



Archaetnos Culture & Cultural
Resource Consultants
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**A REPORT ON AN ARCHAEOLOGICAL AND BUILT ENVIRONMENT HERITAGE
IMPACT ASSESSMENT FOR THE PROPOSED BUFFELSDOORN GOLD MINE,
NORTH WEST PROVINCE**

For:

Prime Resources
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REPORT NO.: AE01961V

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SUBMISSION OF REPORT

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

It is the client's responsibility to do the submission via the SAHRIS System on the SAHRA website. Arrangements can however be made if necessary.

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

DISCLAIMER

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites is as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Access to certain areas is also sometimes limited. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof. Any additional sites identified can be visited and assessed afterwards and the report amended, but only upon receiving an additional appointment.

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EXECUTIVE SUMMARY

Prime Resources has requested Archaetnos to conduct an Archaeological and Built Environment Heritage Impact Assessment related to the proposed Buffeldoorns Gold Mine. This is planned on Portion 13 of the farm Buffelsdoorn 389, as well as the farms Beatrix 392 and Rietfontein 388. The project is located in the Matlosana and Tlokwe (now JB Marks) Local Municipalities, North West Province. The nearest towns are Klerksdorp and Stilfontein.

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

Five sites of cultural heritage significance were identified. The following is recommended:

1. The cultural significance of site no. 1 (Clay brick building remains) is Low and it received a Field rating of Local Grade IIIC. The description in this phase 1 report is seen as sufficient recording and it may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation. If no impact is expected it may be left *in situ*.
2. The cultural significance of site no. 2 (Farm yard) is Low and it receives a Field rating of Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority. Again, if no impact is expected it may be left *in situ*.
3. The cultural significance of site no. 3 (stone walled structure, midden and retaining wall) is Low-Medium. It receives a Field rating of Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority. Again, if no impact is expected it may be left *in situ*.
4. The cultural significance of site no. 4 (Large historical structure) is Low-Medium. It receives a Field rating of Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority. Again, if no impact is expected it may be left *in situ*.
5. The cultural significance of site no. 5 (cemetery) is High And the Field rating is Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority.

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

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

NB - The cemetery is already impacted on since the gravel road runs across some of the graves. This should immediately cease, and the road be moved to at least 100 m to the south of the graves. Since the graves are at least 100 m from the strike, the road cannot be moved towards the north. The 100 m is seen as an acceptable buffer. Thus it is not necessary to exhume and relocate the graves (Option 2). Accordingly Option 1 is recommended.

However, Option 1 may be allowed if *in situ* preservation, via a management plan cannot be guaranteed.

6. The proposed development may continue after receiving comments from the relevant heritage authority and implementation of the mitigation measures indicated.
7. It should be noted that the subterranean presence of archaeological and/or historical sites, features or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on site immediate cease and a qualified archaeologist be called in to investigate the occurrence.

In this regard the following 'Chance find Procedure' should be followed:

- *Upon finding any archaeological or historical material all work at the affected area must cease.*
- *The area should be demarcated in order to prevent any further work there until an investigation has been completed.*
- *An archaeologist should be contacted immediately to provide advice on the matter.*
- *Should it be a minor issue, the archaeologist will decide on future action. Depending on the nature of the find, it may include a site visit.*
- *SAHRA's APM Unit may also be notified.*
- *If needed the necessary permit will be applied for with SAHRA. This will be*

done in conjunction with the appointed archaeologist.

- *The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter.*
- *Work on site will only continue after the archaeologist/ SAHRA has agreed to such a matter.*

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

CURRICULUM VITAE
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- Post-Graduate Diploma in Museology 1993 (cum laude), University of Pretoria
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- DPhil Archaeology 2001, University of Pretoria.
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- DPhil History 2010, University of Stellenbosch

EMPLOYMENT HISTORY

- *1988-1991*: Fort Klapperkop Military Museum - Researcher
- *1991-1999*: National Cultural History Museum. Work as Archaeologist, as well as Curator/Manager of Pioneer Museum (1994-1997)
- *1999-2002*: City Council of Pretoria. Work as Curator: Fort Klapperkop Heritage Site and Acting Deputy Manager Museums and Heritage.
- *2002-2007*: City of Tshwane Metropolitan Municipality. Work as Deputy Manager Museums and Heritage.
- *August 2007* – present – Managing Director for 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.
- *2014-2015*: Part-time lecturer for the Honours degree in Museum Sciences in the Department of History and Heritage Studies at the University of Pretoria
- *Since 2015*: Extraordinary Professor of History at the Mahikeng campus of the Northwest University

OTHER

- Has published 34 peer-reviewed and 42 popular articles.
- Has written 11 books/book contributions/conference proceedings .
- Has been the author and co-author of over 911 unpublished reports on cultural resources surveys and archaeological work.
- Has delivered more than 72 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; 2012-2014; 2018-

2020).

- Has been editor for the SA Journal of Cultural History 2002-2004.
- Editorial member of various scientific journals.
- Member of the Provincial Heritage Resources Agency, Gauteng's Council.
- Member of Provincial Heritage Resources Agency, Gauteng's HIA adjudication committee (Chairperson 2012-2019).

A list of reports can be viewed on www.archaetnos.co.za.

DECLARATION OF INDEPENDENCE

I, Anton Carl van Vollenhoven from Archaetnos, hereby declare that I am an independent specialist within the field of heritage management. The report complies with the SAHRA 2007 Minimum Standards for *Archaeological Components of Impact Assessment Reports*.



Signed:

Date: 5 December 2019

LIST OF ACRONYMS:

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

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1. INTRODUCTION

Prime Resources has requested Archaetnos to conduct an Archaeological and Built Environment Heritage Impact Assessment related to the proposed Buffeldoorns Gold Mine. This is planned on Portion 13 of the farm Buffelsdoorn 389, as well as the farms Beatrix 392 and Rietfontein 388. The project is located in the Matlosana and Tlokwe (now JB Marks) Local Municipalities, North West Province. The nearest towns are Klerksdorp and Stilfontein (Figure 1-3).

The project currently is in a stage prior to the Scoping Phase. The Environmental Authorisation (EA) application will be submitted in February 2020, to be followed by Scoping and EIA.

The Buffeldoorns Gold Mine project is planned as an open cast and potentially underground operation (to be confirmed after drilling in Nov 2019). The reef is orientated north-east / south-west, and outcrops towards the north-east of the strike. No processing plant or tailings storage facility will be constructed on site. Ore will be removed from site and taken to Stilfontein Mine via truck, for processing. Waste rock will likely be disposed of on site, and possibly backfilled into the open pit if it is geochemically acceptable. Other surface infrastructure would include workshops, PCDs and possibly change rooms.

The client indicated the area to be investigated which was surveyed by off road vehicle and, where possible, by foot.

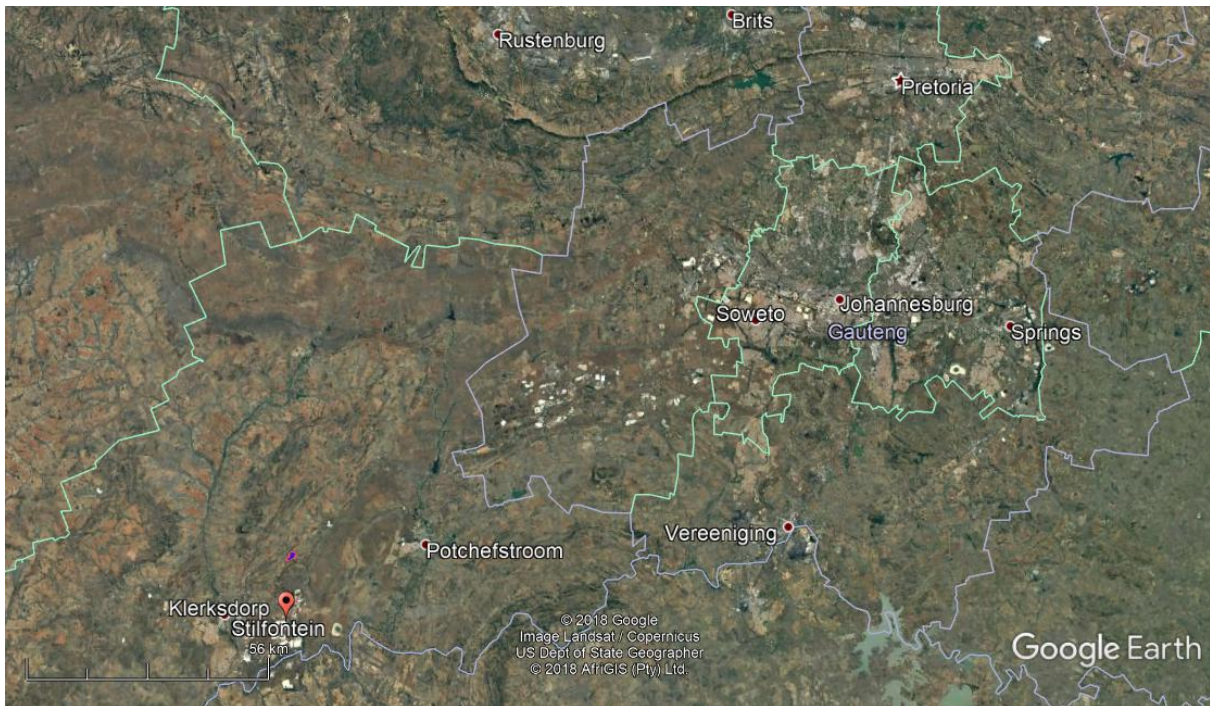


Figure 1: Location of Klerksdorp and Stilfontein in the North West Province. North reference is to the top.

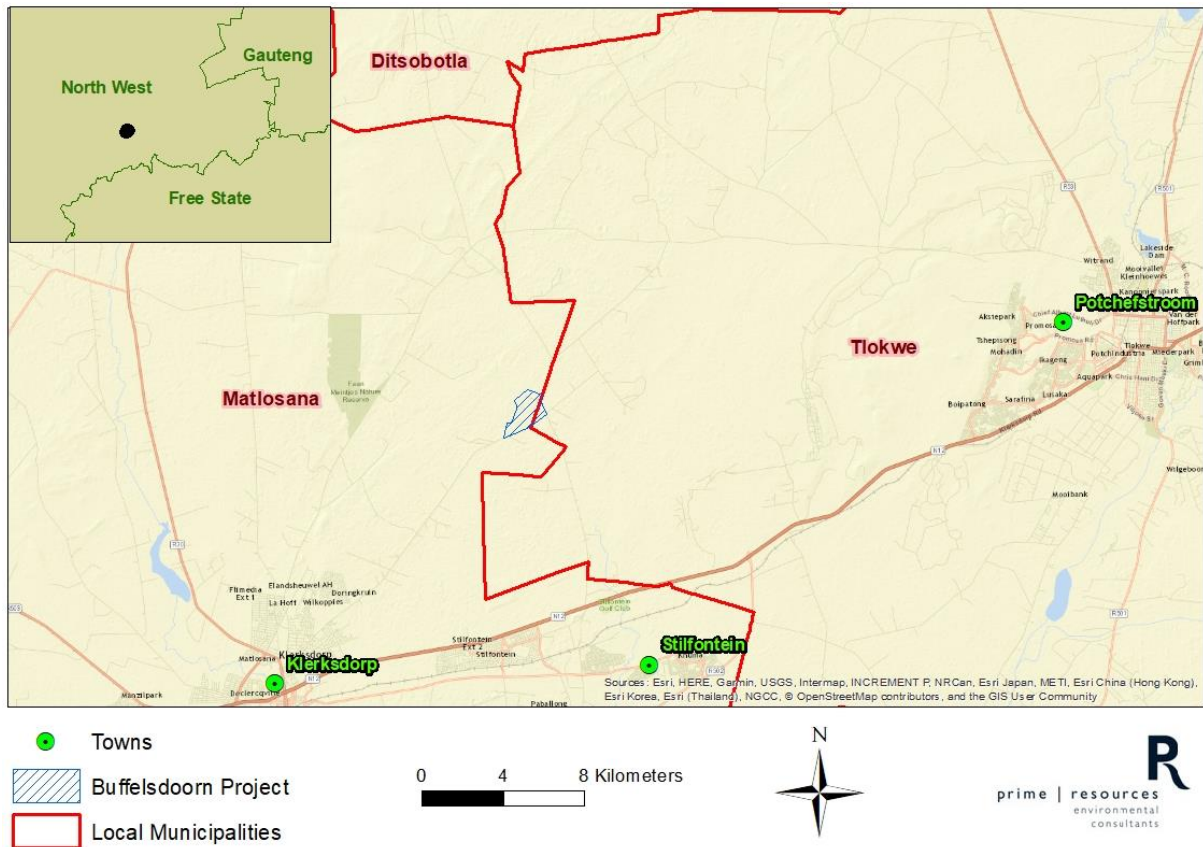


Figure 2: Location of the surveyed site in relation to towns and municipalities (Prime Resources).

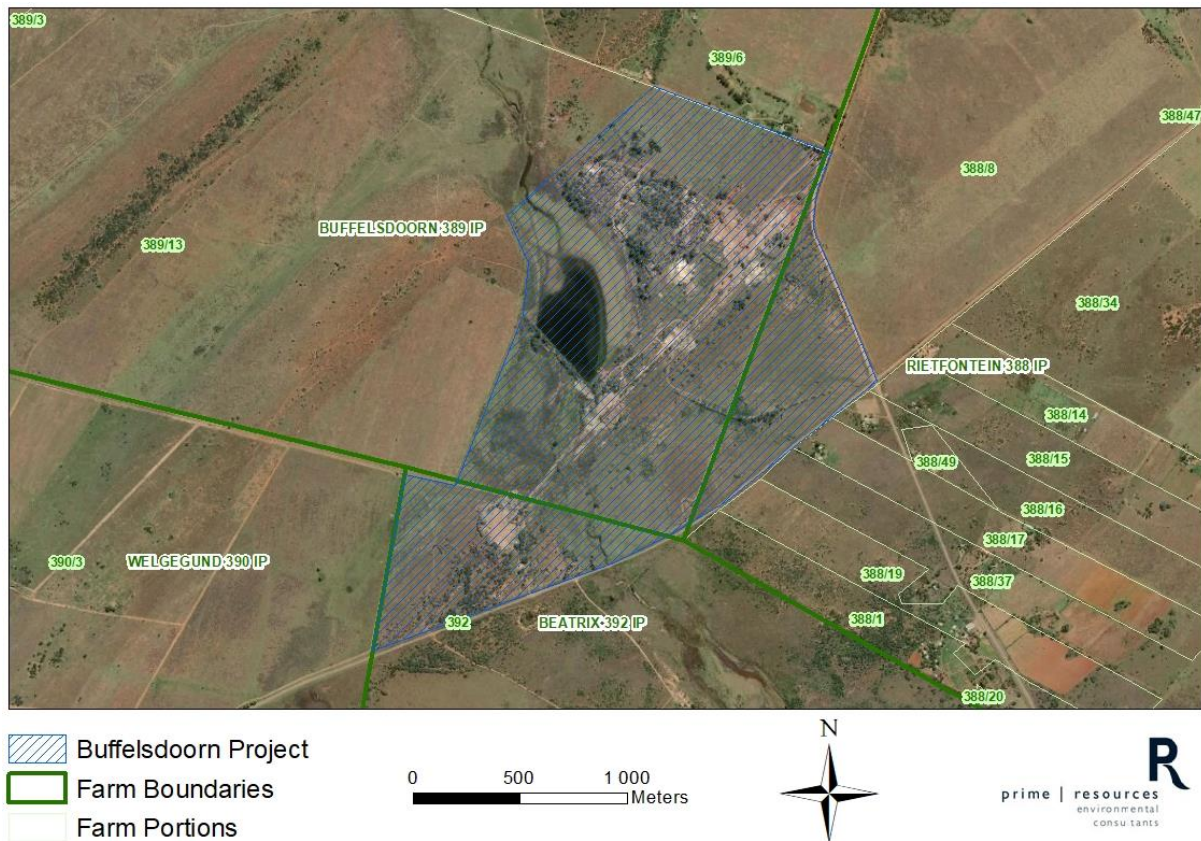


Figure 3: Detailed view of the site (Prime Resources).

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

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

3. CONDITIONS & ASSUMPTIONS

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

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structures and artefacts 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 artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix C).
4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.
5. All recommendations are made with full cognizance of the relevant legislation.
6. It must 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 this report should make it clear how to handle any other finds that might occur.
7. The vegetation cover on site varies in density and height from open patches with short grass to areas with medium high plant growth. In general both the horizontal and the vertical visibility was good.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

4.1 The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. Archaeological artefacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The national estate (see Appendix D) includes the following:

- a. Places, buildings, structures and equipment of cultural significance
- b. Places to which oral traditions are attached or which are associated with living heritage
- c. Historical settlements and townscapes
- d. Landscapes and features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Archaeological and paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. The different phases during the HIA process are described in Appendix E.

An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 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 paleontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite;
- d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites, or
- 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). 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.

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

Human remains that are less than 60 years old are subject to provisions of the **National Health Act (Act 61 of 2003)** 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 **National Health Act (Act 61 of 2003)**.

4.2 The National Environmental Management Act

This act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

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

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

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

Impacts on the cultural heritage should be minimized. This include the possible maintenance of such sites in situ, or when impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artefacts and structures need to be removed is should be done by professionals and by abiding to the applicable legislation.

The removal of cultural heritage resources may however only be considered if there are not technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the effected communities. Again, professionals should carry out the work and adhere to the best available techniques.

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

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the effected communities to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

6. METHODOLOGY

6.1 Survey of literature

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

No previous heritage studies could be found on any of the indicated farms, Buffelsdoorn 389, Beatrix 392 or Rietfontein 388. In fact SAHRIS did not even had any reports done in the Stilfontein area (SAHRIS Database).

6.2 Field survey

The survey was conducted according to generally accepted AIA practices and was aimed at locating possible objects, sites and features of cultural significance in the area of proposed development. Where required, the location/position of any site was determined by means of a Global Positioning System (GPS)¹, while photographs were also taken where needed.

The survey was undertaken by doing a physical survey via off-road vehicle and on foot and covered as much as possible of the area to be studied (Figure 4). Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. The size of the surveyed site is approximately 217 Ha. Within it an open cast strike of about 1,62 km is planned. The survey took about 6 hours to complete.

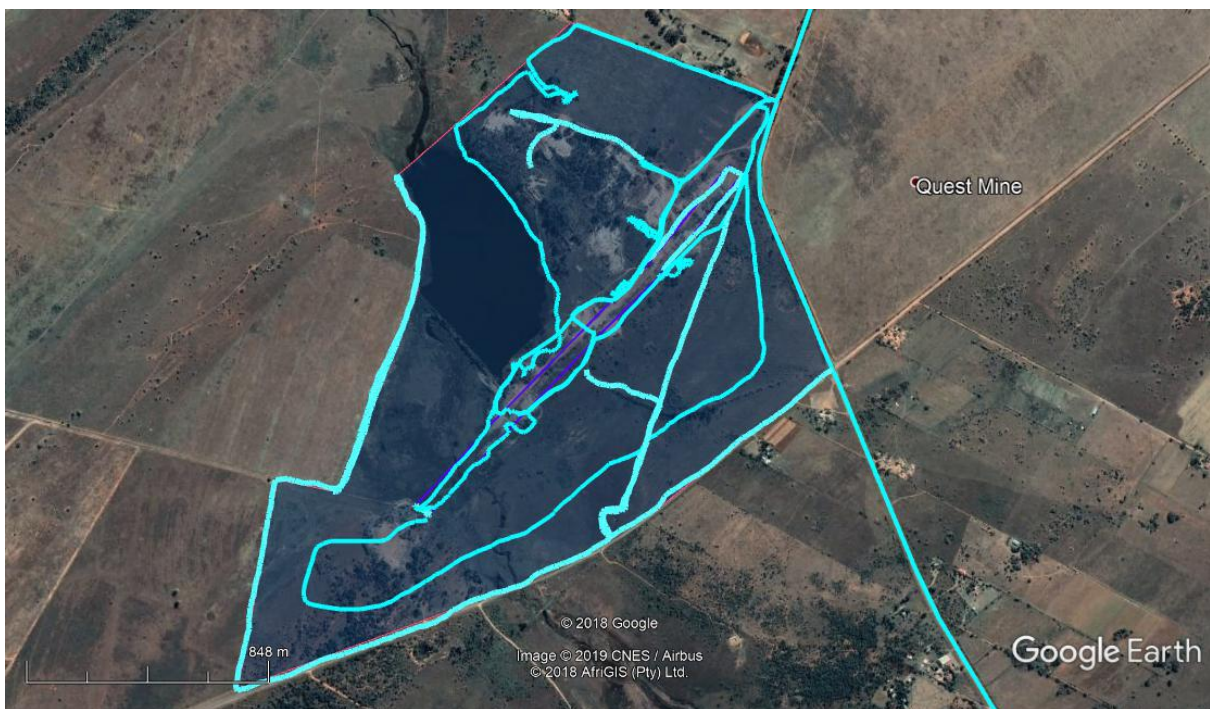


Figure 4: GPS track of the field survey (green lines). North reference is to the top.

6.3 Oral histories

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

¹ A Garmin Oregon 550 with an accuracy factor of a few meters.

6.4 Documentation

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

6.5 Evaluation of Heritage sites

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

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

7. DESCRIPTION OF THE ENVIRONMENT

The surveyed site is disturbed to a large extent, mainly due to past mining activities (Figure 5). The soil is a mixture of sandy, clay and turf in the larger area. A large dam is located in the north west of the site.

The vegetation consists mostly of short and medium high grass (Figure 6-7) with trees and shrubs closer to the dam. Endemic vegetation is scarce and pioneer vegetation, a result of former disturbance, is visible. It seems to be the result of disturbance by human activities and occupation on the site. A large number of alien (eucalyptus) trees is located to the east of the dam (Figure 8).

A number of buildings and structures on the property is relatively recent and thus have no heritage significance (Figure 9). The topography of the terrain is relatively flat with a stony outcrop in the centre, where most of the mining takes place.



Figure 5: Disturbance due to mining activities on the site.



Figure 6: General view of the area showing short grass and a large dam.



Figure 7: View of the environment showing medium tall grass and remains of prospecting activities.



Figure 8: Another view of the surveyed area showing alien trees.



Figure 9: Example of one of the buildings on site which is younger than 60 years of age.

8. HISTORICAL CONTEXT

During the survey five sites of cultural heritage importance was identified. In order to understand the broader history of the larger geographical area, as well as to contextualize possible additional finds that could be unearthed during the development, it is necessary to give a background regarding the different phases of human history in the area.

As indicated above, no previous heritage surveys on this farm could be identified on SAHRIS (SAHRIS database). Klerksdorp is however known as a historical town and it therefore contains many buildings with heritage significance. None of these are however close to the proposed development.

8.1 Stone Age

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

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

No Stone Age sites are indicated on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrence is that of sites close to Vanderbijlpark. These include sock rock engravings (Bergh 1999: 5) which are associated with the Late Stone Age.

It needs to be indicated that the lack of known sites here should rather be seen as a lack of research in the area and not as an indication that such features does not exist. However, no natural shelters were seen during the survey and therefore it is possible that these people did not stay here. There probably would have been ample grazing for wild animals which would have made it a prime spot for hunting. Therefore one may assume that Stone Age people probably would have moved through the area.

8.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.

Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however, indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.

Middle Iron Age (MIA) 900 – 1300 A.D.

Late Iron Age (LIA) 1300 – 1840 A.D.

No Iron Age sites are indicated in a historical atlas around the towns of Klerksdorp and Stilfontein, but again this may only indicate a lack of research in the area. The closest known Iron Age occurrences to the surveyed area are Late Iron Age sites that have been identified to the north and north-west of Klerksdorp as well as around Parys to the south-east (Bergh 1999: 7).

The good grazing in the area would have provided a good environment for Iron Age people although building material seem to be reasonably scarce. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers moved into this environment later on.

8.3 Historical Age

The Historical Age started with the first recorded oral histories in the area. It includes the in-migration of people that were able to read and write.

At the start of the 19th century the Rolong, a Tswana group, stayed to the west of Klerksdorp. During the Difaquane the Ndebele of Mzilikazi moved through this area and passed to the east, close to the current town of Klerksdorp (Bergh 1999: 10-11).

The first white people to move through this area were the party of the hunter WC Harris in 1836 (Bergh 1999: 13). The Voortrekkers also moved through this area and were involved in a number of skirmishes against Mzilikazi during 1836. The Voortrekker leader Andries Hendrik Potgieter settled here and the town Potchefstroom was established in 1839. White farmers settled around Klerksdorp by 1840 (Bergh 1999: 14-15, 129).

The town also saw action during the Anglo-Boer War (1899-1902). The British reached Klerksdorp on 14 June 1900 (Bergh 1999: 51). A few battles also took place west of the town at Hartbeesfontein on 18 February 1901 and at Yzerspruit on 25 February 1902 (Bergh 1999: 54).

9. SITES IDENTIFIED IN THE SURVEYED AREA

Five sites were identified. These are discussed below.

9.1 Site no. 1 – Clay brick building ruins

This is a historical ruin of a building which was probably used for residential purposes (Figure 10). The size of the structure is approximately 4 m x 7 m and it only has one room. The front and back walls have collapsed, and no roof has remained. One window and a door could be identified. It probably is associated with farm workers. The state of preservation however is poor.

GPS: 26°43'49.14"S; 26°47'12.55"E



Figure 10: Residential remains at site no. 1.

Cultural significance Table:

A place is considered to be part of the national estate if it has cultural significance because of -	Applicable or not	Rating: 1 - Negligible/ 2 -Low/ 3 - Low-Medium/ 4 - Medium/ 5 - Medium-High/ 6 - High/ 7 - Very High
Its importance in the community or pattern of South Africa's history	Y	Low
Its possession of uncommon, rare, or endangered aspects of South Africa's natural or cultural history	N	
Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage	Y	Low
Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	Y	Low
Its importance in exhibiting particular aesthetic characteristics valued by a community cultural group	Y	Low
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	N	
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	N	
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	
Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:	Low – 2	

Integrity scale:

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

Field-rating = Cultural significance x Integrity

= 2 (Low) x 1

= 2

Field rating: Local Grade IIIC.

The description in the phase 1 heritage report is seen as sufficient recording and it may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation.

9.2 Site no. 2 – Farm yard

This is a farm yard consisting of various features. It is merely 72 m from Site 1, suggesting it comes from the same time period. The site consists of the following structures: a farm house, dam, storage/garage structure and septic tank chamber.

GPS: 26°43'50.03"S; 26°47'15.95"E

The farm house has a size of approximately 26 m x 19 m (Figure 11). It is constructed from bricks, hewn stone, mud and cement. Floors, window frames and door frames are made of wood. A number of 7 rooms are still perceived. No roof is visible, but 3 doors leading out of the house is still visible as well as windows all along the outside wall. Wooden flooring is still present but in a bad state of decay. The western side of the house is completely collapsed.

The building is probably just older than 60- years of age but has undergone many changes. Water piping, cable conduits and a date (1976-2-14) on outside veranda shows recent usage.

The outbuilding (storage/garage structure) has a size of 8 m x 5 m and is built from brick. It only has one room (Figure 12). The dam is made from brick and reinforced steel straps (Figure 13). The septic tank chambers are built from similar material and has a size of 4 m x 2 m (Figure 14). The type of bricks indicate that these were probably built during the 1970's and 1980's.



Figure 11: Remains of farm house.



Figure 12: Outbuilding.



Figure 13: Dam.



Figure 14: Septic tanks.

Cultural significance Table:

A place is considered to be part of the national estate if it has cultural significance because of -	Applicable or not	Rating: 1 - Negligible/ 2 -Low/ 3 - Low-Medium/ 4 - Medium/ 5 - Medium-High/ 6 - High/ 7 - Very High
Its importance in the community or pattern of South Africa's history	Y	Low
Its possession of uncommon, rare, or endangered aspects of South Africa's natural or cultural history	N	
Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage	Y	Low
Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	Y	Low
Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group	Y	Low
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	N	
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	N	
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	

Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:	Low – 2	

Integrity scale:

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

Field-rating = Cultural significance x Integrity

= 2 (Low) x 3

= 6

Field rating: Local Grade IIIB

The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority.

9.3 Site no. 3 – Stone walled structure, midden and retaining wall

The site consists of a stone walled structure, wall, midden and retaining wall. The stone walled structure has a size of 4 m x 2 m and is built from stones and mud daga. It has only one room. The structure is a single stone room mostly collapsed (Figure 15).

The second stone walled structure has a size of 8 m x 4 m and is made from stones and mud dagga. It has two rooms and consist of two standing walls with two small windows and a possible entrance to the east (Figure 16). The stone wall is 5 m in length consisting of a single row (Figure 17). The midden has a size of 3 8m x 5 m. It seems to be a residential dumping site (Figure18). Coal, animal remains, and ceramics are visible where the midden was exposed due to a prospecting hole.

The site probably has a residential origin. The artifacts exposed indicate a mid to late 20th century origin.

GPS: 26°44'.12.03"S; 26°47'21.11"E



Figure 15: Remains of first stone walled structure.



Figure 16: Remains of second stone walled structure.



Figure17: Low stone wall.



Figure 18: Refuse midden at the site.

Cultural significance Table:

A place is considered to be part of the national estate if it has cultural significance because of -	Applicable or not	Rating: 1 - Negligible/ 2 -Low/ 3 - Low-Medium/ 4 - Medium/ 5 - Medium-High/ 6 - High/ 7 - Very High
Its importance in the community or pattern of South Africa's history	Y	Low
Its possession of uncommon, rare, or endangered aspects of South Africa's natural or cultural history	N	
Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage	Y	Low-Medium
Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	Y	Low-Medium
Its importance in exhibiting particular aesthetic characteristics valued by a community cultural group	N	
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	N	
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	N	
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	
Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:	Low-Medium - 3	

Integrity scale:

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

Field-rating = Cultural significance x Integrity

= 3 (Low-Medium) x 4

= 12

Field-rating: Local Grade III B

The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority.

9.4 Site 4 – Large historical structure

The site consists of a large building (Figure 19-20). It has a size of 120 m x 14 m and is constructed from stones, bricks and cement. It has at least 20 rooms. It may have been single living quarters or offices associated with past mining activities.

GPS: 26°44'.05.39"S; 26°47'25.45"E



Figure 19: Remains of large building.



Figure 20: Another view of the same building.

Cultural significance Table:

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

Its importance in exhibiting particular aesthetic characteristics valued by a community cultural group	N	
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	N	
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	N	
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	
Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:	Low-Medium	

Integrity scale:

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

Field-rating = Cultural significance x Integrity

= 3 (Low-Medium) x 3
= 9

Field-rating: Local Grade IIIB

The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority.

9.5 Site 5 - Cemetery

It is a large cemetery of approximately 178 graves (Figure 21-22). The headstones are made of cement or slate. The grave dressings are made from bricks, cement or natural stones. Graves are orientated north-east to south-west.

GPS: 26°44'10.96"S 26°47'27.33"E

Only one grave is older than 60 years of age and four graves are younger than 60 years. The unmarked graves thus are 173. The oldest grave is that of Voilet Santhu who died on 26/06/1955 and the youngest is that of Jiosaa(??) Dingiswa who died on 09/13/1977 (?). Other names and dates noted are Liely Dingiswa, Jiosaa(??) Dingiswa, Mita Santu 02/06/1963, Timoty Gwabi Sathu 23/08/1967, Phillip Santho 28/04/1973 and Kingdom(??) Dingi...

Warning: It needs to be noted that a number of graves are intersected by the dirt road to the south-west (Figure 23-24).



Figure 21: Cemetery identified during the survey.



Figure 22: Example of one of the graves.



Figure 23: Dirt road running over the graves.



Figure 24: Grave in centre of dirt road.

Cultural significance Table:

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

characteristics valued by a community cultural group		
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	N	
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	Y	Medium-High
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	
Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:	High	

Integrity scale:

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

Field-rating = Cultural significance x Integrity

= 6 (High) x 3

= 18

Field-rating: Local Grade IIIB

The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority.

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

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

Note - The cemetery is already impacted on since the gravel road runs across some of the graves. This should immediately cease, and the road be moved to at least 100m to the south of the graves. Since the graves are at least 100 m from the strike, the road cannot be moved towards the north. The 100 m is seen as an acceptable buffer. Thus it is not necessary to exhume and relocate the graves (Option 2). Thus Option 1 is recommended.

10. PUBLIC CONSULTATION

This will be done by the EAP in accordance with EIA regulations. Scoping phase site notices and media notice probably to go out around mid-February 2020.

11. CONCLUSION AND RECOMMENDATIONS

The heritage survey of the indicated area was completed successfully. Five sites were identified (Figure 25-26).

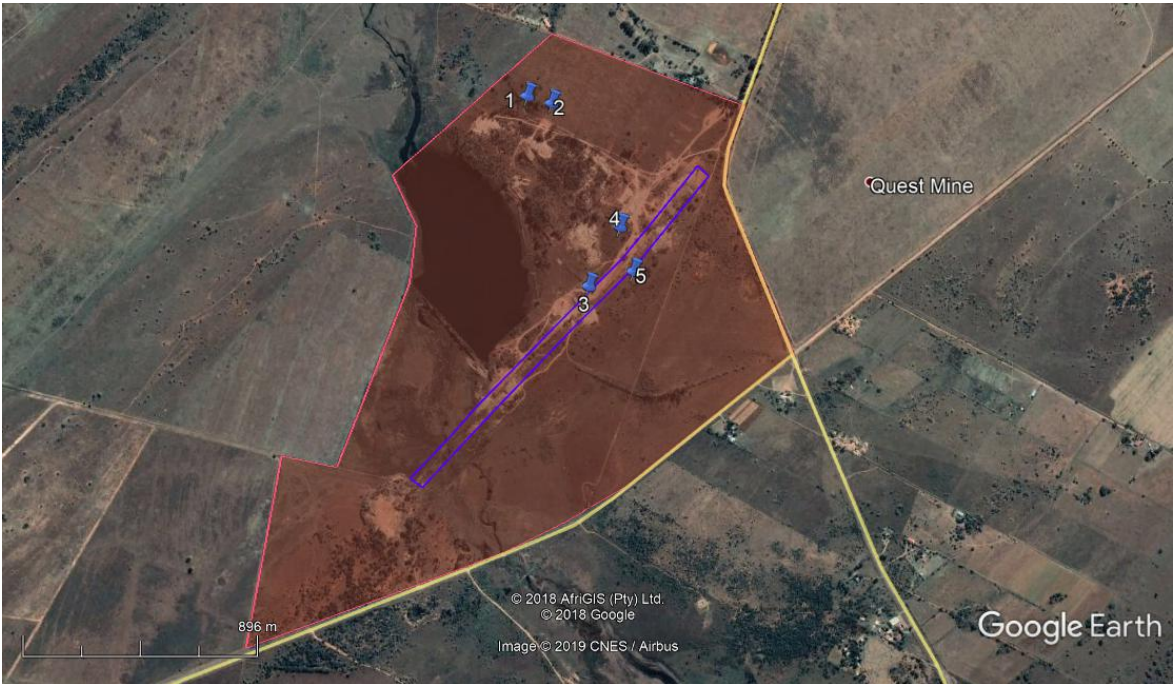


Figure 25: Indication of the location of the identified sites in relation to the development.



Figure 26: Location of the cemetery in relation to the strike and gravel road.

The following is recommended:

1. The cultural significance of site no. 1 (Clay brick building remains) is Low and it received a Field rating of Local Grade IIIC. The description in this phase 1 report is seen as sufficient recording and it may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation. If no impact is expected it may be left *in situ*.
2. The cultural significance of site no. 2 (Farm yard) is Low and it receives a Field rating of Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority. Again, if no impact is expected it may be left *in situ*.
3. The cultural significance of site no. 3 (stone walled structure, midden and retaining wall) is Low-Medium. It receives a Field rating of Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority. Again, if no impact is expected it may be left *in situ*.
4. The cultural significance of site no. 4 (Large historical structure) is Low-Medium. It receives a Field rating of Local Grade IIIB. The site should be included in the

heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority. Again, if no impact is expected it may be left *in situ*.

5. The cultural significance of site no. 5 (cemetery) is High And the Field rating is Local Grade IIIB. The site should be included in the heritage register and may be mitigated. Mitigation is subject to a permit application lodged with the relevant heritage authority.

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

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

NB - The cemetery is already impacted on since the gravel road runs across some of the graves. This should immediately cease, and the road be moved to at least 100 m to the south of the graves. Since the graves are at least 100 m from the strike, the road cannot be moved towards the north. The 100 m is seen as an acceptable buffer. Thus it is not necessary to exhume and relocate the graves (Option 2). Accordingly Option 1 is recommended.

However, Option 1 may be allowed if *in situ* preservation, via a management plan cannot be guaranteed.

6. The proposed development may continue after receiving comments from the relevant heritage authority and implementation of the mitigation measures indicated.
7. It should be noted that the subterranean presence of archaeological and/or historical sites, features or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on site immediate cease and a qualified archaeologist be called in to investigate the occurrence.

In this regard the following 'Chance find Procedure' should be followed:

- *Upon finding any archaeological or historical material all work at the affected area must cease.*

- *The area should be demarcated in order to prevent any further work there until an investigation has been completed.*
- *An archaeologist should be contacted immediately to provide advice on the matter.*
- *Should it be a minor issue, the archaeologist will decide on future action. Depending on the nature of the find, it may include a site visit.*
- *SAHRA's APM Unit may also be notified.*
- *If needed the necessary permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist.*
- *The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter.*
- *Work on site will only continue after the archaeologist/ SAHRA has agreed to such a matter.*

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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 artefacts, 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: Artefact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:

- Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.
- Aesthetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.
- Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period
- Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
- Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.
- Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C

SIGNIFICANCE AND FIELD RATING:

Cultural significance:

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

High - Any site, structure or feature regarded as important because of its age or uniqueness. Also any important object found within a specific context.

Very High - A site of exceptional importance due to its age, uniqueness and good state of preservation.

Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

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

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

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

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

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

APPENDIX D

PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – grade I and II

Protected areas - an area surrounding a heritage site

Provisional protection – for a maximum period of two years

Heritage registers – listing grades II and III

Heritage areas – areas with more than one heritage site included

Heritage objects – e.g. archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states

Structures – older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.