grass within ploughed fields which may indicate graves or ruins. In this area it seems as if graves were particularly found in plantations, close to houses or ruins and in wetland areas and therefore these areas will also have a high sensitivity rating. The problem is that a few graves were found inside of ploughed fields without any vegetation around it – this basically means that one can found graves anywhere. The bottom line is that the nature of heritage sites is such that predicting its locations is almost impossible.
23. Once the recommended mitigation measures have been implemented, the mining activities may continue.

Table 1 Risk management relating to graves

Risk factor	Fencing of site	Exhumation and Relocation of graves
Access	Descendants will need undisturbed access to graves (only if descendants are identified)	Descendants will have access to new grave yard (only if descendants are identified)
Compensation	Not needed	Descendants may want compensation, but it is advised that this be limited to a night vigil (only if descendants are identified)
Approval from descendants	Not needed	Needed and without it no relocation will be allowed (only if descendants are identified) – usually not a problem to obtain permission
Security risk	Yes, as descendants must get access (only if descendants are identified)	No, as access would be at new cemetery*
Management of sites	Yes, a sustainable management plan will be needed	No, as this will form part of an existing cemetery *
Monitoring of sites	Yes, an independent heritage expert to monitor management plan and maintenance once a year	No, as it will form part of an existing cemetery*
Upgrade and cleaning	Yes, site should be left by developer in a better state than before and it should be kept neat	No, as this would be dealt with as part of the existing cemetery*
Land claims	Yes, but only in case of a forced removal (only if descendants are identified)	Yes, but only in case of a forced removal (only if descendants are identified)
Finances	Less expensive over the short term	More expensive over the short term
Time frames	Less time consuming	More time consuming
Responsibility	Permanent liability and responsibility for the mine	The mine's responsibility and liability ends after the exhumation and relocation process*

***The mine may decide to start a new cemetery on their premises for this purpose. In such a case they will save the cost of grave plots etc. However the graves will then be a site they need to manage permanently meaning that it will need to be fenced and a management plan needs to be compiled and implemented.**

13. REFERENCES

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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 OF 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 GRADING:

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

APPENDIXD

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

EXCELL SPREADSHEETS INDICATING IMPACT RATING AND MANAGEMENT PLAN

APPENDIX F

DEDET DECLARATION



the **dedet**

Department:
Economic Development, Environment and Tourism
MPUMALANGA PROVINCIAL GOVERNMENT

Details of specialist and declaration of interest in respect of an application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

PROJECT TITLE

Matla

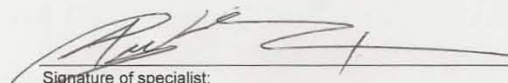
Specialist:	Dr AC van Vollenhoven		
Nature of specialist study compiled:	Heritage		
Contact person:	Dr AC van Vollenhoven		
Postal address:	PO Box 55, Groenkloof		
Postal code:	0027	Cell:	083 291 6104
Telephone:	-	Fax:	086 520 4173
E-mail:	antonv@archaetnos.co.za		
Qualifications & relevant experience:	DPhil (Archaeology); DPhil (History) – more than 21 years in heritage management		
Professional affiliation(s) (if any)	Association of Southern African Professional Archaeologists member no 166		

The specialist appointed in terms of the Regulations

I, Anton Carl van Vollenhoven declare that -

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in Regulation 8;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.


Signature of specialist:

Archaetnos CC

Name of company:

28/10/2011

Date:

Signature of Commissioner of Oaths

Date:

Designation:

Official stamp (below)


Signature/Handtekening
Commissioner of Oaths Ex Officio/Kommissaris van Ede
Full Name: **GIDEON JOHANNES VAN ECK**
Vols Name: **GIDEON JOHANNES VAN ECK**
Date: **28/10/2011** Capacity: **Manager**
Datum: **28/10/2011** Hoedanigheid: **Manager**
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ABSA **GEZINA / 8470**
Bank Limited/Sporsk **Reg No 88/04794/05**