

**Prepared for:**

**JACO-K CONSULTING**

**A PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY  
FOR PORTIONS OF THE FARM WACHTEENBIETJESKOP  
506JR NEAR BRONKHORSTSPRUIT IN THE GAUTENG  
PROVINCE OF SOUTH AFRICA**

**Prepared by:**

**Dr Julius CC Pistorius**

**Archaeologist and Heritage Consultant**

**352 Rosemary Street Lynnwood 0081**

**PO Box 1255 Bela Bela 0480**

**Tel and fax 0147362115**

**Cell 0825545449**

**September 2010**

**Member ASAPA**

## EXECUTIVE SUMMARY

This document contains the report on a Phase I Heritage Impact Assessment (HIA) study which was done according to Section 38 of the National Heritage Resources Act (No 25 of 1999) for a proposed new coal mine on portions of the farm Wachteenbietjeskop 506JR to the east of Bronkhorstspuit in the Gauteng Province of South Africa. The aims with the Phase I HIA study were the following:

- 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) (see Box 1) (except paleontological remains) occur in the Project Area and, if so, to determine the nature, the extent and the significance of these remains.
- To establish if any of these heritage resources will be affected by the proposed coal mining activities and, if so, to evaluate what appropriate mitigation measures must be taken if any of the types and ranges of heritage resources will be affected by the proposed coal mining activities.

The Phase I HIA study for the Project Area revealed the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999), namely:

- A graveyard (GY01) which can be classified as historical as some of the graves are older than sixty years.

The graveyard was mapped and geo-referenced (Figure 1).

### **The significance of the graveyard**

It is highly likely that GY01 will be affected by the proposed coal mining activities. The significance of the graveyard therefore is indicated.

All graveyards and graves can be considered to be of high significance and are protected by various laws. Legislation with regard to graves includes Section 36 of the National Heritage Resources Act (No 25 of 1999) whenever graves are older than sixty years. The act also distinguishes various categories of graves and burial grounds. Other legislation with regard to graves includes those which apply when graves are exhumed and

relocated, namely the Ordinance on Exhumations (No 12 of 1980) and the Human Tissues Act (No 65 of 1983 as amended).

### **Mitigating the graveyard**

The following mitigation measures have to be applied to GY01:

The graveyard has to be exhumed and relocated. The exhumation of human remains and the relocation of graveyards are regulated by various laws, regulations and administrative procedures. This task is undertaken by forensic archaeologists or by reputed undertakers who are acquainted with all the administrative procedures and relevant legislation that have to be adhered to whenever human remains are exhumed and relocated. This process also includes social consultation with a 60 days statutory notice period for graves older than sixty years. Permission for the exhumation and relocation of human remains have to be obtained from the descendants of the deceased (if known), the National Department of Health, the Provincial Department of Health, the Premier of the Province and the local police.

### **General**

It is possible that this Phase I HIA study may have missed heritage resources in the Project Area as heritage sites may occur in thick clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

If any heritage resources of significance is exposed during the opencast coal mining project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all development activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

## CONTENTS

<b>Executive summary</b>	<b>2</b>
<b>1 INTRODUCTION</b>	<b>6</b>
<b>2 AIMS WITH THIS REPORT</b>	<b>8</b>
<b>3 METHODOLOGY</b>	<b>9</b>
3.1 Fieldwork	9
3.2 Databases, literature survey and maps	9
3.3 Spokespersons consulted	10
3.4 Mapping heritage resources	10
3.5 Assumptions and limitations	11
3.6 Some remarks on terminology	11
<b>4 THE PROJECT AREA</b>	<b>13</b>
4.1 Location	13
4.2 The nature of the Project Area	13
4.3 Within a cultural landscape	13
<b>5 CONTEXTUALISING THE PROJECT AREA</b>	<b>15</b>
<b>6 THE PHASE I HERITAGE IMPACT ASSESSMENT</b>	<b>19</b>
6.1 Types and ranges of heritage resources	21
6.2 The graveyard	22
6.3 The significance of the graveyard	23
6.4 Mitigating the graveyard	23
<b>7 CONCLUSION AND RECOMMENDATION</b>	<b>24</b>
<b>8 SELECT BIBLIOGRAPHY</b>	<b>26</b>



## **1 INTRODUCTION**

This document contains the report on a Phase I Heritage Impact Assessment (HIA) study which was done for a proposed new coal mine on portions of the farm Wachteenbietjeskop 506JR to the east of Bronkhorstspruit in the Gauteng Province of South Africa.

The Gauteng 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 Gauteng Provinces 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 as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999).

The National Heritage Resources Act (Act 25 of 1999, Section 3) outlines the following types and ranges of heritage resources that qualify as part of the national estate:

- (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 in terms of the Human Tissue Act (Act 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) moveable objects, including -
  - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, 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 (Act 43 of 1996).

The National Heritage Resources Act (Act 25 of 1999, Sec 3) also distinguishes nine criteria for a place and/or object 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) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and/or
- (i) its significance relating to the history of slavery in South Africa.

## **2 AIMS WITH THIS REPORT**

Muhanga Mines (Pty) Ltd intends mining coal on portions of the farm Wachteenbietjeskop 506JR east of Bronkhorsspruit in the Gauteng Province of South Africa. The proposed coal mining activities may impact on any of the types and ranges of heritage resources as set out in Section 3 of the National Heritage Resources Act (No 25 of 1999). Consequently, Jaco-K Consulting therefore commissioned the author to undertake a Phase I Heritage Impact Assessment (HIA) study for the proposed new coal mining activities.

The aims with the Phase I HIA study were the following:

- 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) (see Box 1) (except paleontological remains) occur in the Project Area and, if so, to determine the nature, the extent and the significance of these remains.
- To establish if any of these heritage resources will be affected by the proposed coal mining activities and, if so, to evaluate what appropriate mitigation measures must be taken if any of the types and ranges of heritage resources will be affected by the proposed coal mining activities.



### **3 METHODOLOGY**

This Phase I HIA study was conducted by

- Surveying the proposed Project Area with a vehicle and selected spots in the Project Area on foot as well as surveying, where possible, areas adjoining the Project Area which need not to be affected by the expansion project.
- Briefly surveying literature relating to the pre-historical and historical context of the Project Area;
- Consulting maps of the proposed Project Area.
- Consulting archaeological (heritage) data bases.
- Consulting spokespersons regarding the possible presence of heritage resources such as graveyards.
- Synthesising all information obtained from the fieldwork survey, literature review, maps, heritage data bases and spokespersons into this report.

#### **3.1 Fieldwork**

The proposed new Project Area was surveyed with a vehicle where accessible routes existed while selected, sensitive spots in the Project Area were surveyed on foot.

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

Databases kept and maintained at institutions such as the Provincial Heritage Resources Agency and the Archaeological Data Recording Centre at the National Flagship Institute (Museum Africa) in Pretoria were consulted to determine whether any heritage resources of significance has been identified during earlier heritage surveys in or near the Project Area.

The author is not unacquainted with the Project Area at large as he had done several heritage impact assessment studies near the Project Area (see 'Select Bibliography', Part 9).

Literature relating to the pre-historical and the historical unfolding of the region where the proposed new coal mine will be established was reviewed (see Part 5, 'Contextualising the Project Area'). It is important to contextualise the pre-historical and historical background of the larger project area in order to comprehend the identity, meaning and significance of heritage resources in and near the Project Area (see Parts 5 & 9).

In addition, the Project Area was studied by means of maps on which it appears (2528DC Bronkhorstspuit; 1: 50 000 topographical map & 2528 Pretoria: 1:250 000 map).

### **3.3 Spokespersons consulted**

Spokespersons living in the Project Area are usually intimately acquainted with the area, particularly if they were born there. Consequently, some spokespersons were therefore consulted with regard to the possible presence of graveyards and abandoned farm homesteads (see Part 10, 'Spokespersons consulted').

### **3.4 Mapping heritage resources**

The most significant types and ranges of heritage resources found in the Project Area were geo-referenced using a GPS instrument and thereafter mapped in Arch View (Figure 2; Table 1).

### **3.5 Assumptions and limitations**

It is possible that this Phase I HIA study may have missed heritage resources in the Project Area as heritage sites may occur in thick clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

If any heritage resources of significance is exposed during the proposed coal mining project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all development activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

### **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 to the first appearance or use of 'modern' Western writing brought to the Eastern Transvaal Highveld 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 'South Shaft 3 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 PROJECT AREA**

### **4.1 Location**

Muhanga Mines' proposed coal mining activities involves portions of the farm Wachteenbietjeskop 506JR east of Bronkhorsspruit in the Gauteng Province of South Africa. The Project Area is situated on an undulating piece of land to the east of Bronkhorstspruit which is characterised by outstretched grass veldt and large tracks of land which is utilized for agricultural activities. A low protrusion in the larger Project Area has been named Wachteenbietjeskop (2528DC Bronkhorstspruit; 1: 50 000 topographical map & 2528 Pretoria; 1:250 000 map) (Figures 1-2).

### **4.2 The nature of the Project Area**

The Project Area covers an undulating piece of land that is marked by vast outstretched agricultural fields, pieces of grass veldt and a number of small dams and streams, one of which bisects the southern part of the Project Area from the north to the south (Figure 2).

Few trees occur, the majority of which are exotics such as Blue Gums and Wattles. No Oak trees were observed. Blue Gum and Oak trees are usually associated with historical farmsteads where they were planted by the first colonists who settled in this part of the province during the first part of the nineteenth century.

### **4.3 Within a cultural landscape**

The Project Area is part of a cultural landscape that is marked by heritage remains dating from the pre-historical into the historical (colonial) period. Stone Age sites, Iron Age remains and colonial remains therefore do occur on the region (see Part 5, 'Contextualising the Project Area'). The archaeological and historical significance of

this landscape therefore must be described in more detail before the results of the Phase I HIA study is discussed



**Figure 1– The Project Area on portions of the farm Wachteenbietjeskop 506JR near Bronkhorstspuit in the Gauteng Province (above). The area is characterised by outstretched and rolling grass veldt, agricultural fields, scarcely scattered plantations with Blue Gum trees and small dams and a stream in the southern part of the Project Area (above).**

## 5 CONTEXTUALISING THE STUDY AREA

The Project Area largely overlaps with the Eastern Bankeveld. The 'Bankeveld' is a piece of land running from east to west and situated between the Bushveld in the northern part of South Africa and the centrally situated Highveld. The core of this area is situated between Krugersdorp in the south, the Pienaars River to the north, the town of Bronkhorstspuit in the east and the Pilanesberg to the west.

Interaction over millions of years between the climate, geology, topography, fauna and flora in the Bankeveld established a milieu in which the earliest ancestors of modern men/women emerged some two to three million years ago. The remains of *Australopithecine* and *Homo habilis* were found in dolomite caves and underground dwellings at Sterkfontein and Swartkrans near Krugersdorp, outside the Project Area. *Homo habilis*, one of the **Early Stone Age** (ESA) hominids, is associated with Oldowan artefacts which include of crude implements manufactured from pebble stones.

The Acheul industrial complex replaced the Oldowan industrial complex during the Early Stone Age. This phase of human existence was widely distributed across the world and is associated with *Homo Erectus*, who manufactured hand axes and cleavers from as early as one and a half million years ago. One of the earliest discoveries of an Acheul site was made at Wonderboompoort, in the Magaliesberg.

**Middle Stone Age** (MSA) sites dating from as early as two hundred thousand years ago have been found all over South Africa. Middle Stone Age hunter-gatherer bands must have lived and hunted to the north and south of the Magaliesberg, between Pretoria in the west and Witbank in the east. These people who probably looked like modern humans occupied camp sites near water but also started to use caves as dwellings. They manufactured a wide range of stone tools, including blades and points that may have been hafted on long wooden sticks and were used as spears.

The **Late Stone Age** (LSA) commenced twenty thousand years ago or somewhat earlier. The various types of Stone Age industries scattered across the country are associated with the historical San and Khoi-Khoi people. The San were renowned as formidable hunter-gatherers, while the Khoi-Khoi also herded with cattle and small stock during the last two thousand years. Late Stone Age people manufactured tools that were small but highly effective, such as arrow points and knives.

The LSA is also associated with rock paintings and engravings which were done by San hunter-gatherers, Khoi Khoi herders and EIA farmers. Approximately 400 rock art sites are distributed throughout Mpumalanga, notably in the northern and eastern regions at places such as Emalahleni (Witbank) (4), Lydenburg (2), White River and the southern Kruger National Park (76), Nelspruit and the Nsikazi District (250).

Rock engravings are restricted to the drier interior part of the country.

**Early Iron Age** (EIA) farming communities practised a mixed economy consisting of plant cultivation and stock herding in the interior of South Africa during the first half of the first millennium AD. These Bantu-Negroid people, who probably interbred with the local San and Khoi-Khoi, were ironworkers of some repute and established the first permanent villages south of the Limpopo River. No EIA communities were recorded close to the Project Area as yet.

During the **Late Iron Age** (LIA), farming was practised in the northern, central and eastern parts of the country. Stone walled settlements built from the 17<sup>th</sup> century onwards are particularly numerous during this period and are associated with the Ndebele, Pedi and Swazi who established sites close to the Project Area. However, these sites do not occur in high numbers or in large concentrations near the Project Area.



During the first half of the 19<sup>th</sup> century, numerous traders, adventurers and explorers visited the Bankeveld. These early travellers were followed from the 1840's by the **first colonists** who settled in various places in the Magaliesberg such as Rustenburg, Marikana and in places such as Tierpoort, Garsfontein and Swawelpoort near the Bronberge. In the second half of the 19<sup>th</sup> century, Pretoria was established, on 16 November 1855, to meet the need for a central meeting place for the disunited Voortrekker republics.

The railway line between Pretoria and Lourenzo Marques was built in 1894. It passed close to where Witbank is located today. The first Europeans who came to the area observed the abundance of coal, which is evident on the surface or in the beds of streams. A stage post for wagons close to a large outcrop of whitish stones (a 'white ridge') gave the town its name. Witbank was established in 1903 on a farm known as Swartbos which belonged to Jacob Taljaard.

The **Transvaal Anglo Boer War** followed in 1880 to 1881. The **South African War** raged from 1899 to 1902. Battlefields, graveyards and fortifications from this time still exist from Irene (Centurion) through to Pretoria, Bronkhorstspuit, Cullinan and to Balmoral and Witbank in the east. The British built masonry forts, redoubts, trenches and barbed wire fences to curtail the movements of Boer commandos. In open terrain, blockhouses were spaced roughly one kilometre apart and linked with barbed wire fences. Cliffs prevented troops from crossing mountains, so blockhouses were built at points where it was possible to cross such mountain ranges.

Other historical towns closest to the Project Area include Bronkhorstspuit, Cullinan, Witbank and Middelburg.

Bronkhorstspuit was laid out in 1904 by Cornelius Erasmus on part of his farm Hondsrivier and the town was named Erasmus for a number of years. From July

1935, the town's name, which is derived from a water-cress called 'bronkhors' by early settlers, was changed to Bronkhorstspuit.

Cullinan was founded in 1902 on a portion of the farm Elandsfontein. The town was named after Sir Thomas Cullinan, who opened the Premier Mine. During the Second World War, the farm Wonderwater, near the mine, was used as a military training centre with a large camp for Italian prisoners of war.

Middelburg and Witbank today are important centres where coal is mined and transported to Richards Bay from where it is exported all over the world. The 20<sup>th</sup> century also saw the introduction of large-scale irrigation and dry land farming on the Eastern Highveld. Today the economic activities of the area include diamond and coal mining, light and heavy industries as well as steel and vanadium operations.

The 20<sup>th</sup> century saw the introduction of large-scale irrigation and dry land farming in the larger Project Area. Today, milling is Bronkhorstspuit's main industry. The mining of diamonds and coal gradually increased so that today economic activities in the Witbank area include mining, heavy and light industries as well as steel and vanadium operations.

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

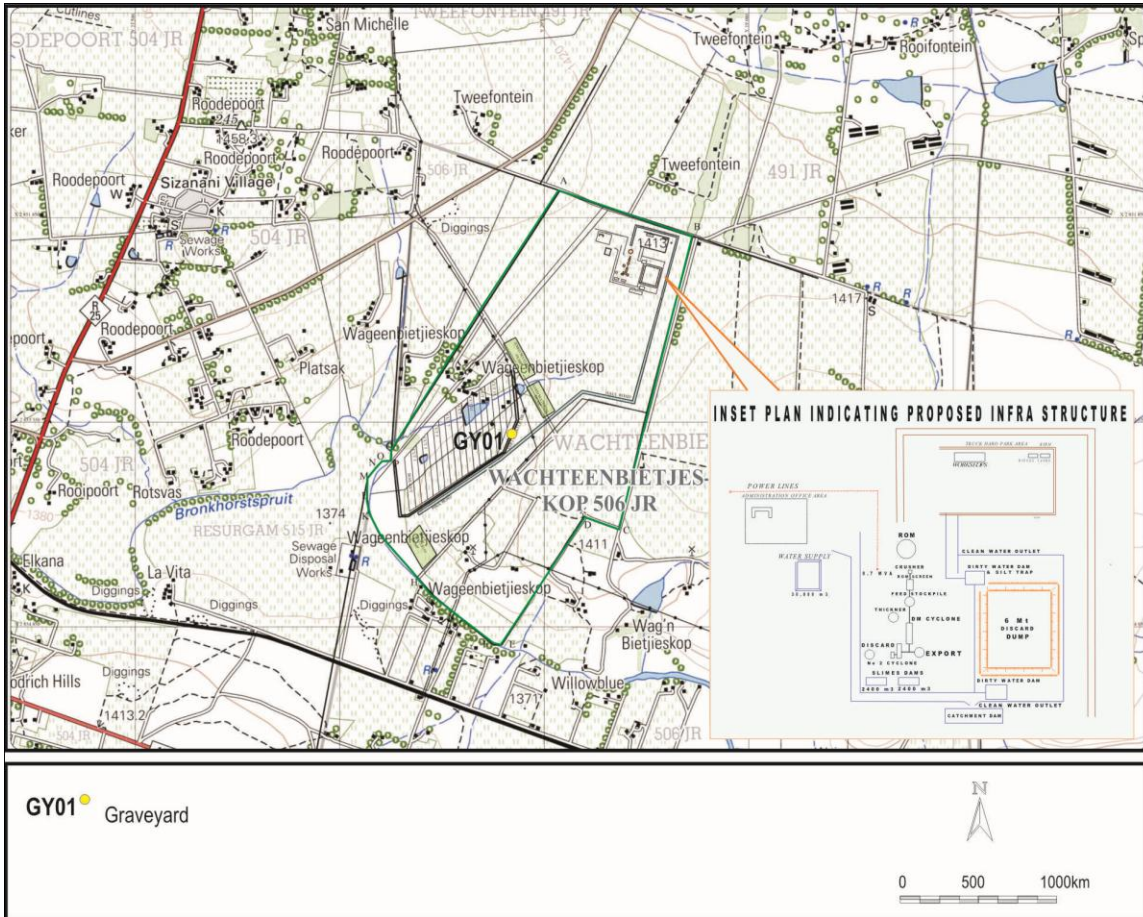
The Phase I HIA study for the Project Area revealed the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999), namely:

- A graveyard (GY01) which can be classified as historical as some of the graves are older than sixty years.

The graveyard was mapped and geo-referenced (Figure 1).

The significance of the graveyard is indicated whilst mitigation measures are outlined as it is highly likely that the graveyard may be affected by the proposed coal mining activities.

The graveyard is briefly discussed and illuminated with photographs. It's significance is indicated as well as mitigation measures should the graveyard be affected by coal mining activities.



**Figure 2-** The proposed Project Area on the farm Wachteenbietjeskop 506JR near Bronkhorstspuit in the Gauteng Province of South Africa (above). Note the graveyard (GY01) in the Project Area (above).

## 6.2 The graveyard

GY01 is located near the edge of the proposed open cast coal mine pit. Currently it is located in a maize field. It holds approximately thirty three graves in two components, namely a smaller and older component which mainly contains graves which are fitted with cement headstones and trimmings, The second, larger component of the graveyard holds many graves which are merely covered with piles of stone.



**Figure 3- GY01 near the edge of the proposed open cast pit holds as many as thirty three graves. It is located between khaki bush in a maize field on Wachteenbietkeskop 506JR (above).**



**Figure 4- One of approximately thirty three graves in GY01 on Wachteenbietjeskop 506JR (above).**

<b>Graveyards</b>	<b>Coordinates</b>	<b>Significance</b>
(G01) Holds approximately 33 graves.	25° 47.323' 28° 47.588'	<b>HIGH</b>

**Table 1- Coordinates for a graveyard in the Project Area and its level of significance (above).**

### **6.3 The significance of the graveyard**

It is highly likely that GY01 will be affected by the proposed open cast coal mining activities. The significance of the graveyard therefore is indicated.

All graveyards and graves can be considered to be of high significance and are protected by various laws. Legislation with regard to graves includes Section 36 of the National Heritage Resources Act (No 25 of 1999) whenever graves are older than sixty years. The act also distinguishes various categories of graves and burial grounds. Other legislation with regard to graves includes those which apply when graves are exhumed and relocated, namely the Ordinance on Exhumations (No 12 of 1980) and the Human Tissues Act (No 65 of 1983 as amended).

#### **6.4 Mitigating the graveyard**

The following mitigation measures have to be applied to GY01:

The graveyard has to be exhumed and relocated. The exhumation of human remains and the relocation of graveyards are regulated by various laws, regulations and administrative procedures. This task is undertaken by forensic archaeologists or by reputed undertakers who are acquainted with all the administrative procedures and relevant legislation that have to be adhered to whenever human remains are exhumed and relocated. This process also includes social consultation with a 60 days statutory notice period for graves older than sixty years. Permission for the exhumation and relocation of human remains have to be obtained from the descendants of the deceased (if known), the National Department of Health, the Provincial Department of Health, the Premier of the Province and the local police.

## 7 CONCLUSION AND RECOMMENDATIONS

The Phase I HIA study for the Project Area revealed the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999), namely:

- A graveyard (GY01) which can be classified as historical as some of the graves are older than sixty years.

The graveyard was mapped and geo-referenced (Figure 1).

The significance of the graveyard is indicated whilst mitigation measures are outlined as it is highly likely that the graveyard may be affected by the proposed coal mining activities.

### **The significance of the graveyard**

It is highly likely that GY01 will be affected by the proposed open cast coal mining activities. The significance of the graveyard therefore is indicated.

All graveyards and graves can be considered to be of high significance and are protected by various laws. Legislation with regard to graves includes Section 36 of the National Heritage Resources Act (No 25 of 1999) whenever graves are older than sixty years. The act also distinguishes various categories of graves and burial grounds. Other legislation with regard to graves includes those which apply when graves are exhumed and relocated, namely the Ordinance on Exhumations (No 12 of 1980) and the Human Tissues Act (No 65 of 1983 as amended).

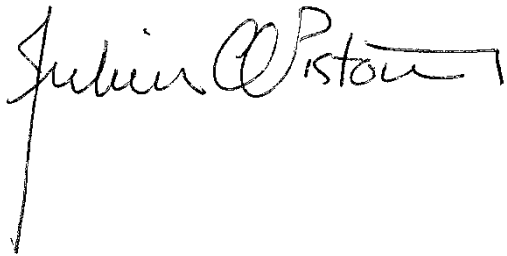
### **Mitigating the graveyard**

The following mitigation measures have to be applied to GY01:

The graveyard has to be exhumed and relocated. The exhumation of human remains and the relocation of graveyards are regulated by various laws,



regulations and administrative procedures. This task is undertaken by forensic archaeologists or by reputed undertakers who are acquainted with all the administrative procedures and relevant legislation that have to be adhered to whenever human remains are exhumed and relocated. This process also includes social consultation with a 60 days statutory notice period for graves older than sixty years. Permission for the exhumation and relocation of human remains have to be obtained from the descendants of the deceased (if known), the National Department of Health, the Provincial Department of Health, the Premier of the Province and the local police.

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 Consultant**  
**Member ASAPA**

## 8 SELECT BIBLIOGRAPHY

Bergh, J.S. (red.) 1998. *Geskiedenisatlas van Suid Afrika. Die vier noordelike provinsies*. J.L. van Schaik: Pretoria.

Erasmus, B.P.J. 1995. *Oppad in Suid Afrika. 'n Gids tot Suid Afrika, Streek vir Streek*. Jonathan Ball Uitgewers Bpk.

Evers, T.M. 1981. The Iron Age in the Eastern Transvaal, South Africa. In Voight, E.A. (ed). *Guide to archaeological sites in Northern and Eastern Transvaal*. Pretoria: South African Association of Archaeologists, 64-109.

Inskeep, R.R. 1978. *The peopling of Southern Africa*. David Philip: Cape Town.

Mason, R. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

Mason, R.J. 1968. Transvaal and Natal Iron Age settlement revealed by aerial photography and excavation. *African Studies*. 27:167-180.

Naude, M. 1990. Die Transvaalse Boerewoning. *Africana Society of Pretoria* (8): 46-49.

Naude, M. 1993. The use of stone on farmsteads on the eastern Transvaal. *Africana Society of Pretoria* (11): 49-55.

Naude, M. 2000. Vernacular stone buildings and structures on farmsteads in the southern districts of the Gauteng Province. *South African Journal of Cultural History*. 14(2): 31-64

Pistorius, J.C.C. 2002. *A Heritage Impact Assessment (HIA) study for a new power line on the farm Rietvallei 397JS between Middelburg and Arnot in the GautengProvince of South Africa*. Unpublished report done for Eskom, Menlyn.

Pistorius, J.C.C. 2003. *A Heritage Impact Assessment study for the proposed 22kV Duvha Colliery power line deviation near Middelburg in the GautengProvince of South Africa*. Unpublished report done for Eskom, Menlyn.

Pistorius, J.C.C. 2004. *A Heritage Impact Assessment (HIA) study for the EMP Amendment for Douglas Colliery in the GautengProvince of South Africa*. Unpublished report for Pulles, Howard and De Lange.

Pistorius, J.C.C. 2004. *A Heritage Impact Assessment (HIA) study for the proposed new Optimum Colliery on the farm Schoonoord 164IS in the GautengProvince of South Africa*. Unpublished report done for African EPA.

Pistorius, J.C.C. 2005. *A Phase I Heritage Impact Assessment (HIA) study for a dual underground and open cast mine on the farm Middelkraal 50IS in the GautengProvince of South Africa*. Unpublished report done for African EPA.

Pistorius, J.C.C. 2005. *A Phase I Heritage Impact Assessment (HIA) study for Portion 10 of the farm Wonderfontein 428JS and the remainder of Kaalplaats 453JS for the proposed new Steelcoal Open Cast Mine in the GautengProvince of South Africa*. Unpublished report done for African EPA.

Pistorius, J.C.C. 2005. *A Phase I Heritage Impact Assessment (HIA) study for the proposed new Brakfontein Opne cast and underground mine on the farm Brakfontein 264IR in the GautengProvince of South Africa*. Unpublished report for EPA Africa.

Pistorius, J.C.C.2005. *Results of a Phase 2 HIA study: An investigation of a historical sandstone farmstead and outbuildings on the banks of the Olifants River*

*on the farm Kleinkopje 15IS within the boundaries of Douglas Colliery in the GautengProvince of South Africa. Unpublished report for Ingwe.*

Pistorius, J.C.C. 2006. *A scoping report for a Phase I Heritage Impact Assessment study for the proposed new Zonnebloem Water Reclamation Project near Witbank in the GautengProvince of South Africa. Unpublished report for Anglo Coal and Ingwe Colliers.*

## **9 SPOKESPERSONS CONSULTED**

Petrus Msizwa. Farm worker on Wachteenbietjeskop 506JR.