

ADDENDUM C :HERITAGE IMPACT ASSESSMENT

**TO:  
THE NETWORK SERVICES MANAGER  
ESKOM, RUSTENBURG**

**A HERITAGE IMPACT ASSESSMENT FOR ESKOM'S NEW  
PROPOSED 88KV POWER LINE FROM THE MIDDELKRAAL  
SUBSTATION TO THE BIG HORN/WONDERKOPPIES POWER  
STATIONS ON THE FARM ELANDSDRIF 467JQ AND  
MIDDELKRAAL 466JQ NEAR MARIKANA AND MOOINOOI IN  
THE NORTH-WEST PROVINCE OF SOUTH AFRICA**

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## EXECUTIVE SUMMARY

The Eskom study area is located on the farm Elandsdrift 467 JQ and Middelkraal 466 JQ in the Western Platinum Mine premises in the Brits District of the North-West Province of South Africa. Various stretches of the proposed new 88kV power line between the Big Horn/Wonderkoppies Power Stations and the Middelkraal Substation were subjected to a heritage impact assessment (Figure 1).

The range of heritage resources discovered in/close to the critical area (new power line corridor) consisted of the remains of two Late Iron Age sites (Site MDL01 and Site MDL02), scattered potsherds and a graveyard (GY01). The Late Iron Age sites and the graveyard occur in Part EF and the scattered potsherds in Part GH of the proposed new power line corridor. The graveyard and Late Iron Age sites, which were evaluated according to a set of criteria, were determined to be of outstanding significance. The scattered potsherds have little significance. The coordinates of the Late Iron Age site, scattered potsherds and graveyard have been tabulated (Table 1).

The proposed new power line may stretch across an enclosure located on the eastern edge of the series of granite hills that is part of Site MDL01. However, the pylons carrying the power line will be built on both sides of the kopje (to the north and to the south) so that the pylons (and the power lines hanging on the pylons) will not affect the enclosure.

Part EF of the proposed new power line may cross the eastern perimeter of Site MDL02 that is located to the south of a series of granite knolls. However, this site needs not to be damaged if the pylons, carrying the power lines, are placed on opposite sides (to the north and to the south) of the granite knolls.

The cemetery (GY01) is located at a safe distance to the west of the proposed new power line corridor and will not be affected by the construction of the new power line.

The scattered potsherds in Part GH is of little significance and will remain in the new proposed power line corridor if the pylons do not affect them.

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## 1 INTRODUCTION

This document contains the report on the results of a cultural heritage impact assessment study done for Eskom in the Bankenveld in the Rustenburg District of the North-West Province of South Africa. The Bankenveld is located, ecologically speaking, between the Bushveld (to the north) and the Highveld (to the south). The Bankenveld has a rich archaeological heritage comprised of remains dating from the prehistoric and the historical (or colonial) periods of South Africa. Prehistoric and historical remains in the Bankenveld form a record of the cultural heritage of most groups living in South Africa today. These remains include:

- limestone caves and underground dwelling sites of the earliest hominids (ape-man creatures) who lived near Krugersdorp in South Africa 2 to 3 million years ago;
- Stone Age sites that may be associated with the San people and which date back hundreds of thousands of years;
- rock engraving sites located near diabase outcrops and dating from the last 20 000 years;
- rock painting sites in the Magaliesberg and in the Plianesberg which date from the last 10 000 years;
- Early Iron Age sites occupied by the first Bantu-Negroid agriculturists and possibly cattle herders which date back 1 500 years;
- Late Iron Age sites dating from the last 500 years;
- remains dating from the previous century when the first immigrant Boers settled in various places to the north, the south and to the west of the Magaliesberg from the 1840's onwards;
- blockhouses built by British troops during the Anglo-Boer War (1899-1900) on the Magaliesberg and other mountain ranges;
- graves and graveyard sites dating from historic and prehistoric times; and
- numerous other formal historical features (the Voortrekker Monument, the Willem Prinsloo agricultural museum, the Pioneers' Open Air Museum, Melrose House, the Sammy Marks Museum, the Paul Kruger house museum in Pretoria and Paul

Kruger's farm Boekenhoutfontein to the north of Rustenburg, the Rustenburg and Zeerust museums, etc).

## 2 CULTURAL HERITAGE REMAINS AND LEGISLATION

Eskom's study area is situated in the archaeologically sensitive Bankveld. All settlements older than hundred years and all structures or parts of structures older than sixty years located in this region are protected by legislation. A synopsis of the relevant legislation is provided below. It must serve as a guideline to be considered before any development project is undertaken.

### 2.1 The Environment Conservation Act (Act No 73 of 1989)

The Environment Conservation Act (Act No 73 of 1989) makes provision for the drawing up of reports concerning the impact on the environment of activities identified and prohibited in terms of Sections 21 and 22 respectively. These reports must evaluate the impact that development may have on the natural and man-made environment, and this includes archaeological sites.

Local and regional authorities (Town Councils, Regional Governments and Regional Services Councils) also have regulations requiring evaluation of the possible effects that rezoning and development schemes may have on the environment, including the cultural environment. These regulations must be studied to ensure that they are implemented correctly.

### 2.2 The Minerals Act (Act No 50 of 1991)

The Minerals Act (Act No 50 of 1991) and the Minerals Amendment Act (Act No 103 of 1993) require plans for the conservation of the environment at or in the vicinity of any mine or works to be detailed in an environmental management programme (EMP). The EMP must indicate how the natural and the 'man-made' environment will be protected and rehabilitated during and after the mining.

### 2.3 The National Heritage Resources Act (Act No 25 of 1999)

The National Heritage Resources Act (Act No 25 of 1999) requires all developers (including engineers, farmers [agriculturists] and mines, previously excluded from the bill) to undertake impact assessment studies whenever any development activities are undertaken. The law also provides guidelines for impact assessment studies to be done whenever cultural resources may be destroyed by development activities. Permits must be acquired from the South African Heritage Resources Agency (SAHRA) before a heritage site can be affected or destroyed during the course of development activities.

Archaeological impact assessment studies have therefore become a common procedure for all development activities, even if such development may be exempted in terms of the Environment Conservation Act.

The new law stipulates the types of remains, which qualify as cultural resources (heritage). These cultural resources are classified into national, provincial and other cultural heritage resources. The law stipulates general principles for heritage resources management and involves all three levels of government in the management of the country's cultural heritage. The law also requires community participation in the protection of living heritage resources.

SAHRA establishes and maintains a national policy, strategy plans and standards for heritage resources management and monitors the system as a whole. Heritage authorities assist and co-operate with individuals and organisations concerned with the study, the conservation and the promotion and utilisation of national heritage resources. A newly established National Heritage Resources Fund provides financial assistance for heritage projects.

## **2.4 Legislation relevant to graves, the exhumation and relocation of human remains**

Different legislation applies to different categories of graves, namely:

### **2.4.1 Graves younger than 60 years**

Graves younger than 60 years are protected by Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983). These graves fall under the jurisdiction of the National Department of Health and the relevant Provincial Department of Health. Approval for the removal of graves and bodies must be directed to the Office of the relevant Provincial Minister. (This function is usually delegated to the Provincial MEC for Local Government and Planning, or, in some cases, the MEC for Housing and Welfare). Authorisation for exhumation and re-interment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must be adhered to. In order to handle and transport human remains, the institution conducting the relocation must have authorisation under Section 24 of Act 65 of 1983 (the Human Tissues Act).

## **2.4.2 Graves older than 60 years**

Graves older than 60 years but younger than 100 years fall under Section 36 of Act 25 of 1999 (the National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and under the jurisdiction of the South African Heritage Resources Agency (SAHRA). The Procedure for Consultation Regarding Burial Grounds and Graves (Section 36[5] of Act 25 of 1999, National Heritage Resources Act) is applicable to graves older than 60 years which are situated outside a formal cemetery administered by a local authority. Graves in this category located inside a formal cemetery administered by a local authority also require the same authorisation as set out for graves younger than 60 years, over and above SAHRA authorisation. If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authorities must be adhered to. In order to handle and to transport human remains, the institution conducting the relocation needs authorisation under Section 24 of Act 65 of 1983 (the Human Tissues Act). Any alteration to a grave in this category or the relocation thereof must be supervised by an archaeologist accredited by SAHRA and the Cultural Resource Management Section of the South African Association for Archaeologists.

## **2.4.3 Graves older than 100 years**

All graves older than 100 years are legislated as being archaeological and therefore protected under Act 25 of 1999 (the National Heritage Resources Act). SAHRA authorisation is required for all graves in this category, regardless of where they are located. Any alteration to a grave in this category or the relocation thereof must be supervised by an archaeologist accredited by SAHRA and the Cultural Resources Management Section of the South African Association of Archaeologists. If the grave is situated in a cemetery administered by a local authority, the authorisation as set out for graves younger than 60 years are also applicable, over and above SAHRA authorisation. At the discretion of SAHRA, the Procedure for Consulting Regarding Burial Grounds and Graves (Section 36[5] of the National Heritage Resources Act) might also be required. In order to handle and transport human remains, the institution conducting the relocation must have authorisation under Section 24 of Act 65 of 1983 (the Human Tissues Act).

## **2.4.4 Graves of victims of conflict**

All graves of victims of conflict, regardless of how old they are or where they are situated, are protected by Act 25 of 1999 (the National Heritage Resources Act).

SAHRA authorisation is required for all graves in this category. Any alteration to a grave in this category or the relocation thereof must be supervised by an archaeologist accredited by SAHRA and the Cultural Resources Management Section of the South African Association for Archaeologists. If the grave is situated in a cemetery administered by a local authority, the authorisation as set out for graves younger than 60 years is also applicable, over and above SAHRA regulations. On the discretion of SAHRA, the Procedure for Consulting Regarding Burial Grounds and Graves (Section 36[5] of the Act 25 of 1999, National Heritage Resources Act) might also be required. In order to handle and transport human remains, the institution conducting the relocation must have authorisation under Section 24 of Act 65 of 1983 (the Human Tissues Act).



### 3 AIM OF THIS REPORT

Eskom intends to establish a 88kV power line between the Middelkraal Substation located on the farm Elandsdriif 467 JQ and the Big Horn power station located on the farm Middelkraal 466 JQ near Mooinooi and Marikana in the Brits District of the North-West. The Middelkraal Substation is located in the Western Platinum Mine premises and the Big Horn power station is located approximately 4,5 kilometres further to the north, outside the mining premises. The proposed new power line will be established to the west of existing power lines running between the Middelkraal Substation and the Big Horn and Wonderkoppies power stations located further to the north (Figure 1).

In order to comply with legislation Eskom requires knowledge of the presence, relevance and the significance of any heritage resources that may occur in a critical area (new power line corridor) to be established along the existing power line corridor between the Middelkraal Substation and the Big Horn and the Wonderkoppies power stations further to the north. Eskom needs this information in order to take pro-active measures with regard to any heritage remains that may be affected, damaged or destroyed by the proposed new development project. Eskom therefore commissioned me to undertake a heritage impact assessment study of the critical areas (the deviations) to be affected by the proposed development. The aim of the heritage impact assessment study is:

- to establish whether any heritage resources do occur in or near the proposed new corridor and, if so, what the nature, the extent and the significance of these remains are;
- to determine whether such remains will be affected by the building of the new power line; and
- to evaluate what appropriate actions could be taken to reduce the impact of the development on such remains.

## 4 METHODOLOGY

### 4.1 A survey on foot

The proposed new power line corridor between the Middelkraal Substation and the Big Horn power station was subjected to a survey on foot. The proposed new corridor was divided into different stretches (or parts) that were subjected to a survey on foot. These stretches of power lines are outlined and discussed in detail in Part 6 of this report.

### 4.2 Databases and literature survey

Information derived from databases kept and maintained at institutions such as the South African Heritage Resources Agency (SAHRA) and the National Cultural History Museum in Pretoria were used to determine whether any heritage remains have been identified in or near the critical areas (corridor).

A survey of literature relating to the cultural and historical context of the study area was also undertaken in order to establish whether any heritage remains of significance occur in or near the study area (see Part 5.3).

The author of this report also has completed several impact assessment studies in the immediate area where this study was done and is therefore not totally unacquainted with the region in which the development is planned (see Bibliography, Part 10).

### 4.3 Assumptions and limitations

It must be kept in mind that cultural heritage surveys may not detect all heritage resources in any given study area. While certain 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 the digging of holes for pylons) commences.

### 4.4 Some remarks on terminology

The cultural heritage assessment referred to in the title of this report includes a survey of heritage resources as outlined in the National Heritage Resources Act (Act No 25 of 1999).

Cultural heritage (or cultural resources) includes 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' generally 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 Rustenburg area, to the first appearance or use of 'modern' Western writing brought to Marikana by the first Colonists who settled in this area c. 1850. The historical period for the Marikana area therefore dates from c. 1850.

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, however, may be close to sixty years of age and may, in the near future, qualify as heritage resources.

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 tombstones that are older than sixty years.

The term 'Stone Age' refers to the prehistoric past, although Late Stone Age peoples lived in the area 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 'Late Iron Age' refers to the period between the 17<sup>th</sup> century and the 19<sup>th</sup> century and can therefore include the historical period.

The term 'study area' or 'project area' refers to the area where Eskom wants to focus its development activities.

The 'critical areas' refer to the areas (or corridors) that will be affected by Eskom's proposed development project.

The 'peripheral area' refers to the area where Eskom does not intend to focus its development activities, but which are in close proximity to the critical areas (or corridors).

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 and excavating work, the documenting of rock art sites, engraving sites or historical dwellings and other architectural features and structures, the sampling of archaeological sites or shipwrecks, etc. Phase II work requires the co-operation and approval of SAHRA.

## 5 THE STUDY AREA

### 5.1 Location

Eskom intends to establish a new 88kV power line between the Middelkraal Substation on the farm Elandsdrift 467JQ and the Wonderkoppies/Big Horn power stations further to the north on the farm Middelkraal 466JQ. The proposed new power line corridor runs across the Western Platinum Mine's premises. The study area is situated between Mooi-nooi in the south and Marikana to the north in the Brits District of the North-West Province of South Africa. The proposed new power line corridor is approximately 4,5 kilometres long and will be established to the west of an existing power line corridor. The proposed new power line corridor was divided into various stretches in order to undertake the heritage impact assessment study. (Figure 1).

### 5.2 The developed nature of the study area not conducive to the conservation of heritage remains

Two modern towns near the study areas are Mooi-nooi to the south and Marikana to the north. Formal and informal settlements in the area include Wonderkoppies to the north and Modderfontein, Bapong and Majakaneng to the south. Farmers and workers have occupied the Mooi-nooi and Marikana areas since the 19<sup>th</sup> century. Farmers and farm-workers have therefore occupied the area without interruption for more than a hundred and fifty years. Remains dating from this historical (colonial and modern) period and from the relatively recent past therefore exist in or near the study area.

The study area is largely covered by agricultural fields and has also been scarred by abandoned (older) and current mining activities. Numerous other development activities, with a negative impact from a cultural heritage point of view, have also been undertaken in the study area. Earlier mining rehabilitation activities as well as secondary (dirt) roads, rock dumps, large barren (scarred) surfaces, overhead lines (telephone and power lines) have contributed to the disturbed nature of the study area.

### 5.3 The historical context of the study area

The proposed new development is located to the north of the Magaliesberg near the Hartebeespoort area and falls within the boundaries of the Brits district. The Magaliesberg and surrounding area is known for its rich and diverse range of heritage resources. Stone Age sites are scattered along the Magaliesberg and are also found in caves and rock shelters in the mountain. Rock engraving sites are located further towards Maanhaarand and Rustenburg in the west.

Colonial farmsteads dating from the second half of the 19<sup>th</sup> century were established along the southern and northern foot of the Magaliesberg. Marthinus Ras, who lived on the farm Bokfontein to the east of the study area, built the first canon in South Africa. The ZAR forces used this canon in Rustenburg against the British during the First Anglo-Boer War (1880-1881). The barrel of the canon was manufactured from the hoops of wagon wheels that had been forged together.

British blockhouses dating from the Second Anglo-Boer War (1899-1902) occur along the ridge of the Magaliesburg, from Pretoria in the east to Rustenburg in the west. Several of these structures are located in Kommandonek and in Pampoennek in the Magaliesberg, to the south of the study area. Late Iron Age stone walled sites, such as the one occupied by Mzilikazi's Matabele (Ndebele) near Silikaatsnek in the Magaliesberg, also abound in the area. Even Early Iron Age sites (dating from the first millennium AD) have been found in the Magalies Valley between the southern foot of the Magaliesberg and the northern foot of the Witwatersberge.

Numerous Late Iron Age Tswana and Ndebele clans occupied the Magaliesberg area from the 17<sup>th</sup> century onwards. Some of the main groups, such as the Kgatla and Kwena, were based near Pretoria, Brits and Marikana, while the Fokeng lived further to the west in Rustenburg. The Bapò, a people whose earliest ancestors were descended from the Amambo Nguni from Kwa Zulu/Natal, arrived in the Magaliesberg during the 16<sup>th</sup> or 17<sup>th</sup> centuries. Here they established a sphere of influence to the north of the Magaliesburg. One of their capitals was situated at Tlhogokgolo (Wolhuterskop), a prominent mountain situated to the east of the study area. Several of the chiefs of this clan, also known as the Kwena Mogale, were known by the name of Mogale. The name of the Magalies Mountains (Magaliesberg) was derived from the name Mogale.

Since the second half of the 19<sup>th</sup> century, farmers and workers have occupied the Mooinooi and Marikana areas. Tobacco and citrus farming, together with cattle herding, became a subsistence pattern that has lasted to this day. Old farm homesteads, agricultural implements and other infrastructure such as tobacco drying sheds still exist on farms adjacent to the study area. What started as small-scale mining activities north of the Magaliesberg during the 20<sup>th</sup> century was soon eclipsed by the rise of the platinum-mining complex near Rustenburg. The discovery of the Merensky Reef led to the platinum boom, which soon was followed by the establishment of numerous chrome mines in the North-West province of South Africa.

Figure 1. Eskom's proposed new power line corridor between the Middelkraal Substation on Elandsdrift 467JQ and the Big Horn/Wonderkoppies power stations on Middelkraal 466JQ will be located to the west of an existing power line corridor. The proposed new power line corridor was subjected to a heritage impact assessment study. Note the two Late Iron Age sites (MDL01 and MDL02) and cemetery (GY01) located in and near the proposed new power line corridor.

**SITE MDL01**

**SITE MDL02**

**GY01**

**Scattered potsherds**

**PART AB**

**PART CD**

**PART EF**

**PART GH**

## 6 THE HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED NEW POWER LINE CORRIDOR

The proposed new power line corridor between the Middelkraal Substation and the Big Horn/Wonderkoppies Power Stations was divided into the following stretches that were subjected to a heritage impact assessment (Figure 1):

- Part AB runs from the Middelkraal Substation to a four-way stop street.
- Part CD runs from the four-way stop to a series of granite kopjes.
- Part EF runs from the granite kopjes to a series of low granite knolls.
- Part GH runs from the granite knolls to the Big Horn/Wonderkoppies Power Stations.

The heritage impact assessment study of these various stretches is discussed below and illustrated with photographs.

### Part AB: from the Middelkraal Substation to a four-way stop street

Part AB leaves the Middelkraal Substation and runs in a southerly direction across a tar road and then turns with a ninety degree to the east following other power lines until it reaches the four-way stop. Here, Part AB turns with another ninety degrees running towards the north.

Part AB is approximately 350 metres long and runs across the perimeter of an agricultural field. This part of the power line corridor also crosses a water pipe line and various parts in the agricultural field that has been disturbed by different activities in the past.

No heritage remains of great significance were observed along Part AB.



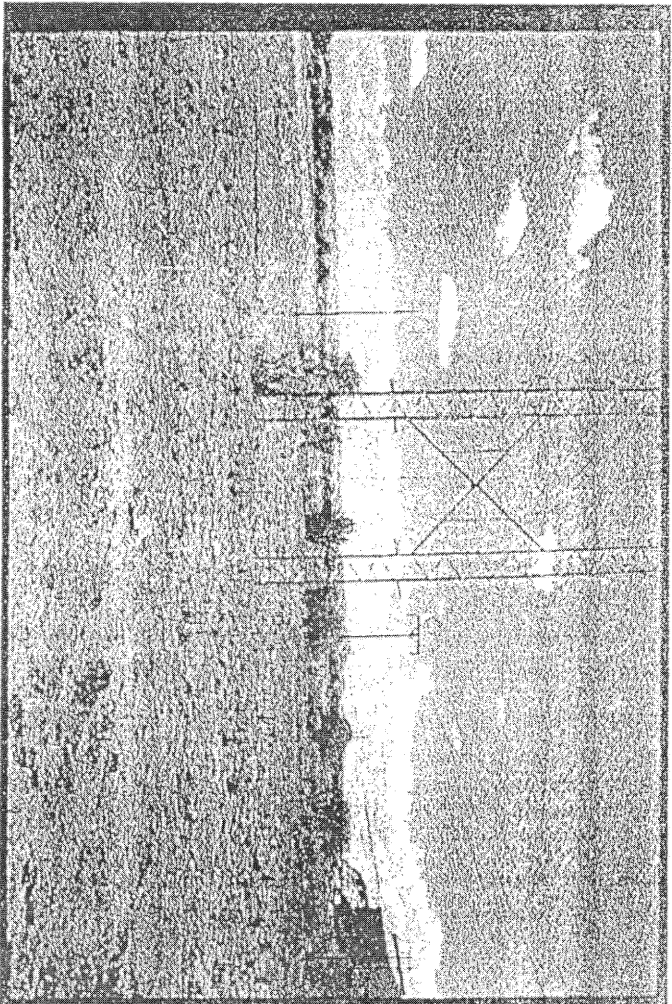
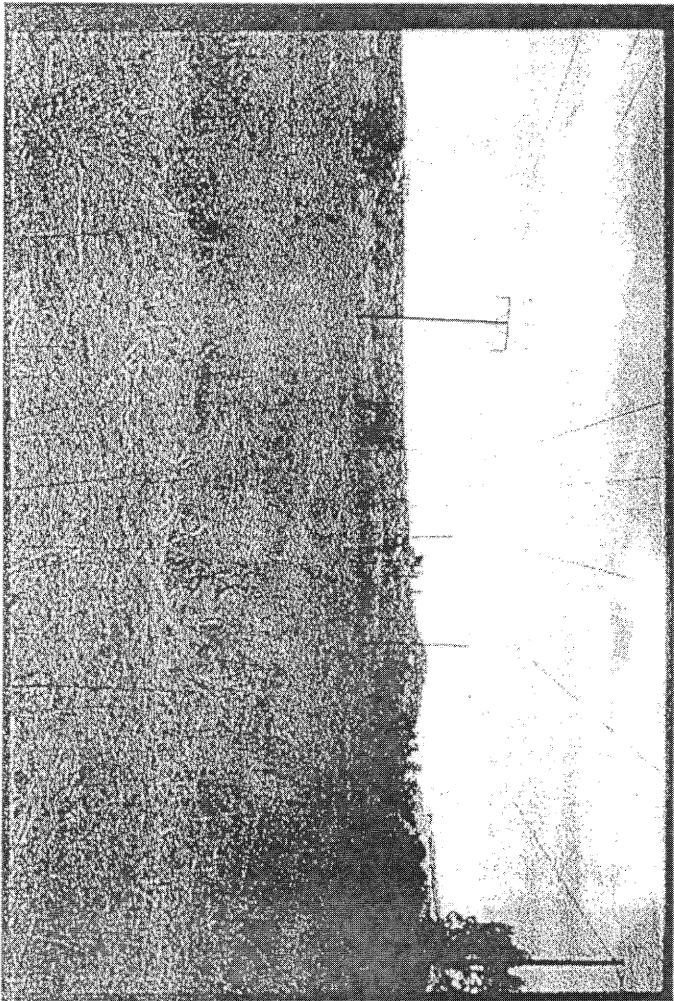
Part CD: from the four-way stop to the granite kopjes

Part CD runs from near the four-way stop in a northerly direction for approximately 2,1 kilometres before approaching a stream and a series of granite kopjes. Before reaching the stream the power line turns slightly to the north-east and then again towards the north-west in order to avoid the granite kopjes. This part of the power line corridor runs parallel and to the west of the tar road leading to Western Platinum Mine's smelter.

Part CD is the longest of all the stretches that were subjected to the heritage impact assessment. It crosses at least four dirt roads running towards the west and at least two pipe lines running from east to west. Both Part CD of the existing power line corridor as well as the proposed new power line corridor (parallel and to the west of the former) have been intensely disturbed in the past. These corridors are marked by dirt roads, pipe lines, furrows and scarred pieces of land (Figures 2 & 3, next page).

No heritage remains of great significance were observed along Part CD.

Figures 2 & 3. Part CD, between the four-way stop and the granite kopjes on a tributary of the Mareitlwane River.



Part EF: from the granite kopjes to the granite knolls

Part EF runs from the granite kopjes in a northerly direction for approximately 900 metres before it reaches the series of low granite knolls. Part EF initially runs across open veld, a railway line and single isolated granite protrusions before reaching the more prominent series of granite knolls directly to the west of the gate giving access into the Western Platinum Mine smelter complex.

The remains of at least two Late Iron Age sites (Site MDL01 and Site MDL02) and a cemetery occur along Part EF. Whilst Site MDL01 is located on the northern foot of the most prominent granite protrusion at the start of Part EF, the second Late Iron Age site (Site MDL02) and cemetery (GY01) are located along the southern foot of the granite knolls at the end of Part EF.

*Heritage remains*

The following heritage and sensitive remains were observed along Part EF:

Site MDL01

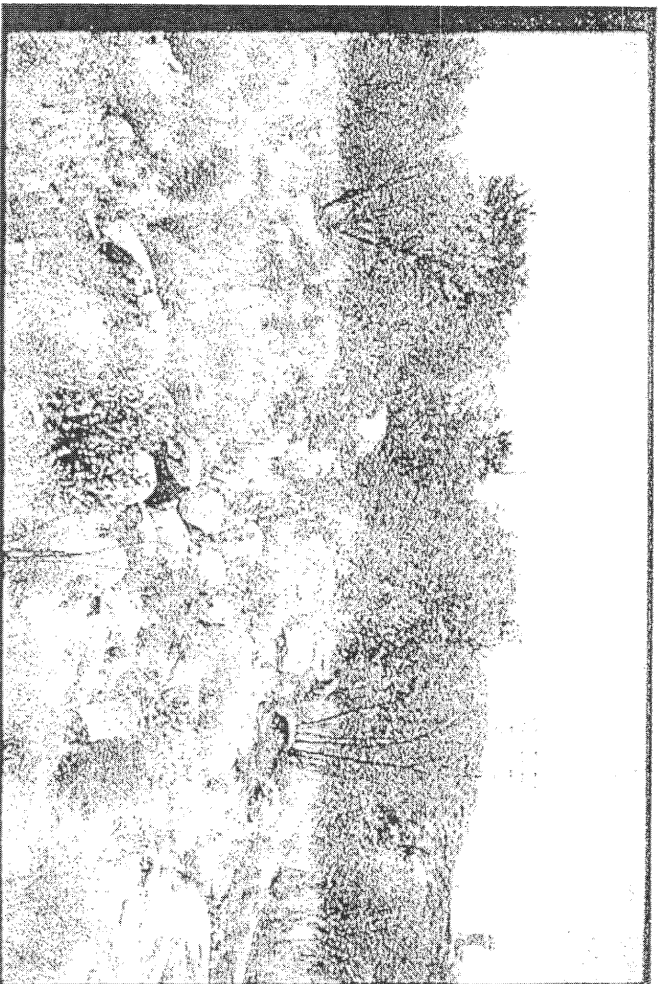
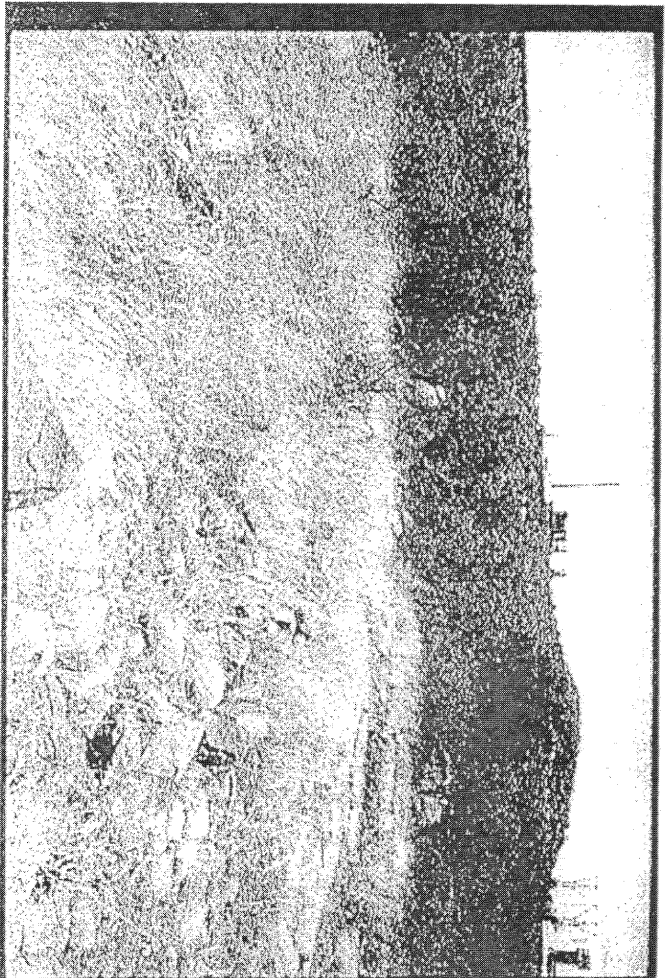
Site MDL01 is composed of at least two structures that were built with stone. Both structures are located on the northern foot of the most prominent of the granite protrusion that are situated near the northern banks of a tributary of the Marelwane River. The two structures are a semi-circular enclosure built with massive upright stones along the northern foot of the kopje and a smaller enclosure situated on the lower contours of the eastern perimeter of the granite protrusions (Figures 4 & 5, next page).

Site MDL01 is not associated with any visible deposits or with other material (such as bones, potsherds, etc) on its surface. It is possible that a part of this site, slightly to the north of the kopjes, may have been covered by the numerous heaps of waste rock that have been dumped around these kopjes in the past.

It is possible that the proposed new power line may cross the small enclosure on the eastern edge of the granite kopjes. However, as the pylons will be builds on opposite sides of the kopjes (to the north and to the south) the enclosure will not be affected by the power line, which will be hanging above the enclosure.

Site MDL01 can be considered of some significance with regard to criteria such as its cultural historical significance, research value, etc (Table 1).

Figures 4 & 5. Site MDL01 on the northern slope and the eastern edge of the granite kopjes on the banks of a tributary of the Marelwane River.



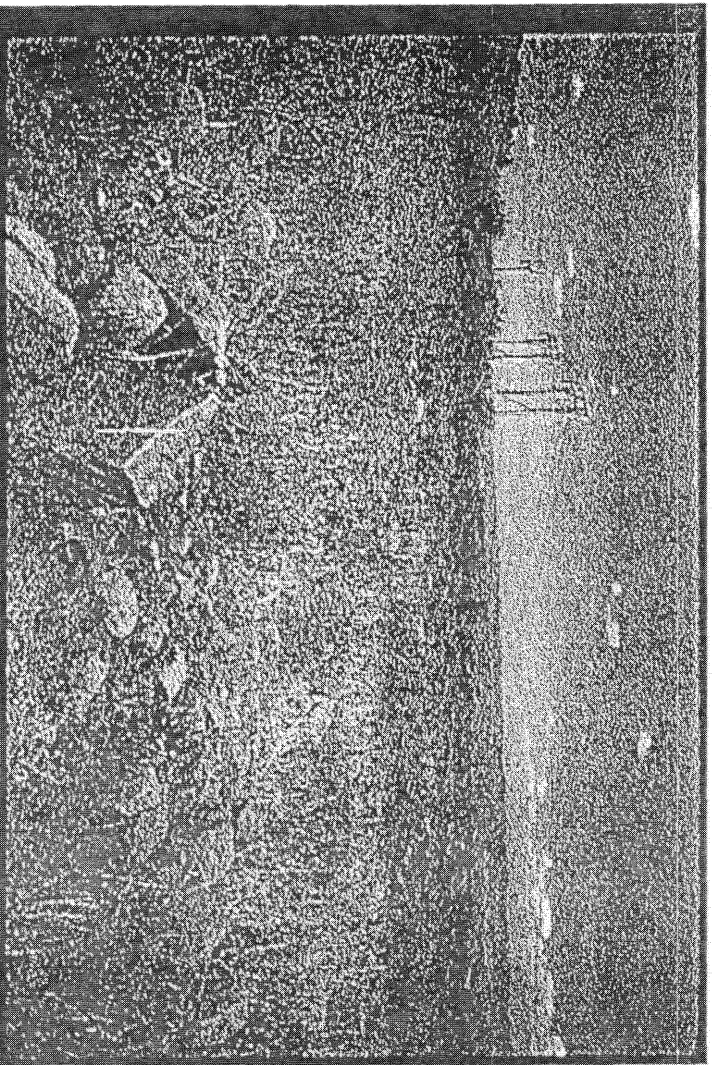
### Site MDL02

Site MDL02 consists of a series of enclosures and other stone walled structures located slightly to the west of the proposed new power line corridor (Figure 6, below). The site is marked by surface material such as clay nodules and potsherds. The clay nodules are the remains of dwellings (huts) built with clay walls and possibly with conical-shaped straw roofs.

The new power line corridor (to the west of the existing power lines) may cross the eastern edge of some of the stone walls in this site. However, Site MDL02 need not to be affected if the pylons are carefully positioned to miss (avoid) the stone walls.

Site MDL02 can be considered of some significance with regard to criteria such as its cultural historical significance, research value, state of preservation, ideological significance, etc. (Table 1).

Figure 6. Site MDL02 with the existing power lines between Middelkraal Substation and Big Horn/Wonderkoppies Power Station.



### The cemetery (GY01)

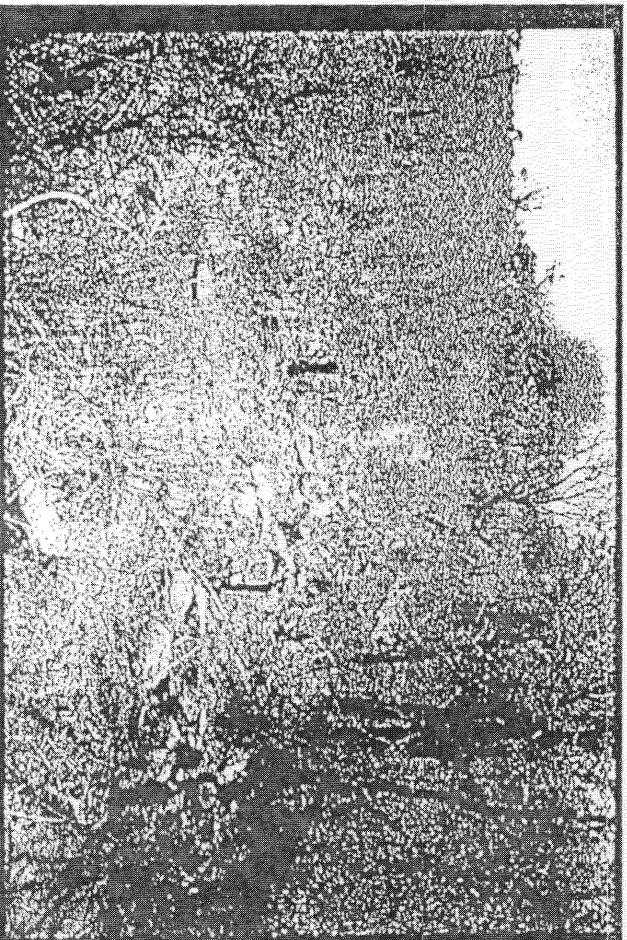
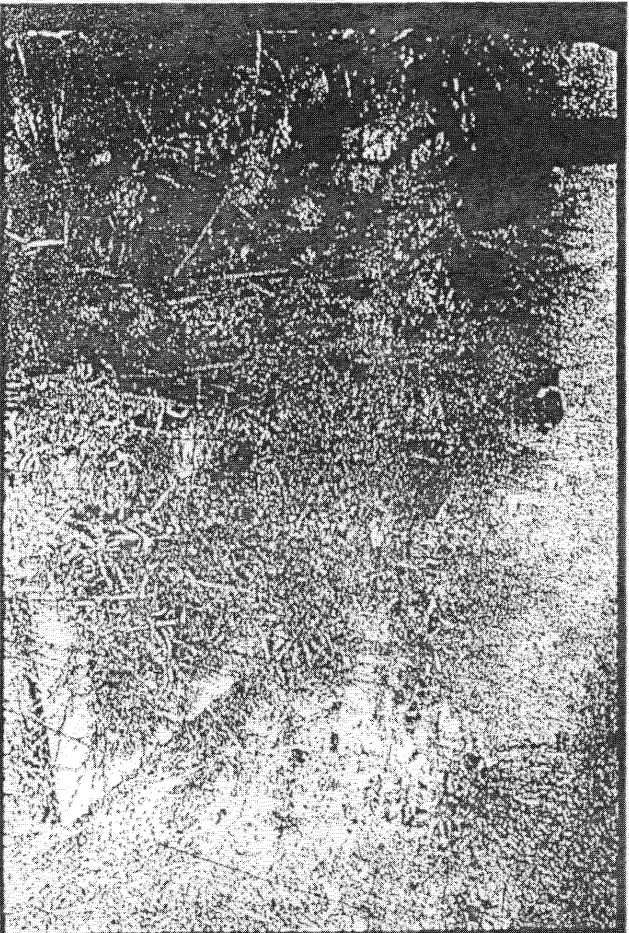
A cemetery (GY01) composed of approximately 25 to 30 graves is located within the perimeters of Site MDL02 (Figures 7 & 8). The graves are those of black people who may have some historical association with Site MDL02. Only two of the graves are covered with cement slabs and with tombstones. The tombstones, however, do not have inscriptions. The majority of the graves are edged with stones. As no funerary goods occur on the graves it can be accepted that relatives do not visit the graves any more.

These graves are situated slightly to the west of the proposed new power line corridor and will not be affected by the new power line.

The graveyard can be considered of outstanding significance (Table 1).



Figures 7 & 8. Graveyard 01 contains approximately 25 to 30 graves. The graveyard is located to the west of the proposed new power line corridor between the Middelkraal Substation and the Big Horn/Wonderkoppies Power Station.

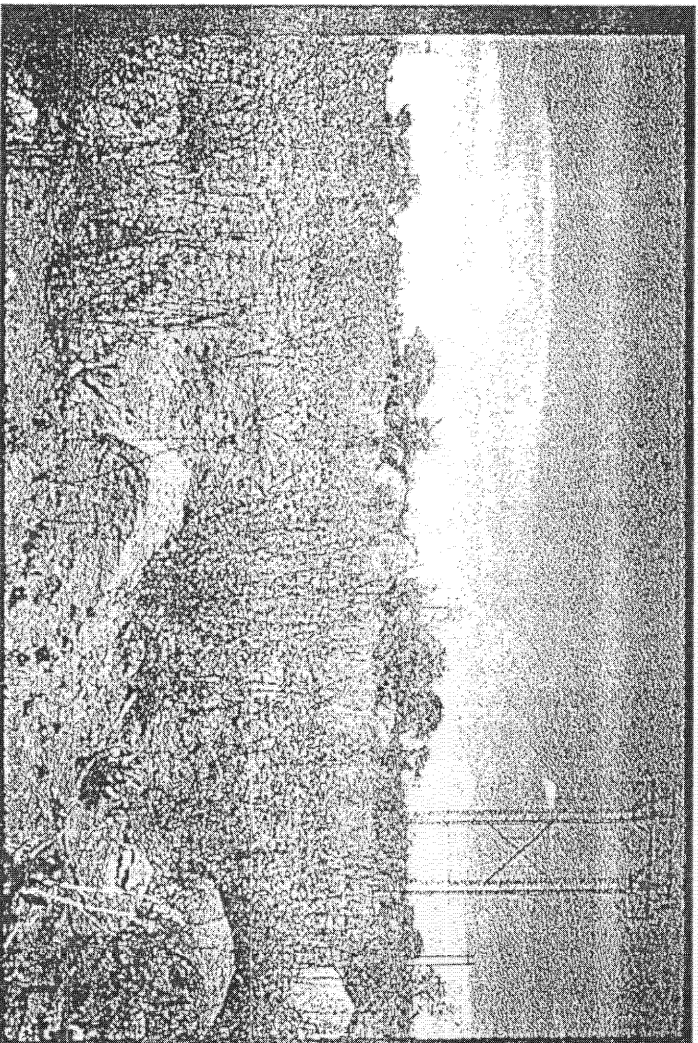


Part GH: from the granite knolls to the Big Horn/Wonderkoppies Power Stations

Part GH runs from the granite knolls northwards across a piece of veld and a dirt road before entering one of the above mentioned power stations. Part GH is approximately 250 metres long.

A scatter of potsherds was observed near the northern end of the granite protrusions. This part of the new power line corridor is not marked with any heritage remains of outstanding significance (Figure 9, below).

Figure 9. The granite knolls where the scatter of potsherds occur.





## 7 RATING SCHEME FOR LATE IRON AGE SITES AND CEMETERY DISCOVERED IN THE PROPOSED NEW POWER LINE CORRIDOR

The following criteria were used to determine the significance of the two Late Iron Age sites (Site MDL01 and Site MDL02), the scatter of potsherds and the cemetery (GY01) discovered in and near the proposed new power line corridor between the Middelkraal Substation and the Big Horn/Wonderkoppies Power Stations. The values accorded to each of these categories varied between 1 (low significance), 2 (medium significance) and 3 (high significance). The rating criteria were (Table 1):

### Ideological (symbolic) significance

This category of significance refers to sites, structures or features that may have symbolic or ideological significance, e.g. cattle kraals that may have been used as burial grounds, or stone cairns in initiation schools that symbolise the regiments (of men) moulded during these puberty ceremonies, etc. Burial grounds, graves, cemeteries and sites that are venerated would also score high on ideological significance.

### Aesthetic significance

This category of significance refers to the beauty, craftsmanship or workmanship evident in sites, structures or features of historical and pre-historical sites. In this regard, one thinks of the spatial composition and layout of settlements, the spatial location of settlements on majestic or impressive mountains or kopjes, etc. Other aesthetic aspects include architectural style and building features such as stone walls, stone platforms, the shape and size of enclosures, etc.

### Unique(ness)

The uniqueness of sites, structures and features refers to the fact that such sites and the structures or features of these sites may be scarce and may not be repeated in other sites or at other places.

### Cultural historical significance

The cultural historical significance of sites refers primarily to the age and the cultural affiliation of sites. However, these criteria may include the aesthetics or appearance of

sites, the uniqueness of sites and the association of sites with peoples (as well as individuals) and with important events in the past.

#### State of preservation

The state of preservation of sites, structures and features refers to the condition of remains, which may be affected by development activities. Sites may be badly damaged or may still be in a pristine condition.

#### Research value

The research value of sites, structures and features refers to the knowledge that can be derived from these remains, through documentation, excavation or research of these remains. Research has little value if the results are not published to the benefit of the community.

## 8 POSSIBLE IMPACT OF PROPOSED NEW POWER LINE ON THE LATE IRON AGE SITES AND THE CEMETERY

### 8.1 Ranges of heritage resources and sensitive remains in and near the proposed new power line corridor

Two Late Iron Age sites (Site MDL01& Site MDL02), a cemetery and a scatter of potsherds were discovered in Part EF and Part GH of the proposed new power line corridor between the Middelkraal Substation and the Big Horn/Wonderkoppies Power Stations (Figure 1 & Table 1). Both the Late Iron Age sites can be considered to be of high significance due to:

- Site MDL02's ideological significance (as this 'old' site is associated with what seems like a 'young' cemetery);
- the cultural historical significance of both sites (which are part of many Late Iron Age sites in the region);
- the state of preservation of both sites (which are in pristine conditions); and
- the research value of both sites (the floor plan/spatial composition of the sites must be mapped and compared with other Late Iron Age sites in the region; the relationship between some of these 'old' sites and their relatively 'modern' cemeteries must be determined as this phenomena has also been observed at other sites in the region; the sites must be dated and their historical affiliation must be established, etc.).

The cemetery (GY01) has outstanding significance as the deceased must have living relatives who, however, may not be aware of the existence of the graveyard as it seems as if the graves are not visited anymore.

The scatter of potsherds has no significance when considered in isolation. No diagnostic potsherds occur in the collection. The collection must be evaluated within the spatial context of Site MDL01 and Site MDL02 and other Late Iron Age sites in the region.

No other ranges of heritage resources of any outstanding significance were observed along the other stretches of the proposed new power line corridor.

HERITAGE RESOURCES AND THEIR CO-ORDINATES	Ideological/symbolic significance	Aesthetic significance	Uniqueness	Cultural Historical significance	State preservation	of	Research value
CEMETERY (GY01) 25° 41' 41" S; 27° 31' 07"	3	1	1	3	3		3
Scattered potsherds 25° 41' 33" S; 27° 31' 13"	1	1	1	1	1		1
SITE MDL01 25° 41' 45" S; 27° 31' 15"	1	1	1	3	2		2
SITE MDL02 25° 42' 18" S; 27° 31' 00"	3 (with GY01)	1	1	3	2		2

Table 1. Different levels of significance distinguished for the Late Iron Age sites, scatter of potsherds and the cemetery discovered in the proposed new power line corridor between the Middelkraal Substation and Big Horn/Wonderkoppies Power Stations on the farms Elandsdrift 487JQ and Middelkraal 486JQ.

1= low significance

2= medium significance

3= high significance

## 8.2 Possible impact on the heritage resources and sensitive remains

Part CD of the proposed new power line may cross an enclosure on the eastern edge of the granite kopjes that is part of Site MDL01 located near the northern banks of a tributary of the Marellwane River. However, the pylons carrying the 88kV power line will be built on both sides of the kopje (to the north and to the south) so that the pylons (and power lines hanging on the pylons) will not affect this enclosure.

Part EF of the proposed new power line may cross the eastern perimeter of Site MDL02 that is located to the south of a series of granite knolls. However, this site needs not to be damaged if the positions of the pylons (carrying the power lines) are well planned on both sides (to the north and to the south) of the granite knolls.

The cemetery (GY01) is located at a safe distance to the west of the proposed new power line corridor and will not be affected by the construction of the new power line.

The scatter of potsherds has no significance and will remain in the proposed new power line corridor if the pylons do not affect them.

## 9 CONCLUSION

Eskom's proposed building of a new 88kV power line from the Middelkraal Substation to the Big Horn/Wonderkoppies Power Stations need not to impact negatively on two Late Iron Age sites (Site MDL01 & Site MDL022), a cemetery (GY01) and a scatter of potsherds located along Part EF and Part GH of the proposed new corridor. Consequently, there is no reason from a cultural heritage point of view why Eskom should not undertake the proposed new development.

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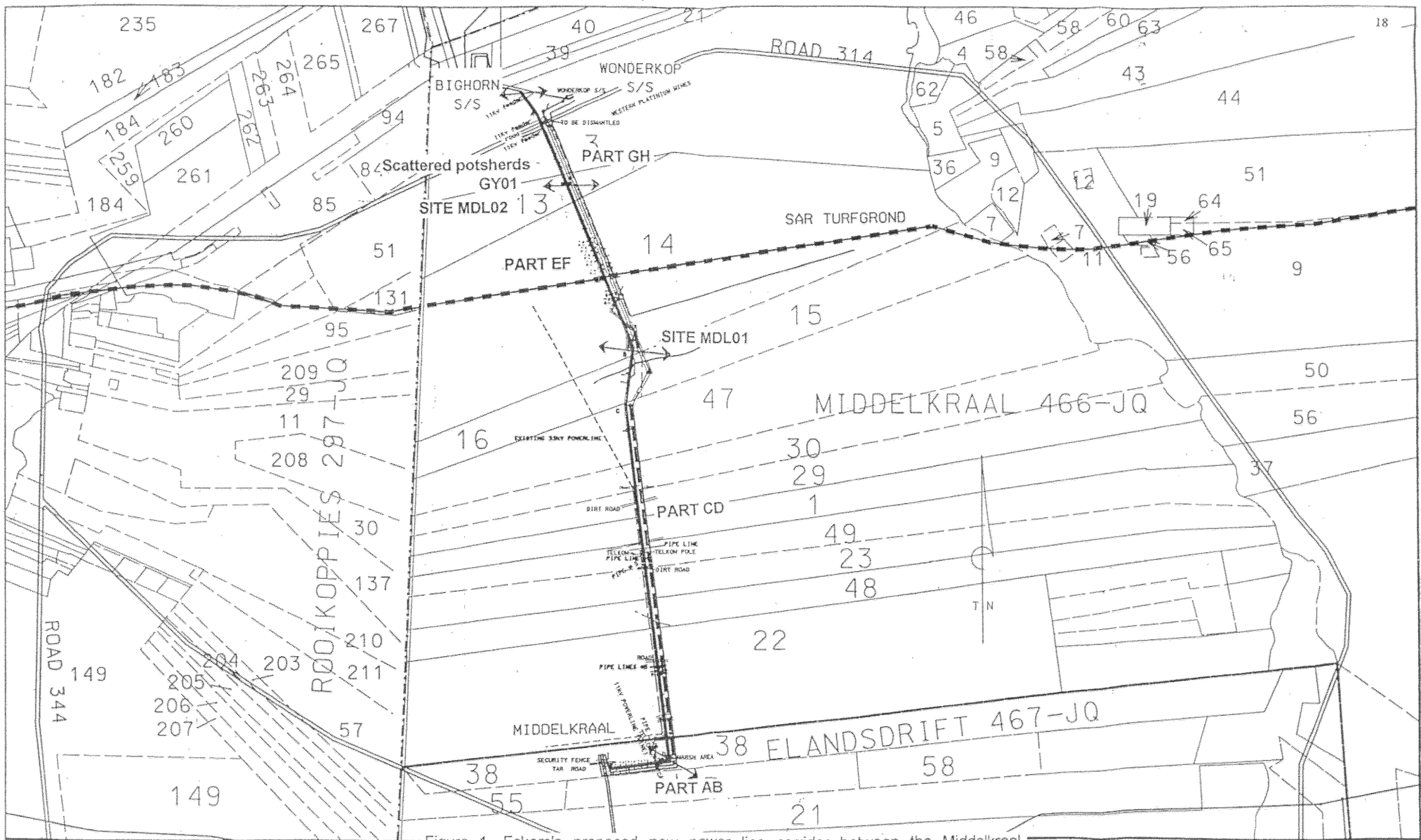


Figure 1. Eskom's proposed new power line corridor between the Middelkraal Substation on Elandsdrift 467JQ and the Big Horn/Wonderkoppies power stations on Middelkraal 466JQ will be located to the west of an existing power line corridor. The proposed new power line corridor was subjected to a heritage impact assessment study. Note the two Late Iron Age sites (MDL01 and MDL02) and cemetery (GY01) located in and near the proposed new power line corridor.

SCALE 1 : 20 000

