Heritage Impact Assessment for the Farm Buffelskloof 141JS, Steelpoort River Valley, Mpumalanga

Prepared for: Minthiro Mining (Pty) Ltd

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Date: November 2010

Executive summary

Mintirho Mining (Pty) Ltd is in the process of applying for a mining license to extract iron and vanadium bearing ore on the farm Buffelskloof 141JS in the Steelpoort vicinity. GEM-Science CC was contracted to review the area and conduct the environmental impact assessment on their behalf. This heritage impact assessment forms part of the total impact assessment of the proposed mining activities.

The heritage assessment was conducted on the 29th and 30th of September 2010. The team consisted of an archaeological field expert and archaeological assistant. With the assistance of members of the local community, the team conducted the survey. The aim of the survey was to determine the extent of cultural heritage within the boundaries of the area to be affected by the proposed mining activities.

Various sites of heritage significance were identified during the survey. Sites that were identified ranged from abandoned homesteads, isolated graves and cemeteries to male and female initiation sites. The significance of these sites vary from those sites of little significance, for example the initiation sites and abandoned homesteads to those sites with a high significance, for example the isolated graves and cemeteries. The proposed mining activities are based on extracting the minerals by making use of an open cast method. The result of this will be a large scale destruction of the identified heritage sites.

Due to the specific environmental demands Stone Age and Iron Age communities tend to settle in the close proximity of rivers and available water sources, therefore mountainous areas were avoided. This also proofs to be the case for the historic period, as the majority of settlements and farming activities are found close to the rivers.

Even though a number of well-known archaeological sites do occur in this region and a number of archaeological sites were identified close to the Steelpoort River, no archaeological relevant sites were identified in the study area. The heritage remains in this area is mostly of a historical context. Dilapidated homesteads, graves and cemeteries and initiations sites were mostly identified as the heritage remains on the survey area. The

significance of the initiation sites are not much, as any other suitable venue could be considered for such a purpose. It is though advised that the community be supplied with a suitable alternative area large enough and in close proximity with access to all the necessary resources to conduct in initiation practices. It must however be pointed out that it is customary for the local community to bury deceased small children and babies within a homestead. Some of these homesteads were pointed out as containing the graves of small children or babies. Proper social consulting should be done to determine which homesteads do contain graves, before any mining operations can commence.

It is recommended that if mining in this area is approved and mining operations are to commence, that large scale social consulting should take place. Family members and the local community must become involved in the identification and decision making regarding individual graves and cemeteries in order to plan the mitigation process if the mining process do commence. The Department of Water Affairs as the current stakeholders is also part of the brain trust that must be consulted before any decisions could be made.

Disclosure

GEM-Science acts as an independent consultant in the Heritage Impact Assessment. All possible care was taken to identify all sites of cultural and archaeological importance during the investigation of the study areas. It is possible that hidden or sub-surface sites could be overlooked during the study. Neither GEM-Science nor its staff will be held liable for such oversights or for costs incurred as a result of such oversights.

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1 BACKGROUND INFORMATION ON THE PROJECT

1.1 Introduction

GEM-Science CC, an independent consultant, was contracted by Mintirho Mining (Pty) Ltd to conduct an Environmental Impact Assessment (EIA) and public participation process for the proposed mining activities on the farm Buffelskloof 141JS in the Steelpoort vicinity. This Heritage Impact Assessment forms part of the EIA produced for the client.

Mintirho Mining (Pty) Ltd is in the process of applying for a mining license to extract iron and vanadium bearing ore on the farm Buffelskloof 141JS. This Heritage Impact Assessment was conducted to determine the extent of the heritage within the boundaries of the proposed mining area and how the proposed activities would impact on the heritage.

A study was conducted in order to determine the extent of cultural activities in the region. A scoping report was forwarded lead to further research and a field survey. Mitigation methods and recommendations could be made as a result of the information gathered from the Mine Works Programme (MWP), field survey and desktop study.

1.2 Aim of the study

- To fulfill in the requirements of the South African Heritage Resources Act (Act nr. 25 of 1999) Section 38.
- To identify and describe sites of archaeological importance that would be affected by proposed development activities.
- To identify and describe sites of cultural heritage that would be affected by proposed development activities.
- To identify and describe the impacts of development activities on the identified sites.
- To evaluate the impacts of development activities on identified sites.
- To make recommendations regarding the conservation of identified sites.
- To recommend mitigation on the affected identified sites.
- To identify and propose management measures.

1.3 Overview of proposed mining activity

Geologically the farm Buffelskloof 141JS is located over vast deposits of Vanadium-bearing titaniferous magnetite that occur in the upper zone of the Bushveld Complex to the north of Roossenekal, located over the northern margin of the Iron-bearing mineral field mostly in the form of the magnetite layers of which more than 25 may be present.

The magnetite layers are present throughout the eastern limb, with most of the ore presently being drawn from the main magnetite layer at the Mapochs Mine near Roossenekal. The grade of the Main Magnetite layer at Mapochs is 54% Fe, 11, 7 % Ti O_2 and 16% V_2 O_5 with proven reserves of 100mt. The magnetite layers have been exploited in the past at various other localities, but primarily for vanadium. Only Highveld Steel and Vanadium, who operate the Mapochs mine, process the ore for iron as well as vanadium.

In the evaluation of the reserve base, consideration was given to various mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These were used to define the geological and mining discount factors which were applied to the resource base. This proposed opencast mine is considered to be small scale mining as the total reserve is approximately 12Mt tonnes.

Given the size of the reserve, it would not be economically viable to establish a beneficiation plant on site. The iron-bearing mineral will be selectively mined, as a raw Run of Mine product and delivered to a stockpile on site, from where it will be crushed and screen and loaded onto road transport and transported to the purchaser, or their processing facility.

At a macro-level there are essentially three market segments for Iron-bearing mineral, these are:

- Highveld Steel
- Iscor
- Ferro metals

Given the size of the reserve, the proposed Buffelskloof Mine will target these markets directly. The companies have been selected based on their proximity to the proposed Buffelskloof Mine, all being less than 50km by road from the proposed operation.

As the iron-bearing mineral is going to be sold as a run of mine (ROM) product, only limited infrastructure will be required. The following infrastructure will be required for the distribution of the iron ore:

- Run of Mine Stockpile (50,000t stockpile area approximately 150 x150m)
- Weighbridge (Accredited)
- Electricity (Diesel Generator)
- Roads (Mine and Provincial)

Mapochs Mine have expressed an interest in purchasing the ROM iron bearing mineral from the proposed mine. The basis for any contractual negotiations will be as follows:

Contract Duration: Life of Mine (30 Years)

Annual Consumption: 243,083 tons

Uses: Beneficiation for Domestic Metallurgical

Mintirho Mining Pty. Ltd. plans to employ a conventional strip mining [roll-over] method. Material from the box-cut phase will be stored per overburden classification, with the bulk of the material placed in a position alongside the final strip, to facilitate filling of the final void.

Earthmoving will be done by both truck and shovel operation and by dozing, once the opencast mining has entered the strip mining [steady-state] phase.

Hard overburden and iron ore will be blasted to an acceptable fragmentation.

Rehabilitation of the opencast mining area will be done concurrently with the opencast mining according to a stated mining sequence. Materials will be placed back into the void in the former strata graphical sequence i.e. topsoil on the surface, subsoil directly below the topsoil and all hard material [sandstone and shale] in the bottom of the void.

It is envisaged that the final reinstated surface level will be approximately 0.41m above the original surface level. However the existing surface drainage pattern will remain unchanged and the total disturbed area will be free draining.

On completion of surface reinstatement, the area will be re-vegetated with suitable pasture grass species.

1.4 Environmental approvals and permits required for mining operations

According to South African Legislation, several permits/authorizations are required for the approval of the proposed mining activities to take place at the site. The Environmental Impact Assessment and Environmental Management Program will elaborate on the requirements for these approvals, by giving the necessary recommendations for compliance. These permits/authorizations and the relevant authorities are listed in Table 1.

Table 1 Relevant permits/ authorizations and relevant authorities.

Relevant Legislation
Minerals and Petroleum Resource Development Act, Act 28 of 2002
GNR 386 in Government Gazette No 28753 of 21 April 2006. Activity No 1 (c)
GNR 386 in Government Gazette No 28753 of 21 April 2006. Activity No 1 (n)
GNR 386 in Government Gazette No 28753 of 21 April 2006. Activity No 1 (s)
GNR 386 in Government Gazette No 28753 of 21 April 2006. Activity No 7
GNR 386 in Government Gazette No 28753 of 21 April 2006. Activity No 15
GNR 386 in Government Gazette No 28753 of 21 April 2006. Activity No 25
GNR 387 in Government Gazette No 28753 of 21 April 2006. Activity No 1 (c)
GNR 387 in Government Gazette No 28753 of 21 April 2006. Activity No 1 (g)
GNR 387 in Government Gazette No 28753 of 21 April 2006. Activity No 1 (p)
National Water Act, Act 36 of 1998, Section 21 (g)

1.5 Developer's, consultant's and owner's name and contact details

Project Name	Buffelskloof Mine	
Mining Right Applicant	Mintirho Mining (Pty) Ltd	
Contact Person	Mr Owner Siweya	
Contact Details	Telephone number:	+27 11 484 6004
	Fax number:	+27 11 642 9611
Consultant	GEM-Science CC	
	Telephone number:	+27 12 348 7760
	Fax number:	+27 86 684 0141
		P O Box 32748
		Glenstantia
		0010

1.6 Legislative requirements

The legislation, National Heritage Resources Act (Act No. 25 of 1999, section 35) requires that all objects of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance are protected. This includes, the protection of all these heritage components such as archaeology, shipwrecks, battlefields, graves and structures over 60 years, living heritage, and the collection of oral histories, historical settlements, landscapes, geological sites, paleontological sites and objects (SAHRA 2006).

The developer should take into consideration that the following legislation should be taken into account:

- National Environmental Management Act (NEMA) Act 107 of 1998
- National Heritage Resources Act (NHRA) Act 25 of 1999
- Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
- Development Facilitation Act (DFA) Act 67 of 1995

Sections referring directly to the identification, evaluation and assessment of cultural heritage resources in each Act are the following.

- National Environmental Management Act (NEMA) Act 107 of 1998
- Basic Environmental Assessment (BEA) – Section (23) (2) (d)
- Environmental Scoping Report (ESR) – Section (29) (1) (d)
- Environmental Impacts Assessment (EIA) – Section (32) (2) (d)
- Environmental Management Plan (EMP) – Section (34) (b)
- National Heritage Resources Act (NHRA) Act 25 of 1999
- Protection of Heritage resources – Sections 34 to 36; and
- Heritage Resources Management – Section 38
- Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
- Section 39(3)
- Development Facilitation Act (DFA) Act 67 of 1995
- The GNR.1 of 7 January 2000: Regulations and rules in terms of the Development Facilitation Act, 1995. Section 31

2 BACKGROUND TO THE ARCHAEOLOGICAL HISTORY

2.1 Terminology

The following terminology is used when referring to cultural, historic and archaeological heritage:

Stone Age: The Stone Age began with the appearance of early humans. The Stone Age people were hunter-gatherers. Stone tools and rock art are found throughout South Africa. The Stone Age can be divided into the Early Stone Age (2 000 000 – 150 000 Before Present); the Middle Stone Age (150 000 – 30 000 BP) and the Late Stone Age (30 000 until ca. AD 200).

Iron Age: This period covers the last 2000 years. Farming communities moved down from the eastern parts of Africa into the southern parts of Africa. These people settled permanently, practised agriculture and had domesticated animals. They introduced metal and mining to Southern Africa.

Historical period: This period falls into the last 300 years with the arrival of white settlers on the continent. These settlers moved into the interior of southern Africa to among other settle, farm and mine.

A Heritage Impact Assessment is not limited to artefacts, historical buildings and graves; it is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals.

2.2 Literature review

The Steelpoort River valley has a rich cultural heritage and extreme caution should be taken before any development is undertaken. Various archaeological and historical sites and San rock art have been identified in the larger region of this proposed development area (Bergh 1998). Mason (1962) refers to a number of settlements during the Prehistory of the Transvaal, whilst Maggs (1979) also comments on the Iron Age of the southern Highveld. During the Later Iron Age copper was mined in the area and a trade route to the coast cuts

through the area. During more recent times a number of wars occurred in this area, and the remains of farmsteads and burial sites are situated in this area.

Stone Age

People of the Stone Age used to settle in the greater Steelpoort area as is evident in sites like the Bushman Rock Shelter at Echo Caves near Ohrigstad. The occurrence of fragmented blade flakes as was identified in the study area supports this. Rock art is also found in the greater area although no sites have been documented in close proximity to the study area. Stone tools from the Early, Middle and Later Stone Age were identified during similar studies conducted in this area. No significant Stone Age sites have been documented in this study area.

Iron Age

Sites evident of the Early, Middle and Later Iron Age have been identified in the larger area as can be seen from the typical pottery remains identified as the Doornkop Phase (600 -900 AD). The characteristic Lydenburg masks were also found in the greater area. The settlement of early farming communities have been identified in the greater area in studies similar to this one. No evidence of Iron Age settlement was identified within the boundaries if the surveyed area (Van Schalkwyk 2007).

Historical Period

Later farmer communities identified in the oral traditions as the BaKoni lived in the valleys and plains near Lydenburg, Badfontein, Sekhukhuneland, Roossenekal and the Steelpoort area. From the 1670's to 1820's Ndundza Ndebele settled in the Steelpoort River valley (Delius & Hay 2009).

In the late 18th century powerful chiefdoms developed in the larger area, including the Pedi, Swazi, Ndebele and Ndwandwe chiefdoms. The Pedi settled predominantly in the area between the Olifants River and the Steelpoort River (Monnig 1967).

The first White settlers moved into the area in the 1840's and settled in the current Mpumalanga in 1945. This led to bitter struggles over labour and politics between the Boer

settlers and their African neighbours. The most notable of these being the Sekhukhune wars (1876; 1879) and the Mapoch wars (1863; 1883) (Monnig 1967; Delius & Hay 2009).

In 1882/3 the Ermelo lager was situated in the area during the war between the Transvaal State and the Ndzundza-Ndebele (the so-called Mapoch Wars). A number of Anglo-Boer War skirmishes occurred in the larger region, and the possibility of identifying war graves within the proposed mining area cannot be excluded (Bergh 1998).

This area later became popular for farming activities, with a number of homesteads being built on the farmlands. Graves of relatives of the people who occupy the farmsteads might be situated in the proposed mining area. Informal cemeteries of farm workers or labourers might also be located.

2.3 References used

A number of heritage impact assessments have been conducted in the northern part of Mpumalanga and southern part of Limpopo province, the SAHRA database (2009) was used to find these assessments. Recent heritage impact assessments for the De Hoop dam development by Murimbika (2005) and Van Schalkwyk (2007) were conducted on the exact location also commenting on the sensitivity of the proposed development area.

3 DESCRIPTION OF THE PROPERTY OF AFFECTED ENVIRONMENT

3.1 Location of surveyed area

The proposed Buffelskloof Mine is situated along the R 555 between the towns of Stoffberg and Steelpoort, approximately 100 km north-east of Middelburg, 80 km north of Belfast, 20 km north of Roossenekal and 40 km south of Steelpoort. The proposed mine is situated within in the Elias Motsoaledi Local Municipality of the Sekhukhune District Municipality in Limpopo, South Africa (Figure 1 and Figure 2). The farm Buffelskloof 141 JS is approximately 4080 ha and the specialist study area is approximately 580 ha and is hereafter referred to as "the site". The specialist areas indicated on the maps are representative of the revised proposed mining area.

The land is primarily utilized for livestock grazing and game farming, and very small areas under crops. The remaining area comprises of natural bushveld and riparian areas consisting of streams and man-made impoundments (Figure 3). The site corresponds to the Savanna Biome and more particularly to the Central Bushveld Bioregion as defined by Mucina & Rutherford (2006).

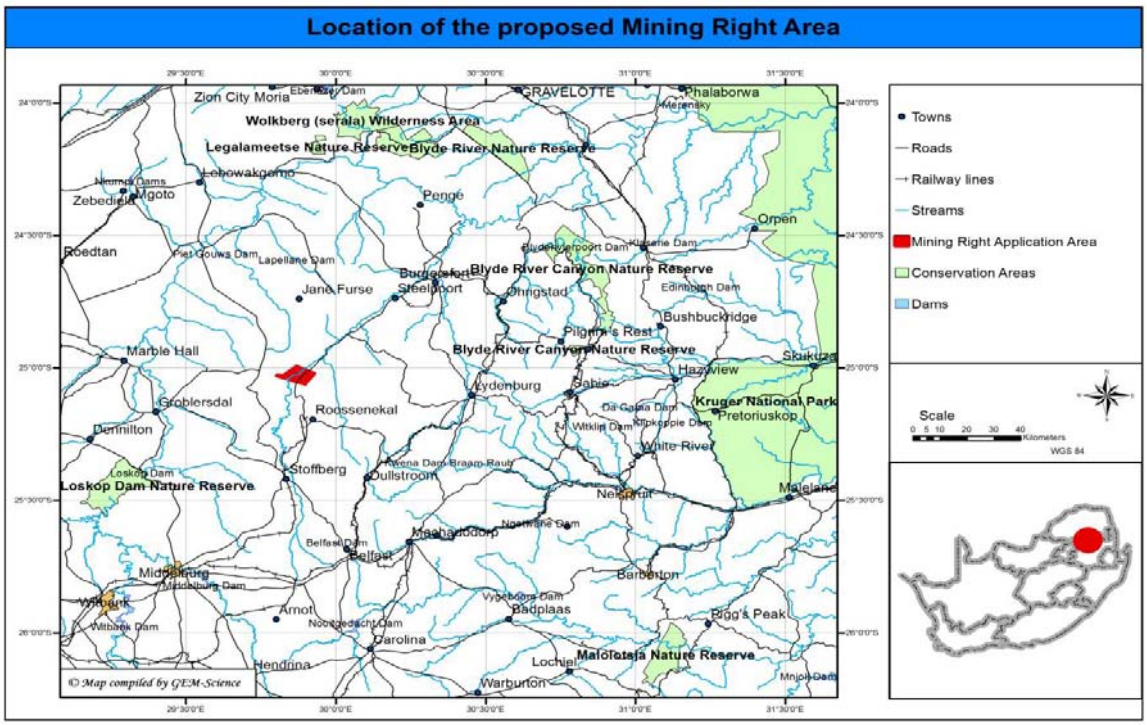

Figure 1. Location of the proposed Mining Right Area

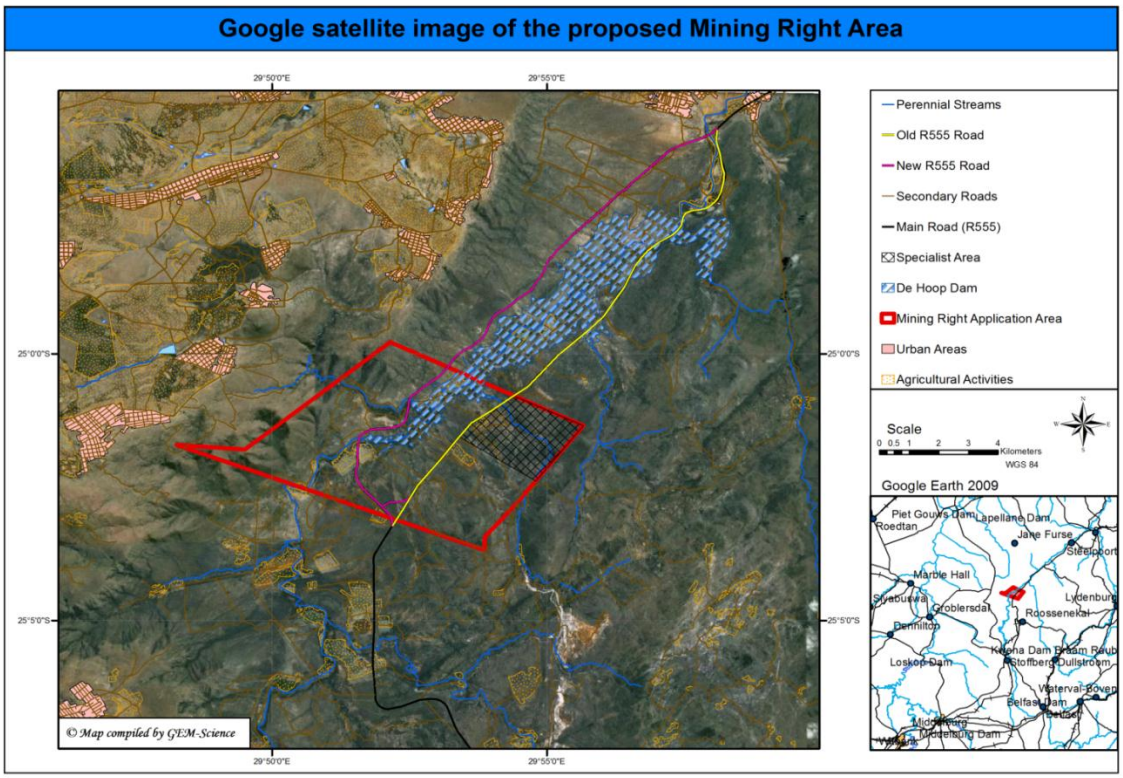

Figure 2. Regional location of the proposed Mining Right Area

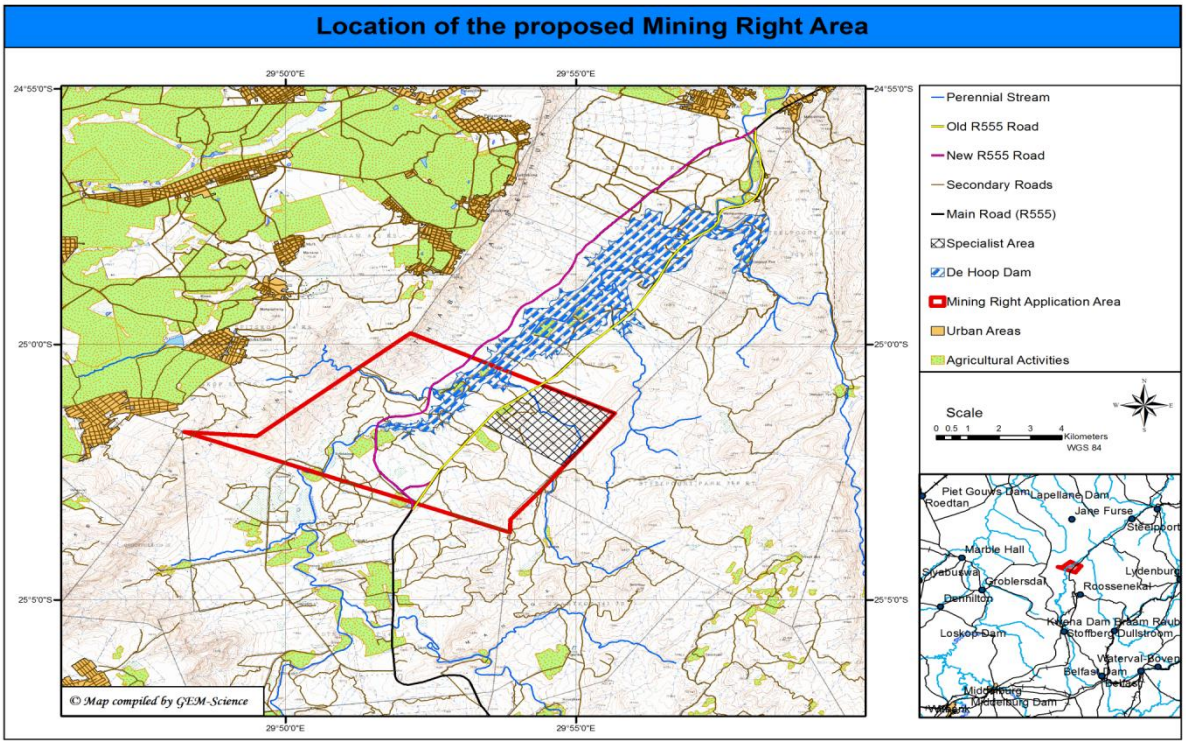

Figure 3. Land use map of the site and surrounding area

3.2 Methodology

A desktop study was conducted to fulfil in the requirements for the scoping report that was conducted earlier in the year. After the necessary permissions was obtained from the Department of Water Affairs (DWAF): De Hoop Dam and the local Buffelskloof community (Mr Kgopa, local community leader) a heritage assessment was conducted on the 29th and 30th of September 2010. The team consisted of an archaeological field expert and archaeological assistant. With the assistance of members of the local community, organised by Mr Kgopa, the team conducted the survey. The aim of the survey was to determine the extent of archaeological and cultural heritage within the boundaries of the area to be affected by the proposed mining activities.

The team was initially guided to sites of heritage importance by members of the community; Mr Samuel Moredi and Mr Joe Tau, there after the team surveyed the remainder of the area on foot.

Two GPS's were used during the survey process to log all the relevant sites and finds. Photographs of all the relevant sites were taken. No sampling was done during the survey.

All sites/find spots located during the foot surveys were briefly documented. The documentation included digital photographs and descriptions as to the nature and condition of the site and recovered materials. The sites/find spots were plotted using a Global Positioning System (GPS) (Garmin E-Trek Legend) and numbered accordingly.

No physical or other impediments had an impact on the survey. Data was acquired by using different databases, journal articles, HIA reports, maps and aerial photographs were used. The guides from the local community proved to be of great assistance as they liaised with the local community to determine the precise locations of all sites.

Figure 1 shows the location of all sites identified during the survey.

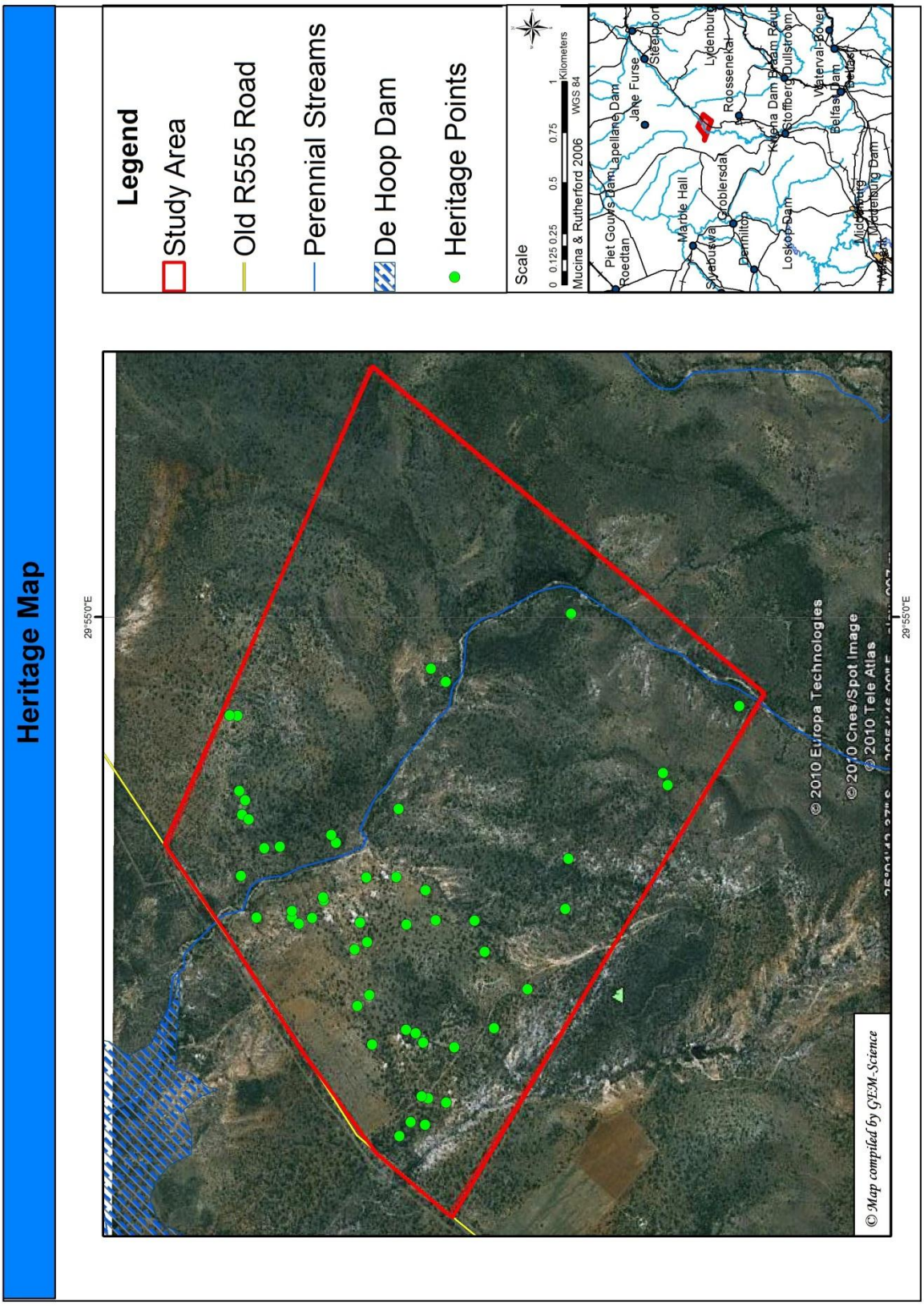

Figure 1 Location of heritage sites.

4 SIGNIFICANCE AND RECOMMENDED RATING

This section deals with the significance and recommended rating of heritage sites. The following criteria was used to determine the significance of heritage sites.

- The unique nature of a site
- The amount/depth of the archaeological deposit and the range of features (stone walls, activity areas etc.)
- The wider historic, archaeological and geographic context of the site
- The preservation condition and integrity of the site
- The potential to answer present research questions

4.1 Site significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report.

Low or No Significance:

The constraint is absent, but in instances where present, poses a negligible significance on the proposed development in terms of heritage concerns.

Moderate Significance:

The constraint is present and poses a notable but not major significance on the proposed development in terms of heritage concerns. If the constraint can not be avoided, appropriate mitigation measures must be implemented to minimize the significance.

High Significance:

The constraint is present and poses a high significance on the proposed development in terms of heritage concerns. It is recommended that the constraint be avoided or appropriate mitigation measures must be implemented to minimize the significance.

4.2 Field ratings

The following field ratings were used describing the significant archaeological heritage value of each site in term of the legislation NHRA, section 3 (3).

Table 2 Field rating

FIELD RATING	*GRADE*	*SIGNIFICANCE*	*RECOMMENDED MITIGATION*
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High Significance	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High Significance	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	Grade 4A	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	Grade 4B	Medium Significance	Recording before destruction
Generally Protected C (GP.C)	Grade 4C	Low Significance	Destruction

4.3 Impact rating

Very High

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or cultural) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.

Example: The loss of a species would be viewed by informed society as being of *Very High* significance.

Example: The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with a *Very High* significance.

High

These impacts will usually result in long term effects on the social and /or natural environment. Impacts rated as *High* will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

Example: The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of *High* over the long term, as the area could be rehabilitated.

Example: The change to soil conditions will impact the natural system, and the impact on affected parties (e.g. farmers) would be *High*.

Moderate

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as *Moderate* will need to be considered by the public or the specialist as constituting a fairly unimportant and usually short term change to the (natural and/or social) environment. These impacts are real, but not substantial.

Example: The loss of a sparse, open vegetation type of low diversity may be regarded as *Moderately* significant.

Example: The provision of a clinic in a rural area would result in a benefit of *moderate* significance.

Low

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as *Low* will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

Example: The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels.

Example: The increased earning potential of people employed as a result of a development would only result in benefits of *Low* significance to people living some distance away.

No Significance

There are no primary or secondary effects at all that are important to scientists or the public.

Example: A change to the geology of a certain formation may be regarded as severe from a geological perspective, but is of *No Significance* in the overall context.

4.4 Certainty of prediction

DEFINITE: More than 90% sure of a particular fact. Substantial supportive data exist to verify the assessment.

PROBABLE: Over 70% sure of a particular fact, or of the likelihood of an impact occurring.

POSSIBLE: Only over 40% sure of a particular fact, or of the likelihood of an impact occurring.

UNSURE: Less than 40% sure of a particular fact, or of the likelihood of an impact occurring.

4.5 Duration of impact

SHORT TERM: 0 – 5 years

MEDIUM: 6 – 20 years

LONG TERM: more than 20 years

DEMOLISHED: site will be demolished or is already demolished

4.6 Mitigation measures

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be classified as follows:

- **A** – No further action necessary
- **B** – Mapping of the site and controlled sampling required
- **C** – Preserve site, or extensive data collection and mapping required; and
- **D** – Preserve site

5 DESCRIPTION OF SITES IDENTIFIED

A number of sites were identified in the study area during the survey. The sites were classified into the following categories: Graves, homesteads, initiation schools and artifacts or find spots. The sites are named using BK, abbreviation for Buffelskloof, and a numerical sequence.

5.1 Description of grave sites

(Site numbers 1, 2, 17, 18, 21, 26, 27, 30, 31, 32, 36 and 37)

Members of the local community pointed out various graves and cemeteries in the proposed mining area. These graves and cemeteries vary in from; those with formal grave dressings to those that had elongated shaped mounds containing rock and soil.

Site BK 1:

GPS: 25° 00,984 S
29° 54,738 E

A single, formal grave was identified at this location. The grave was identified approximately 30m south of a small cemetery with 12 graves (as described in site BK 2) and did not form part of this cemetery. The grave had a formal dressing which consisted of a rectangular granite outline which was filled with gravel. The grave was orientated from north to south and an inscribed headstone was placed at the northern end of the grave. It was the grave of Lefeletse Madihlabe who was born on 10/01/1892 and died on 20/03/1938. The grave dressing was obviously placed on the grave much later after the burial.

Site size: Approximately 3m x 2m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 2 BK 1 A single grave

Site BK 2:

GPS: 25° 00,963 S

29° 54,739 E

A small cemetery with 12 graves was identified here. The cemetery was situated approximately 30m to the north of the single grave identified at site BK 1. The graves were placed in two unequal lines next to each other and all were orientated from west to east. Four of the graves had formal granite dressings and inscribed headstones. The other eight graves had informal dressings which consisted of elongated oval shaped mounds of packed rocks and soil. The cemetery was well maintained and grave goods (such as cups and plates) were present on some of the graves. The graves belonged to the Madihlaba family.

Site size: Approximately 20m x 10m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 3 BK 2 A small cemetery

Site BK 17:

GPS**:** 25° 01,246 S

29° 54,400 E

A single informal grave was identified at this location. The grave was isolated and no other structures or features were identified or associated with this grave. It was pointed out by some of the elder members of the community, but the deceased was not known to them. The grave was old and they only recognized its location and not to whom it belonged. The grave had an informal, oval shaped mound of packed rocks and soil as dressing and was orientated from west to east. The grave was overgrown with vegetation and was not maintained. No grave goods were found with the grave.

Site size: Approximately 2m x 2m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite

Duration: Long Term
Mitigation: C – Preserve site, or data collection and mapping required

Figure 4 BK 17 Single grave indicated by stones

Site BK 18:

GPS: 25° 01,234 S
29° 54,420 E

A cluster of five graves was identified here. The graves were placed in a line next to each other and all were orientated from west to east. Two of the graves had rectangular shaped cement and brick outlines which were filled with gravel and soil. Inscribed cement headstones were also placed at the western end of these two graves. The other three graves had informal oval shaped mounds of packed rocks and soil as dressings. These dressings were slightly disturbed. The graves were not maintained and no grave goods were found with them.

Site size: Approximately 15m x 5m.

Field Rating: Generally Protected A (4A)
Heritage Significance: High Significance
Impact: Negative
Certainty: Definite
Duration: Long Term
Mitigation: C – Preserve site, or data collection and mapping required

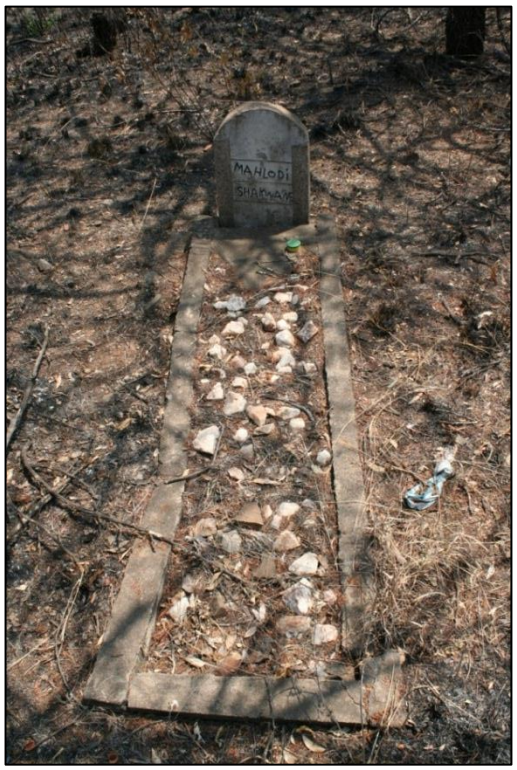

Figure 5 BK 18 One of the graves with a head stone

Site BK 26:
GPS**:** 25° 01,474 S

29° 53,725 E

A single informal grave was identified at this location. The grave was situated next to the access road to the village and close by the village. The grave had an informal, oval shaped mound of packed rocks and soil as dressing and was orientated from west to east. The grave had large tree growing on the western end and it was not maintained. No grave goods were found with the grave.

Site size: Approximately 2m x 2m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 6 BK 26 Single grave

Site BK 27:

GPS**:** 25° 01,303 S

29° 53,966 E

A cluster of six informal graves was identified at this location. The graves were placed in two unequal lines next to each other and all were orientated from west to east. Three of the graves had rectangular shaped cement and brick outlines which were filled with gravel and soil. Inscribed cement headstones were placed at the western end of these graves. The other three graves had informal mounds of packed rocks and soil as dressings. One of these graves had a small painted sign/marker placed at the western end. The graves were well maintained, but no grave goods were found with the graves.

Site size: Approximately 10m x 5m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 7 BK 27 Cluster of graves

Figure 8 BK 27 One of the graves in the cluster of graves

Figure 9 BK 27 One of the graves in the cluster of graves

Site BK 30:

GPS**:** 25° 01,246 S

29° 54,400 E

A single informal grave was identified at this location. The grave was isolated and no other structures or features were identified or associated with this grave. It was pointed out by some of the elder members of the community, but the deceased was not known to them. The grave was old and they only recognized its location and not to whom it belonged. The grave had an informal, oval shaped mound of packed rocks and soil as dressing and was orientated from west to east. The grave was overgrown with vegetation and was not maintained. No grave goods were found with the grave.

Site size: Approximately 2m x 2m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 10 BK 30 Single grave with a stone outline

Site BK 31:

GPS**:** 25° 01,561 S

29° 53,856 E

A small informal cemetery with 12 graves was identified at this location. The graves were placed in two unequal lines next to each other and all of the graves were orientated from west to east. Two clusters of graves were crudely fenced in. Five of the graves had formal granite dressings with inscribed headstones. Three more graves had informal rectangular shaped cement outlines filled with gravel as dressings. Inscribed cement headstones were placed at the western ends of the graves. The last four graves had informal oval shaped mounds of packed rocks and soil as dressings. All of the graves were well maintained, but no grave goods were found with the graves.

Site size: Approximately 20m x 10m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 11 BK 31 One of the graves in this cemetery

Figure 12 BK 31 Cemetery

Figure 13 BK 31 One of the graves in this cemetery, with a stone outline

Site BK 32:

GPS**:** 25° 01,484 S

29° 54,273 E

A small cemetery with 44 graves was identified at this location. The graves were placed in six unequal lines and all of them were orientated from west to east. Th graves were crudely fenced in. Ten of the graves had formal granite dressings with inscribed headstones. Fourteen of the graves had informal rectangular shaped cement outlines which were filled

with gravel and soil. Some of these graves had inscribed cement headstones placed at the western ends. The rest of the graves had informal oval shaped mounds of packed rocks and soil as dressings. The cemetery and the graves were well maintained and it was used recently as new burials are evident. Some of the graves also had grave goods placed on them.

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 14 BK 32 One of the graves in this cemetery

Figure 15 BK 32 Cemetery

Site BK 36:

GPS**:** 25° 01,667 S

29° 53,907 E

A single informal grave was identified at this location. The grave was isolated and no other structures or features were identified or associated with this grave. It was pointed out by some of the elder members of the community, but the deceased was not known to them. The grave was old and they only recognized its location and not to whom it belonged. The grave had an informal, oval shaped mound of packed rocks and soil as dressing and was orientated from north to south. The grave was overgrown with vegetation and was not maintained. No grave goods were found with the grave.

Site size: Approximately 2m x 2m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	High Significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

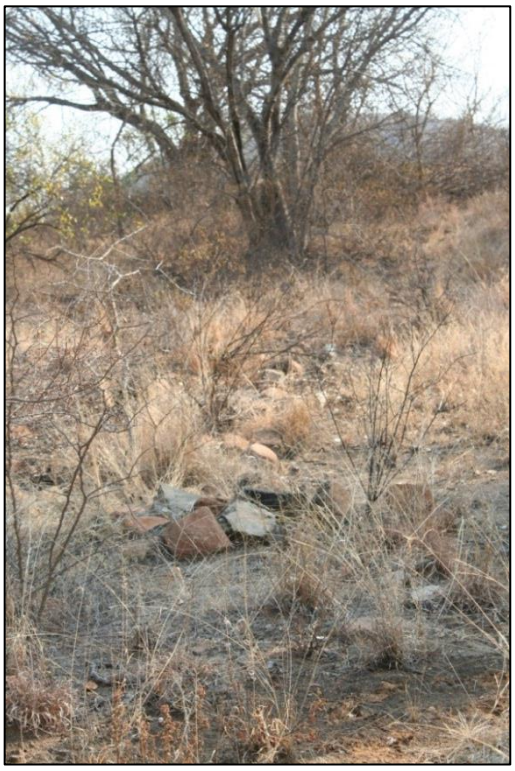

Figure 16 BK 36 Single grave with stones

Site BK 37:

GPS**:** 25° 01,756 S

29° 54,010 E

A cluster of four informal graves was identified at this location. The graves were placed in a line next to each other in a small dry streambed. The graves were orientated from north to south. These graves were also isolated and no other structures or features were identified or associated with this grave. They were also pointed out by some of the elder members of the community, but the deceased were not known to them. The graves were old and they only recognized their location and not to whom they belonged. The graves had informal, oval shaped mounds of packed rocks and soil as dressings and were orientated from north to south. The graves were overgrown with vegetation and were not maintained. No grave goods were found with the graves.

Site size: Approximately 10m x 2m.

Field Rating: Generally Protected A (4A)
Heritage Significance: High Significance

Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – Preserve site, or data collection and mapping required

Figure 17 BK 37 Single grave

5.2 Description of male initiation sites

(Site numbers 3, 33, 34, 35, 38, 39, 40 and 41)

A number of traditional male initiation schools were identified on the site of the proposed mining activities. These sites were pointed out by a member of the community that was familiar with the area. These sites were all secluded and far away from the local settlements. The initiation sites were also located in close proximity to necessary resources like water or streams.

Site BK 3:

GPS**:** 25° 01,538 S

29° 54,828 E

The remains of a traditional male initiation school were identified at this location. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of

continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

The remains of another two initiation lodges were identified next to the first one. The lodges of successive initiation schools were usually constructed in the same area (Monnig, 1967).

Several non-diagnostic potsherds were identified in and next to the track leading to the initiation school. It was customary for women to bring food in traditional ware (such as clay pots and wooden bowls) to the initiation school and leave the food in a designated area out of sight of the initiates (Monnig, 1967). The identified potsherds could have been the remains of fractured ceramics which was used to bring food to the initiates.

Site size: Approximately 300m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 18 BK 3 Male initiation site

Figure 19 BK 3 Male initiation site

Site BK 33:

GPS**:** 25° 01,615 S

29° 54,193 E

The remains of a male initiation school/lodge were identified at this location. The remains of this lodge consisted mainly of approximately 30 individual fireplaces, which were spread out over an area of approximately 75m in diameter. The fireplaces were stone packed circles with ash in it. The rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the western end of the concentration of fireplaces. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

Site size: Approximately 75m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 20 BK 33 Male initiation site

Figure 21 BK 33 Male initiation site

Site BK 34:

GPS**:** 25° 01,865 S

29° 54,357 E

The remains of a traditional male initiation school were identified at this location. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

The remains of another two initiation lodges were identified next to the first one. The lodges of successive initiation schools were usually constructed in the same area (Monnig, 1967).

Site size: Approximately 150m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 22 BK 34 Male initiation site

Figure 23 BK 34 Male initiation site

Site BK 35:

GPS**:** 25° 01,538 S

29° 54,828 E

The remains of a traditional male initiation school were identified at this location. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

Site size: Approximately 100m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 24 BK 37 Male initiation site

Site BK 38:

GPS**:** 25° 01,872 S

29° 55,010 E

The remains of a traditional male initiation school/lodge were identified at this location. The remains of this lodge were found in a neck/saddle between two hills just to the south of a river. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were

constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

Site size: Approximately 100m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 25 BK 38 Male initiation site

Site BK 39:

GPS**:** 25° 02,320 S

29° 54,764 E

The remains of another traditional male initiation school/lodge were identified at this location. The remains of this lodge were found next to a river. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and

most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

Site size: Approximately 100m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 26 BK 39 Male initiation site

Site BK 40:

GPS**:** 25° 02,116 S

29° 54,585 E

The remains of another traditional male initiation school were identified at this location. The remains of this lodge were found in a neck/saddle between two hills to the south of a river. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967).

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

The remains of another initiation lodge were identified next to the first one. The lodges of successive initiation schools were usually constructed in the same area (Monnig, 1967).

Site size: Approximately 100m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 27 BK 40 Male initiation site

Site BK 41:

GPS**:** 25° 02,116 S

29° 54,585 E

The remains of another traditional male initiation school were identified at this location. The remains of this lodge were also found in a neck/saddle between two hills to the south of a river. The remains consisted of two parallel lines of packed rocks, which were placed approximately 0,5m from each other. These two lines extended approximately 40 meters and the space in between the two lines of rock was filled with ash. These rocks and ash were the result of continues fires during the time the initiates spend at the initiation school. The fires formed a central part of the initiation lodge, which is called the *mphato.* The circumcision ceremony, healing period and most of the education during the initiation school takes place at the *mphato* (Monnig, 1967). A dilapidated stone walled structure was identified alongside the lines of rock and ash. The structure was circular in shape and measured approximately 10m in diameter. This stone walled structure was most probably used accommodation by the senior men during their stay at the initiation school. According to one of the informants (Sameul Moredi), this initiation lodge was used by his father in the early 1970's.

Several cairns of packed rocks were also identified at the one end of the lines of rock and ash. These cairns consisted of flat rocks which were packed into cairns of various sizes. Ash (from the above mentioned fires) was filled in the gaps between the packed rocks. The

bigger cairns are called *phiri* and the smaller cairns are called *phisana.* These cairns were constructed at the end of the initiation period and served as visible monuments of the time spend here by the initiates (Monnig, 1967).

Site size: Approximately 100m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary to preserve site, but through social consulting an alternative venue must be established.

Figure 28 BK 41 Male initiation site

Figure 29 BK 41 Male initiation site

5.3 Description of female initiation sites

(Site numbers 11, 12, 15, 28 and 29)

A number of female initiation schools or lodges were identified in the area of the proposed mining activities. These were all pointed out to the survey team by members of the local community. These sites differed in size and state of preservation, as they were all crudely constructed by making use of local material. The pole and lattice structure which was covered by grass was only a temporary structure for the duration of the instruction.

Site BK 11:

GPS**:** 25° 01,212 S

29° 54,254 E

The remains of a female initiation school or lodge were identified at this location. The remains of this initiation school consisted only of a basic outline of the structure (a temporary foundation) and a fireplace. The initiation school or lodge is also known as a *mphato* and is the area where young girls are being educated in various aspects of tribal life and life itself (Monnig, 1967). The numbers of the initiates attending these schools vary from school to school and from year to year. The *mphato* consisted mainly of a pole and lattice structure which was covered with grass. The structure measured approximately 5m x 10m in size and served as instruction facility as well as a temporary lodge for the girls. A central fireplace was also found in the temporary structure. The structure was fenced with a pole and lattice fence which was also covered with grass. The fenced area was used for cooking and the fence created privacy for the inhabitants during their stay. The *mphato* was situated at the back of one of the stands of the village and was not isolated from the village as was the case with the male initiation school.

Site size: Approximately 50m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term

Mitigation: A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

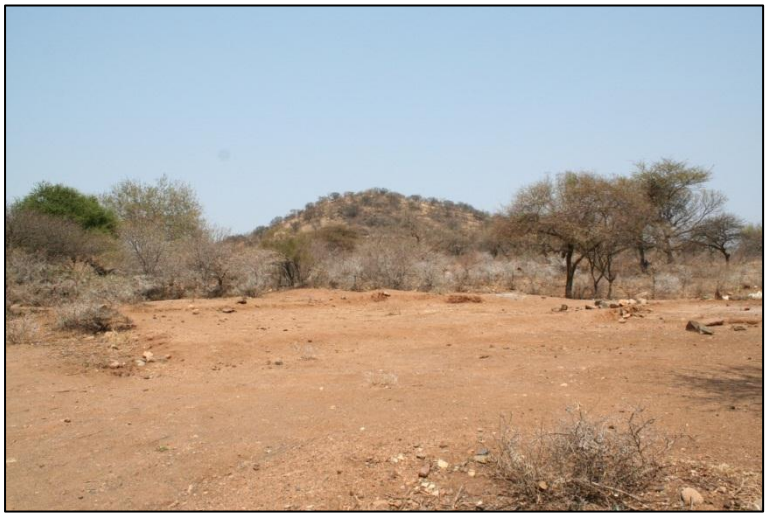

Figure 30 BK 11 Female initiation site

Figure 31 BK 11 Female Initiation Site

Site BK 12:

GPS**:** 25° 01,310 S

29° 54,187 E

The remains of another female initiation school or lodge were identified at this location. The remains of this initiation school consisted of the dilapidated remains of a temporary pole and lattice structure which was fenced in. The initiation school or lodge is also known as a *mphato* and is the area where young girls are being educated in various aspects of tribal life

and life itself (Monnig, 1967). The numbers of the initiates attending these schools vary from school to school and from year to year. The *mphato* consisted mainly of a pole and lattice structure which was covered with grass. The structure measured approximately 5m x 10m in size and served as instruction facility as well as a temporary lodge for the girls. A central fireplace was also found in the temporary structure. The structure was fenced with a pole and lattice fence which was also covered with grass. The fenced area was used for cooking and the fence created privacy for the inhabitants during their stay. The *mphato* was situated at the back of one of the stands of the village and was not isolated from the village as was the case with the male initiation school.

Site size: Approximately 50m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 32 BK 12 Female initiation site

Figure 33 BK 12 Female initiation site

Figure 34 BK 12 Female initiation site

Site BK 15:

GPS**:** 25° 01,407 S

29° 54,308 E

The remains of another female initiation school or lodge were identified at this location. The remains of this initiation school consisted of the dilapidated remains of a temporary pole and lattice structure which was fenced in. The initiation school or lodge is also known as a *mphato* and is the area where young girls are being educated in various aspects of tribal life and life itself (Monnig, 1967). The numbers of the initiates attending these schools vary from school to school and from year to year. The *mphato* consisted mainly of a pole and lattice structure which was covered with grass. The structure measured approximately 5m x 10m in size and served as instruction facility as well as a temporary lodge for the girls. A

central fireplace was also found in the temporary structure. The structure was fenced with a pole and lattice fence which was also covered with grass. The fenced area was used for cooking and the fence created privacy for the inhabitants during their stay. The *mphato* was situated at the back of one of the stands of the village and was not isolated from the village as was the case with the male initiation school.

Site size: Approximately 50m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 35 BK 15 Female initiation site

Site BK 28:

GPS**:** 25° 01,432 S

29° 53,903 E

The remains of another female initiation school or lodge were identified at this location. The remains of this initiation school consisted of the dilapidated remains of a temporary pole and lattice structure which was fenced in. The initiation school or lodge is also known as a

mphato and is the area where young girls are being educated in various aspects of tribal life and life itself (Monnig, 1967). The numbers of the initiates attending these schools vary from school to school and from year to year. The *mphato* consisted mainly of a pole and lattice structure which was covered with grass. The structure measured approximately 5m x 10m in size and served as instruction facility as well as a temporary lodge for the girls. A central fireplace was also found in the temporary structure. The structure was fenced with a pole and lattice fence which was also covered with grass. The fenced area was used for cooking and the fence created privacy for the inhabitants during their stay. The *mphato* was situated at the back of one of the stands of the village and was not isolated from the village as was the case with the male initiation school.

Site size: Approximately 50m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 36 BK 28 Female initiation site

Figure 37 BK 28 Female initiation site

Site BK 29:

GPS**:** 25° 01,459 S

29° 53,894 E

The remains of another female initiation school or lodge were identified at this location. The remains of this initiation school consisted only of a basic outline of the structure (a temporary foundation) and a fireplace. The initiation school or lodge is also known as a *mphato* and is the area where young girls are being educated in various aspects of tribal life and life itself (Monnig, 1967). The numbers of the initiates attending these schools vary from school to school and from year to year. The *mphato* consisted mainly of a pole and lattice structure which was covered with grass. The structure measured approximately 5m x 10m in size and served as instruction facility as well as a temporary lodge for the girls. A central fireplace was also found in the temporary structure. The structure was fenced with a pole and lattice fence which was also covered with grass. The fenced area was used for cooking and the fence created privacy for the inhabitants during their stay. The *mphato* was situated at the back of one of the stands of the village and was not isolated from the village as was the case with the male initiation school.

Site size: Approximately 50m in diameter.

Field Rating:	Generally Protected 4C
Heritage Significance:	Low/no significance
Impact:	Negative

Certainty:	Definite
Duration:	Long Term
Mitigation:	A – No further action necessary needed to preserve site, but through social consulting an alternative venue must be established.

Figure 38 BK 29 Female initiation site

Figure 39 BK 29 Female initiation site

5.4 Description of historic homesteads

(Site numbers 4, 5, 6, 7, 8, 9, 10, 13, 14, 16, 19, 20, 22, 23, 24 and 25a-j)

The remains and the foundations of a cluster of dilapidated structures were identified at these locations. These dilapidated structures formed part of an abandoned homestead

which was most probably occupied within the last 60 years. The remains consisted basically of packed lines of rocks which were used in the foundations of these structures on which mud-brick walls were built. Evidence of cement plaster and/or cemented floors was also found. These structures were predominantly square or rectangular in shape and the rooms measured approximately 5m x 5m. A few metal artefacts such as wire and cans were observed amongst the remains of the structures. The following sites were identified as historic homesteads.

Site BK 4:

GPS**:** 25° 00,993 S

29° 54,312 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 5:

GPS**:** 25° 01,035 S

29° 54,201 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 6:

GPS**:** 25° 01,129 S

29° 54,202 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 7:

GPS**:** 25° 01,129 S

29° 54,219 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 8:

GPS**:** 25° 01,147 S

29° 54,184 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 9:

GPS**:** 25° 01,183 S

29° 54,199 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 10:

GPS**:** 25° 01,214 S

29° 54,247 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 13:

GPS**:** 25° 01,295 S

29° 54,116 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 14:

GPS**:** 25° 01,183 S

29° 54,199 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 16:

GPS**:** 25° 01,183 S

29° 54,199 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 19:

GPS**:** 25° 00,996 S

29° 54,475 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 20:

GPS**:** 25° 01,014 S

29° 54,462 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 22:

GPS**:** 25° 01,004 S

29° 54,538 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 23:

GPS**:** 25° 01,055 S

29° 54,385 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 24:

GPS**:** 25° 01,183 S

29° 54,199 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25a:

GPS**:** 25° 01,445 S

29° 53,657 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25b:

GPS**:** 25° 01,484 S

29° 53,619 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25c:

GPS**:** 25° 01,415 S

29° 53,720 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25d:

GPS**:** 25° 01,492 S

29° 53,709 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25e:

GPS**:** 25° 01,539 S

29° 53,994 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25f:

GPS**:** 25° 01,336 S

29° 53,863 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25g:

GPS**:** 25° 01,342 S

29° 54,110 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25h:

GPS**:** 25° 01,642 S

29° 54,193 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25i:

GPS**:** 25° 01,511 S

29° 54,183 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Site BK 25j:

GPS**:** 25° 01,433 S

29° 53,725 E

Site size: Approximately 40m x 40m.

Field Rating:	Generally Protected A (4A)
Heritage Significance:	Medium significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	C – because of the probability of graves

Figure 40 Buffelskloof: One of the homesteads

Figure 41 Buffelskloof: One of the homesteads

Figure 42 Buffelskloof: One of the homesteads

Figure 43 Buffelskloof: One of the homesteads

Figure 44 Buffelskloof: One of the homesteads

Figure 45 Buffelskloof: One of the homesteads

5.5 Description of find spots

(Site numbers 42 and 43)

A number of fragmented blade flakes were identified in the area of the proposed mining activities. These finds were documented and photographed and the location was noted.

Site BK 42:

GPS**:** 25° 01,413 S

29° 54,491 E

Find spot:

A fragment of a blade flake was identified in a clearing which was exposed to some measure of erosion. The artifact was of poor quality and was made of poor quality material.

Site size: N/a

Field Rating:	Generally Protected C (4C)
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – no further action necessary

Site BK 43:

GPS**:** 25° 01,499 S

29° 54,863 E

Find spot:

Another fragment of a blade flake was identified in a clearing which was exposed to some measure of sheet erosion. The artefact was of poor quality and was made of poor quality material.

Site size: N/a

Field Rating:	Generally Protected C (4C)
Heritage Significance:	Low/no significance
Impact:	Negative
Certainty:	Definite
Duration:	Long Term
Mitigation:	A – no further action necessary

6 RECOMMENDATIONS

The following steps and measures are recommended regarding the investigated area:

6.1 Recommendations for the graves

(Site numbers 1, 2, 17, 18, 21, 26, 27, 30, 31, 32, 36 and 37)

The identified graves fell within the area intended for development, and the developer should take note of the location and recommendations regarding these graves.

Graves older than 60 years (or presumed older) and not in a municipal graveyard are protected in terms of the National Heritage Act (No. 25 of 1999). Human remains (graves) younger than 60 years may only be handled by a registered undertaker or institution declared under the Human Tissues Act.

The developer is required to follow the process described in the legislation (section 36 and its associated regulations) if he wants to develop in an area where there are graves older than 60 years.

If the developer decides to plan the development around the graves and leave them undisturbed, adequate arrangements should be made to protect the graves from the impact of the development. These should include the following:

- It is important to understand that the identified graves could have significant heritage value to the relevant families (if identified) and should therefore be preserved.
- It is recommended that the identified graves should be clearly marked with danger tape during the entire duration of the project and especially during earth-moving/bush clearing activities and a 10m - 20m buffer zone must be allowed around the graves.
- It is advisable to fence the graves to prevent future mistakes.
- The relevant families should be identified (if possible) and should be informed about the proposed activities which could possibly affect their graves.

- The proposed earth-moving/bush clearing activities should be altered and should be planned around these graves in order to protect them from any damage or other negative impacts.
- Bush clearing crews should be made aware of the graves in order that the graves will not be damaged during the earth-moving activities.
- The planning team should ensure that access to the graves is not limited in any way. A small management plan should be set up to ensure the future safety, access and maintenance of the graves next to the proposed development.

If the above recommendations can not be adhered to, further steps and measures should be taken to move the graves and relocate them to one of the official graveyards in the area. This should only be done as last resort if no other options deem to be possible. The following process is then required:

- A process of consultation with the affected families and communities, if identified, should then be initiated to start the relocation of the graves.
- Various applications to various Departments should be put into motion to obtain the necessary permissions and permits to perform the relocation of the graves. These applications and permits are required by law.
- Only after all the required permissions and permits have been obtained, can the relocation of the graves continue as performed by professionals.

6.2 Recommendations for the male initiation sites

(Site numbers 3, 33, 34, 35, 38, 39, 40 and 41)

The remains of the initiation lodge have little heritage value or significance. These schools are abundant in this region and several of these have been documented in detail (Monnig, 1967). These identified remains also originated from within the last 20 years and are thus not protected under the National Heritage Act (Act 25 of 1999). The initiation tradition, however, does have substantial heritage value and importance for the communities involved. The isolated village setup on the farm Buffelskloof gave them the perfect opportunity and isolated setting to perform their rituals and traditions. If this area is to be

affected by the proposed development, these rituals and traditions cannot be performed in the required privacy. An alternative location befitting the requirements of such an initiation school should be made available for future initiation schools if the present location will be affected by the proposed development. This should be done in consultation with the relative and affected communities.

6.3 Recommendations for the female initiation sites

(Site numbers 11, 12, 15, 28 and 29)

The remains of the initiation lodge have little heritage value or significance. These schools are abundant in this region and several of these have been documented in detail (Monnig, 1967). These identified remains also originated from within the last 20 years and are thus not protected under the National Heritage Act (Act 25 of 1999). The initiation tradition, however, does have substantial heritage value and importance for the communities involved. The isolated village setup on the farm Buffelskloof gave them the perfect opportunity and isolated setting to perform their rituals and traditions. If this area is to be affected by the proposed development, these rituals and traditions cannot be performed in the required privacy. An alternative location befitting the requirements of such an initiation school should be made available for future initiation schools if the present location will be affected by the proposed development. This should be done in consultation with the relative and affected communities.

6.4 Recommendations for the historic homestead sites

(Site numbers 4, 5, 6, 7, 8, 9, 10, 13, 14, 16, 19, 20, 22, 23, 24 and 25a-j)

The identified settlements and structures fell within the proposed area for development.
The exact age and time span of occupation of the above mentioned sites are not known. The architectural design, construction techniques and the artefacts found on these sites were used to assume a relative age for the site. These structures and thus the identified homestead seem to be from within the last 60 years and are therefore not protected under the National Heritage Act (Act 25 of 1999). The structures themselves have little or no heritage value or significance due to their relevant recent origins from within the last 60

years. The structures, however, should be avoided, due to the possibility of infant human remains underneath the remains of the structures. Monnig (1967) also mentions that infants were buried underneath floors and under the walls.

Through experience of similar sites and the knowledge of cultural customs and traditions it is known that stillborn babies and deceased infants occasionally were being buried within the occupational settlement. These children were sometimes buried underneath the floors and walls of houses and huts. These burials were not marked, but were known to the immediate family.

Customs and traditions like these were common in the rural African communities during the earlier parts of the 20th century. It is therefore not only possible, but rather likely that some of these structures may be on top of some of these infant remains.

If the developer decides to plan the development around the identified site (and possible graves) and leave it undisturbed, adequate arrangements should be made to protect the site from the impact of the development. The following steps and measures are recommended for the site:

- It is recommended that the identified site should be clearly marked with danger tape during the entire duration of the project and especially during earth-moving/bush clearing activities and a 10m - 20m buffer zone must be allowed around the site.

If the developer, however, decides to develop the concerned area, the following steps and measures are recommended:

- It is recommended that the identified site should firstly be clearly marked with danger tape during the entire duration of the consultation process during which an attempt will be made to identify the relevant families who occupied the settlement. A 10m - 20m buffer zone must be allowed around the site.
- The relevant families should be identified (if possible) and should be interviewed to enquire about the possibility of infant graves within the settlement.

If the site proof to have graves, the following mitigation steps and measures should be taken:

- Identified graves should be marked and the relevant recommendations for identified graves as described above will then be applicable to these graves as well.

If the site, however, proof to have no graves and as it is younger than 60 years and the developer decides to develop the concerned area, no mitigation measures or steps are required and the development can continue.

6.5 Recommendations for find spot sites

(Site numbers 42, 43)

Two sites were identified during the field survey that proved to contain material of archaeological importance. The fragmented blade flakes that were found were duly documented and photographed and their position noted. The sites with the identified fragmented blade flakes fell within the area of the proposed development.

The non-diagnostic character of the identified fragmented blade flakes made it impossible to determine their age or affinity. The fragmented blade flakes have little, if any, heritage value or significance in the context of the study area. No further site specific actions or mitigation measures are recommended for these sites. It is recommended that the development at this location can continue from a heritage point of view.

7 CONCLUSION

The heritage survey intended to locate, identify, evaluate and document sites, objects and structures of heritage, cultural and archaeological importance found within the proposed development area. The study intended to assess to what extent the proposed development would impact on the identified sites.

A number of sites dating to the, historic period have been identified that would be impacted on by the proposed development.

The identified sites will all be impacted on by the proposed mining activities, but legislation requires mitigation measures to be implemented. The impacts on the sites will be permanent and destructive due to the nature of the proposed activities.

It is recommended that the proposed development can continue in the area, on condition of the acceptance and implementation of the recommendations and mitigation measures for each identified site before development takes place.

The developer should keep in mind that archaeological sites and graves might be exposed during the mining activities. If anything is noticed during the development, work in that area should be stopped and the occurrence should immediately be reported to the necessary authorities or to a heritage consultant. Further investigation should then commence.

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