

**Prepared for:  
METAGO ENVIRONMENTAL ENGINEERS  
EVEREST PLATINUM MINE**

**A PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY FOR THE  
PROPOSED EXTENSION OF MINING ACTIVITIES AT EVEREST  
PLATINUM MINE (EVEREST) IN THE MPUMALANGA PROVINCE OF  
SOUTH AFRICA**

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## EXECUTIVE SUMMARY

A Phase I Heritage Impact Assessment (HIA) study, as required in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999), was done for the extension of mining operations at Everest Platinum Mine (Everest) on parts of the farm Sterkfontein 749 between Lydenburg and Roossenekal in the Limpopo Province of South Africa. The aims with the Phase I HIA was to establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) do occur in the Everest Project Area and, if so, to establish the significance of these heritage resources as well as possible mitigation measures should any of these heritage resources be affected by the proposed extension of the mining activities.

The Phase I HIA study for the two proposed new open pits and for the haul roads revealed the following types and ranges of heritage resources in the Everest Project Area, namely;

- A single stone tool on the surface of Open Pit A.
- Late Iron Age remains consisting of short stone walls, upright stones in lines, rudimentary terraces, stacks of stones and clay with pole impression markings on the surface of Open Pit A.
- Short stone walls along the haul road leading to Open Pit A.

The Late Iron Age remains were geo-referenced, tabled and mapped (Figure 3, Table 1).

The single stone tool in Open Pit A and the short walls along the haul road leading to this open pit have little significance. The development of Open Pit A and haul roads may destroy these remains. However, no mitigation measures are required for these remains.

The Late Iron Age remains which occur across the surface of Open Pit A have significance when considering the following criteria:

- The remains are scattered across a large flat surface and probably represents a single settlement.
- This site is unaffected and has research potential as it can yield information on the Late Iron Age communities who lived inside the Groot Dwars River Valley. (These communities' were probably not related to the communities who lived on the plateau, above the Dwars River Valley).

The development of Open Pit A will lead to the destruction of the Late Iron Age remains on the surface of the pit. The following mitigation measures have to be applied to these remains.

The Late Iron Age remains can not be affected (altered, removed or demolished) by the extension of the mining activities before a permit authorising such an impact has been issued by the Mpumalanga Provincial Heritage Resources Authority. This impact can only occur after the Late Iron Age remains have been subjected to a Phase II archaeological investigation. This implies that the Late Iron Age remains have to be investigated before they are destroyed. This investigation would entail that the Late Iron Age remains be mapped and that sample excavations of certain structures and features in the complex be undertaken in order to collect cultural remains from the site. These remains have to be preserved in a museum.

The results of this Phase II investigation must be published in a report which will be kept in the Mpumalanga Provincial Heritage Resources Authority's data bank.

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## **1 INTRODUCTION**

This document contains the report on a Phase I Heritage Impact Assessment (HIA) study which was done for the proposed extension of mining activities on the farm Sterkfontein 749 in the Everest Platinum Mine (Everest) located between the towns of Roosenekal and Lydenburg in the Mpumalanga Province of South Africa.

The Mpumalanga Province of South Africa has a rich heritage comprised of remains dating from the pre-historic and from the historical (or colonial) periods of South Africa. Pre-historic and historical remains in the Mpumalanga Province present a record of the heritage of most groups living in South Africa today. Various types and ranges of heritage resources that qualify as part of South Africa's 'national estate' (outlined in Section 3 of the National Heritage Resources Act, Act No 25 of 1999) occur in this province (see Box 1).

**Box 1: Types and ranges of heritage resources (the national estate) as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999).**

The National Heritage Resources Act (Act No 25 of 1999, Art 3) outlines the following types and ranges of heritage resources that qualify as part of the National Estate, namely:

- (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 natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds including-
  - (i) ancestral graves;
  - (ii) royal graves and graves of traditional leaders;
  - (iii) graves of victims of conflict;(iv) graves of individuals designated by the Minister by notice in the Gazette;
  - (v) historical graves and cemeteries; and
  - (vi) other human remains which are not covered by in terms of the Human Tissues Act, 1983 (Act No 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including -
  - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - (ii) objects to which oral traditions are attached or which are associated with living heritage;
  - (iii) ethnographic art and objects;
  - (iv) military objects;
  - (v) objects of decorative or fine art;
  - (vi) objects of scientific or technological interest; and
  - (vii) books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

The National Heritage Resources Act (Act No 25 of 1999, Art 3) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following:

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; (h)
- (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;
- (i) sites of significance relating to the history of slavery in South Africa

## **2 AIMS WITH THIS REPORT**

Everest intends to extend its mining activities on the farm Sterkfontein 749 between Roossenekal and Lydenburg in the Mpumalanga Province of South Africa. The proposed extension of mining activities may impact on any of the types and ranges of heritage as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Box 1). Consequently, Everest and Metago Environmental Engineers therefore commissioned the author to undertake a Phase I Heritage Impact Assessment (HIA) study of the proposed extension of mining activities. The aims with this Phase HIA study are:

- to establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (Box 1) do occur in the proposed Everest Project Area and, if so, to determine the nature, the extent and the significance of these remains;
- to determine whether such remains will be affected by the extension of mining activities; and, if so
- to evaluate what appropriate actions could be taken to reduce the impact of the extension of mining activities on such heritage resources.

### **3 METHODOLOGY**

This HIA study was conducted by

- Surveying on foot the proposed open pit areas while travelling the proposed haul roads. Areas adjoining the open pit areas as well as spots along the haul roads were surveyed on foot.
- Briefly surveying literature relating to the pre-historical and historical context of the Everest Project Area.
- Consulting maps of the proposed new mining areas.
- Consulting archaeological (heritage) data bases such as the one kept at the Mpumalanga Provincial Heritage Resources Agency.
- Synthesising all information obtained from the literature survey, maps and fieldwork in this report.

#### **3.1 Fieldwork**

The Everest Project Area involving two open pits and haul roads on Sterkfontein 749 was surveyed with a vehicle and on foot. The haul roads were surveyed with a vehicle and here and there on foot where sensitive spots next to the haul roads were observed. The rugged nature of some stretches of the haul roads made it impossible to survey. However, such rugged places were also unsuitable for human occupation in the past.

The open pit areas were surveyed on foot. The dense grass cover, particularly where Open Pit B will be located, prevented total surface visibility.

#### **3.2 Databases, literature survey and maps**

Databases kept and maintained at institutions such as the Mpumalanga Provincial Heritage Resources Agency in Barberton and the Archaeological Data Recording Centre at the National Flagship Institute (Museum Africa) in Pretoria were consulted to determine whether any heritage resources had been identified during earlier archaeological surveys in the Groot Dwars River Valley.

Literature relating to the pre-historical and the historical unfolding of the Groot Dwars River Valley was reviewed. This review focused on local historical groups such as the Petlas and Chomas who lived in the area, the Ndzundza-Ndebele who lived closer to Roossenekal and the Koni and Pedi who lived in the larger region. The historical or colonial period is briefly referred to as the towns of Roossenekal and Lydenburg in the former Transvaal province represent two of the oldest towns that were established by the colonists (Voortrekkers) north of the Vaal River.

It is important to contextualise the pre-historical and historical background of the Everest Project Area in order to comprehend the identity and meaning of heritage sites in and near the Everest Project Area and subsequently to determine the significance of any remains which may be affected by the development project (see Parts 4 & 8).

In addition, the Everest Project Area was also studied by means of the 1:50 000 topographical maps on which the mining and project area appears (2530AA Draaikraal, 1:50 000).

### **3.3 Mapping heritage resources**

Heritage resources found in the Everest Project Area were geo-referenced using a GPS instrument and they were thereafter mapped in Arch View (Figure 3; Table 1).

### **3.5 Assumptions and limitations**

It must be pointed out that heritage resources can be found in the most unexpected places. It must also be borne in mind that surveys may not detect all the heritage resources in a given project area. While some remains may simply be missed during surveys (observations), others may occur below the surface of the earth and may only be exposed once development (such as mining) commences.

### **3.6 Some remarks on terminology**

Terms that may be used in this report are briefly outlined in Box 2.

## Box 2- Terminology relevant to this report

The Heritage Impact Assessment (HIA) referred to in the title of this report includes a survey of heritage resources as outlined in the National Heritage Resources Act , Act 25 of 1999 (see Box 1).

Heritage resources include all human-made phenomena and intangible products that are the result of the human mind. Natural, technological or industrial features may also be part of heritage resources, as places that have made an outstanding contribution to the cultures, traditions and lifestyles of the people or groups of people of South Africa.

The term 'pre-historic' refers to the time before any historical documents were written or any written language developed in a particular area or region of the world. The historical period and historical remains refer, for the project area, to the first appearance or use of 'modern' Western writing brought to Lydenburg and Roossenekal by the first colonists who settled in this area after c. 1839.

The term 'relatively recent past' refers to the 20<sup>th</sup> century. Remains from this period are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains. Some of these remains may, however, be almost sixty years old and these may qualify as heritage resources in the near future.

It is not always possible, based on observations alone, to distinguish clearly between archaeological remains and historical remains, or between historical remains and remains from the relatively recent past. Although certain criteria may help to make this distinction possible, these criteria are not always present, or, when they are present, they are not always clear enough to interpret with great accuracy. Criteria such as square floor plans (a historical feature) may serve as a guideline. However, circular and square floors may occur together on the same site.

The term 'sensitive remains' is sometimes used to distinguish graves and cemeteries, as well as ideologically significant features such as holy mountains, initiation sites or other sacred places. Graves in particular are not necessarily heritage resources if they date from the recent past and do not have headstones that are older than sixty years. The distinction between 'formal' and 'informal' graves in most instances also refers to graveyards that were used by colonists and by indigenous people. This distinction may be important, as different cultural groups may uphold different traditions and values with regard to their ancestors. These values have to be recognised and honoured whenever graveyards are exhumed and relocated.

The term 'Stone Age' refers to the prehistoric past, although Late Stone Age peoples lived in South Africa well into the historical period. The Stone Age is divided into an Earlier Stone Age (3 million years to 150 000 thousand years ago) the Middle Stone Age (150 000 years to 40 000 years ago) and the Late Stone Age (40 000 years to 200 years ago).

The term 'Iron Age' refers to the last two millennia and 'Early Iron Age' to the first thousand years AD. 'Late Iron Age' refers to the period between the 16<sup>th</sup> century and the 19<sup>th</sup> century and can therefore include the historical period.

Mining heritage sites refer to old, abandoned mining activities, underground or on the surface, which may date from the pre-historic, historical or the relatively recent past.

The term 'mining area' ('critical area') refers to the area where the developer wants to focus development activities.

The term 'peripheral area' refers to the area that will not be affected by the proposed new development activities.

The 'project area' refers to both the mining and peripheral areas.

Phase I studies refer to surveys using various sources of data in order to establish the presence of all possible types of heritage resources in any given area.

Phase II studies include in-depth cultural heritage studies such as archaeological mapping, excavating and sometimes laboratory work. Phase II work may include the documenting of rock art, engraving or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavations of archaeological sites; the exhumation of bodies and the relocation of graveyards, etc. Phase II work may require the input of specialists and requires the cooperation and approval of SAHRA.

## 4 THE EVEREST PROJECT AREA

### 4.1 Location

The Everest Project Area covers parts of the farm Sterkfontein 749 in the Steenkampsberge between Lydenburg and Roossenekal in the Mpumalanga Province of South Africa. The extension of mining activities will occur in the Everest Project Area which is situated along the eastern edge of the Groot Dwars River Valley, a considerable distance below high ground where Everest's existing operations are located (Figure 1).



**Figure 1- Open Pit A (in the foreground) on the edge of the Groot Dwars River Valley (above).**

## 4.2 The nature of the Everest Project Area

The extension of mining activities at Everest includes the following developments:

- The development of two open pit mines (Open Pit A and Open Pit B).
- Establishing additional surface infrastructure (a second portal system) for the underground mining operations.
- Extending existing support services and networks (haul roads, power lines, conveyors and surface water management) at the mine to service the mining extensions.

Developing the open pits and haul roads (A1, A2 and A3, which will follow existing roads) are the most significant activities that have any relevance to this Phase I HIA study. The Everest Project Area therefore refers to the newly planned open pit areas and the upgrade of the haul roads (Figure 3).

The Everest Project Area is part of the mountainous and rugged eastern edge of the Groot Dwars River Valley. This part of the valley was not suitable for occupation by large groups of communities in the past. Human presence in the valley was restricted to small bands of hunters during the Stone Age and small communities during the Late Iron Age.

**Figure 2- The rugged landscape associated with Open Pit B in the Groot Dwars River Valley (below). No heritage resources of significance were observed in this new open pit area.**



#### **4.3 Contextualising the Everest Project Area**

The Everest Project Area falls within a geographical area which includes parts of Sekhukhuneland and incorporates the Steelpoort Valley as well as the Lydenburg and Roossenekal areas which are important historical beacons close to project area (2530AA Draaikraal [1: 50 000]) (Figure 3).

Bantu-Negroid farmers and metalworkers, the first Iron Age people, established large villages in the Steelpoort Valley and near Lydenburg 1 500 years ago while colonists who left the Cape Colony in the early 19<sup>th</sup> century established themselves to the north of the Vaal River in two of the oldest towns in the former Transvaal Province, namely Lydenburg and Roossenekal. Sekhukhuneland became the headquarters of one of the

largest Sotho (Pedi) populations who occupied the northern parts of the country from the 17<sup>th</sup> century onwards.

Early Iron Age sites dating back to AD500 to AD800 were discovered by archaeologists along the banks of the Sterkspruit and other rivers near Lydenburg. The Steelpoort Valley to the northwest was also occupied during this time period and eventually became the heartland of the Pedi during the 18<sup>th</sup> and 19<sup>th</sup> centuries. However, numerous small Sotho clans occupied the area before the Kgatla consolidated these groups into the Pedi state that dominated the region. The majestic Leolo Mountain range to the north-west of the project area in time became an important beacon in the origin history of many Bantu groups now scattered across the Limpopo Province of South Africa.

The Everest Project Area which partly involves the Groot Dwars River Valley may have been occupied from the earliest times. The earliest human occupation of the project area was probably by Early Stone Age people such as *Homo erectus* who lived 500 000 years ago. Acheulian sites with hand axes and cleavers may occur on forested valley floors near rivers and streams such as the Groot Dwars River. The forested nature of the river valley to the west of the project area probably did not change drastically during the Acheulian period. *Homo Erectus* manufactured picks, plains and other tools that were adapted to forested areas towards the end of the Acheul (the Sango phase). The Acheulian people did not prefer high altitudes and therefore probably did not occupy settlements higher up the slopes or on plateaux along the slopes of valleys.

Middle Stone Age sites are numerous and date from 250 000 years ago and are associated, initially, with an archaic form of *Homo sapiens* and later with modern humans (*Homo sapiens sapiens*). Middle Stone Age people roamed the project area as Middle Stone Age sites were discovered during HIA studies in the Groot Dwars River Valley. Middle Stone Age people manufactured stone tools with prepared surface platforms, points (for arrows) and hafted stone tools in wooden handles (for spears, knives). They also occupied caves and rock shelters. Their sites, although discovered on the river valley floors, may also occur in rock shelters.

Later Stone Age San hunter-gathers established base camps in caves but also on level plains dating back from 20 000 years ago. The Later Stone Age period is also associated with rock engravings and rock paintings. Rock engravings dating from the more recent past were recorded against the eastern slope of the Groot Dwars River Valley. It is possible that more engravings may exist in this valley. A substantial number of rock engravings have also been recorded near Lydenburg to the east of the project area.

The first Bantu-Negroid herders and agriculturists south of the Limpopo River occupied the area around Lydenburg where a number of terracotta heads (masks) were discovered in the 1960's. These Early Iron Age remains date from AD500 to AD800 and also occur in the Steelpoort Valley. Although no Early Iron Age Lydenburg type sites have been recorded in the project area it is likely that Iron Age sites dating from the first millennium may exist in valleys, particularly near the confluences of large rivers and small streams.

During the Middle Iron Age (AD900 to AD1200) Eiland type sites occur at various places in South Africa. Little is known about the Eiland people except that they manufactured a characteristic style of pottery, practised metal working, herded with cattle and probably kept small stock as well. They built dwellings with clay and grass roofs. Grinding stones indicate that they either planted crops or traded metal for crops. At least one Middle Iron Age site on the Groot Dwars River valley's floor was found during a HIA study.

The Pedi state was established during the late 18<sup>th</sup> and early 19<sup>th</sup> centuries. This chiefdom reached its zenith, initially under Thulare and later during the rule of Sekhuhkune. The Pedi (of Kgatla origin) consolidated various scattered Sotho clans in Sekhukhuneland in the Pedi confederacy. The Pedi chiefdom lasted during the Late Iron Age with its centre in the Steelpoort Valley. However, numerous Late Iron Age sites that became part of the Pedi sphere of influence are scattered across the Limpopo and Mpumalanga Provinces. These sites are marked by elaborately constructed stone walls and pottery that may be highly decorated.

During the Late Iron Age and Early Historical Period the Ndzundza-Ndebele occupied the southern and western parts of the larger project area. The Ndzundza-Ndebele established their capitol Erholweni (Mapochs Caves) near Roossenekal. Numerous sites that are associated with the Ndzundza-Ndebele and possibly with the Swazi (Mokwana) are scattered around Erholweni in a sphere of influence that is generally referred to as KoNomtjarhelo. The Ndzundza-Ndebele ruled this domain for approximately forty-four years (1839 to 1883) under the consecutive reigns of four chiefs. Erholweni was declared a national monument in 1968.

During the 18<sup>th</sup> and the 19<sup>th</sup> centuries lesser well known clans such as the Phetlas and Chomas settled in an area to the east of Roossenekal where they build an extensive and diversified range of stone walled sites that have only recently being brought to public attention by archaeologists becoming more active with heritage impact assessment work in this part of the country.

Roossenekal was established by colonists (Voortrekkers) who settled on the Mapochsgronden during the late 1830's. Conflict between the Colonists and the Ndzundza-Ndebele eventually lead to at least two wars. During the Mapochs Wars as many as thirty to forty blockhouses were built around Erholweni in order to serve as bulwarks for ZAR forces fighting the Ndzundza-Ndebele. These forts eventually contributed with the siege of the Mapochs Caves and the final subjugation of the Ndzundza-Ndebele in 1867.

Numerous *pre-difaqane* and *difaqane* wars were fought to the west of the project area during the first quarter of the 19<sup>th</sup> century. Battles between the ZAR forces (with Swazi support) and the Kopa of Maleoskop (near Groblersdal) and between the Pedi and the British (with Swazi support) in Sekhukhuneland also occurred during this time period.

During the historical period colonists (Voortrekkers) established themselves in Lydenburg and at Roossenekal during the early 19<sup>th</sup> century. The colonists established farm homesteads with outbuildings, agricultural fields, cattle kraals and cemeteries close to their homes. Some of these heritage resources still exist in the larger project area.

African villages and homesteads dating from the historical period – after the Pedi and Ndzundza-Ndebele tribes were disbanded - are common in the larger project area. Homesteads occupied by labourers in the service of farmers with single graves or with small informal cemeteries are also common in the larger project area.

Two declared heritage sites close to the project area are the Mapochs Caves and the Groot Dwars River geological occurrence which represents unique chromite bands in anorthosite. The geological site is situated to the north of the Everest Project Area while Erholweni (Mapochs Caves) is located to the west of the Groot Dwars River Valley.

## **5 THE PHASE I HERITAGE IMPACT ASSESSMENT**

### **5.1 Types and ranges of heritage resources**

The Phase I HIA study for the two proposed new open pits and for the haul roads revealed the following types and ranges of heritage resources in the Everest Project Area, namely;

- A single stone tool on the surface of Open Pit A.
- Late Iron Age remains consisting of short stone walls, upright stones in lines, rudimentary terraces, stacks of stones and clay with pole impression markings on the surface of Open Pit A.
- Short stone walls along the haul road leading to Open Pit A.

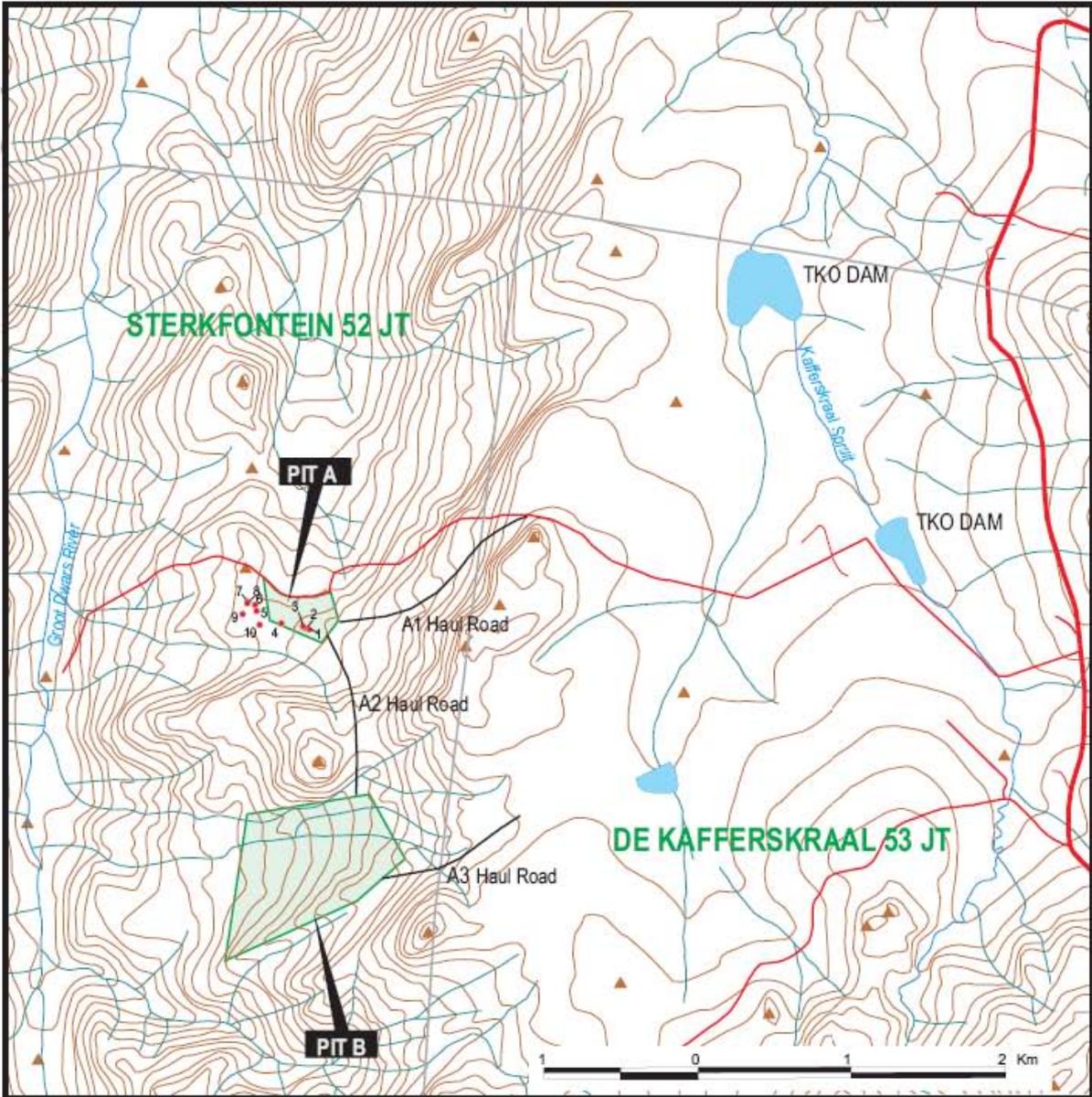
The Late Iron Age remains were geo-referenced, tabled and mapped (Figure 3, Table 1).

The significance of the Late Iron Age remains has been determined by means of various criteria. All these heritage resources are now briefly discussed and illuminated with photographs, maps and tables.

#### **5.1.1 A stone tool**

A single MSA point was observed on the surface of Open Pit A. This tool was manufactured from dolerite and may date back between 200 000 years to 22 000 years ago. The artefact was not geo-referenced or photographed as it represents a typical point, one of the most common artefacts associated with the MSA.

It is highly likely that a few more scattered stone tools which are currently covered with vegetation may occur elsewhere in the Everest Project Area.



**Figure 3-** The Everest Project Area along the eastern edge of the Groot Dwars River Valley. A single stone tool and remains from the Late Iron Age were found on the surface of Open Pit A.

### 5.1.2 Late Iron Age remains

Remains associated with a small Late Iron Age community (Site LIA01) occur on some of the protrusions and on the surface of Open Pit A. These remains include inconspicuous pieces of stone walls, lines with upright stones, rudimentary terrace walls and evidence of some houses that were constructed with clay and wooden poles. An interrupted circular shaped wall occurs on the slope of a small protrusion. No potsherds were observed. .

Some of these remains have been geo-referenced and mapped (Figure 3, Table 1).

These Late Iron Age remains probably constitute a single settlement which covers part of the surface of Open Pit A.



**Figure 4- Rudimentary lines of stone which are part of Site LIA01 in Open Pit A (above).**

NO ON MAP	STRUCTURES AND FEATURES IN OPEN PIT A	COORDINATES	REMARKS
01	Rudimentary terrace walls against slope of low protrusion	25° 08.894'S 30° 07.939'E	Possible living terraces?
02	Rudimentary terrace walls against slope of low protrusion	25° 08.888'S 30° 07.921'E	Possible living terraces?
03	Rudimentary terrace walls against slope of low protrusion	25° 08.882'S 30° 07.916'E	Possible living terraces?
04	Rudimentary terrace walls against slope of low protrusion	25° 08.869'S 30° 07.839'E	Possible living terraces?
05	Stacks of stone on flat surface	25° 08.825'S 30° 07.756'E	Boundary walls for homesteads
06	Stacks of stone on flat surface	25° 08.807'S 30° 07.746'E	Boundary walls for homesteads
07	Clay with pole impression markings		Remains of houses
08	Clay with pole impression marking	25° 08.798'S 30° 07.724'E	Remains of houses
09	Interrupted circular stone wall on low protrusion	25° 08.839'S 30° 07.708'E	Circular enclosure
10	Interrupted circular stone wall on low protrusion	25° 08.878'S 30° 07.766'E	Circular enclosure

**Table 1- Coordinates for rudimentary terraces, stacks of stones, clay with pole impression markings and incomplete enclosure on the surface of Open Pit A (above).**



**Figure 5- Stacks of stones on the surface of Open Pit A (above). These features may have been parts of short walls that demarcated various homesteads.**



**Figure 6- Clay nodules with pole impression markings. These clay nodules were stacked against the pole framework of dwellings such as huts (above).**

### **5.1.3 Short stone walls**

A few short stone walls were observed along the haul road that leads to Open Pit A. These walls are inconspicuous and not associated with any sites. They were mostly built along steep slopes and are barely visible as they are covered with thick vegetation.

These walls are limited and some are damaged. They have little significance and have not been geo-referenced.

## **6.2 The significance of the heritage resources**

The single stone tool in Open Pit A and the short walls along the haul road leading to this open pit have little significance. However, the Late Iron Age remains which occur across the surface of Open Pit A have significance and will be affected when the proposed new open pit is developed. The significance of these remains therefore has to be determined.

### **6.2.1 The significance of the Late Iron Age remains**

The Late Iron Age remains have medium to high significance when considering criteria such as the following:

- The remains are scattered across a large flat surface and probably represents a single settlement.
- This site is unaffected and has research potential as it can yield information on the Late Iron Age communities who lived inside the Groot Dwars River Valley. (These communities' were probably not related to the communities who lived on the plateau, above the Dwars River Valley).

## **6.3 The impact on the Late Iron Age remains**

The development of Open Pit A will lead to the destruction of the Late Iron Age remains on the surface of the pit.

## **6.4 Mitigating the Late Iron Age remains**

No mitigation measures are required for the single stone tool or for the short stone walls that occur along the haul road leading to Open Pit A. However the following mitigation measures have to be applied to the Late Iron Age remains.

The Late Iron Age remains can not be affected (altered, removed or demolished) by the extension of the mining activities before a permit authorising such an impact has been issued by the Mpumalanga Provincial Heritage Resources Authority. This impact can only occur after the Late Iron Age remains have been subjected to a Phase II archaeological investigation. This implies that the Late Iron Age remains have to be investigated before they are destroyed. This investigation would entail that the Late Iron Age remains be mapped and that sample excavations of certain structures and features in the complex be undertaken in order to collect cultural remains from the site. These remains have to be preserved in a museum.

The results of this Phase II investigation must be published in a report which will be kept in the Mpumalanga Provincial Heritage Resources Authority's data bank.

## 7 CONCLUSION AND RECOMMENDATIONS

The Phase I HIA study for the two proposed new open pits and for the haul roads revealed the following types and ranges of heritage resources in the Everest Project Area, namely;

- A single stone tool on the surface of Open Pit A.
- Late Iron Age remains consisting of short stone walls, upright stones in lines, rudimentary terraces, stacks of stones and clay with pole impression markings on the surface of Open Pit A.
- Short stone walls along the haul road leading to Open Pit A.

The Late Iron Age remains were geo-referenced, tabled and mapped (Figure 3, Table 1).

The single stone tool in Open Pit A and the short walls along the haul road leading to this open pit have little significance. The development of Open Pit A and haul roads may destroy these remains. However, no mitigation measures are required for these remains.

The Late Iron Age remains which occur across the surface of Open Pit A have significance when considering the following criteria:

- The remains are scattered across a large flat surface and probably represents a single settlement.
- This site is unaffected and has research potential as it can yield information on the Late Iron Age communities who lived inside the Groot Dwars River Valley. (These communities were probably not related to the communities who lived on the plateau, above the Dwars River Valley).

The development of Open Pit A will lead to the destruction of the Late Iron Age remains on the surface of the pit. The following mitigation measures have to be applied to these remains.

The Late Iron Age remains can not be affected (altered, removed or demolished) by the extension of the mining activities before a permit authorising such an impact has been issued by the Mpumalanga Provincial Heritage Resources Authority. This impact can only occur after the Late Iron Age remains have been subjected to a Phase II archaeological investigation. This implies that the Late Iron Age remains have to be investigated before they are destroyed. This investigation would entail that the Late Iron Age remains be mapped and that sample excavations of certain structures and features in the complex be undertaken in order to collect cultural remains from the site. These remains have to be preserved in a museum.

The results of this Phase II investigation must be published in a report which will be kept in the Mpumalanga Provincial Heritage Resources Authority's data bank.

A handwritten signature in black ink, reading "Julius CC Pistorius". The signature is written in a cursive style with a long vertical line extending downwards from the end of the name.

**DR JULIUS CC PISTORIUS**  
**Archaeologist &**  
**Heritage Management Consultant**  
**Member ASAPA**

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