

**A Pelsers Archaeological Consulting**  
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**A REVISION OF PHASE 1 HIA  
FOR THE PROPOSED WONDERFONTEIN COLLIERY  
NEAR BELFAST IN MPUMALANGA**

For:

***USIMBITHI MINING (PTY) LTD  
PRIVATE BAG X1838  
MIDDELBURG  
1050***

**REPORT: APAC013/33**

by:

***A.J. Pelsers  
Accredited member of ASAPA  
Professional Member of SASCH***

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**P.O.BOX 73703  
LYNNWOOD RIDGE  
0040  
Tel: 083 459 3091  
Fax: 086 695 7247  
Email: [pelserranton@gmail.com](mailto:pelseranton@gmail.com)**

Member: AJ Pelsers BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

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## SUMMARY

APelser Archaeological Consulting was appointed by Usimbithi Mining (Pty) Ltd to undertake a Revision of a Phase 1 Heritage Impact Assessment (HIA) report done for the proposed Wonderfontein Colliery near Belfast in Mpumalanga. This was done initially in August 2008 by Dr. Julius Pistorius. The revision was necessitated by the Final Mine Plan layout, and the fact that APELSER ARCHAEOLOGICAL CONSULTING cc (in conjunction with Crossdale Projects & Mining Services) has been tasked with the exhumation and relocation of graves from a number of sites identified during the initial HIA and during subsequent site visits.

The 2008 HIA identified a range of heritage resources in the proposed mining development area, including formal & informal graveyards (11 in total) and Historical farmsteads and related outbuildings (2 in total). Of these 4 graveyards (1 newly identified) and the farmsteads will be negatively impacted by the mining development. The 2 farmsteads and a wagon shed have been subject to a Phase 2 Architectural documentation project by Mr. Sidney Miller in March 2013 in preparation for Demolition Permit applications.

This document provides a summary of the results of these two previous studies and a revision of the initial 2008 HIA Report based on the Final Mining Plan. The results of site visits to the graveyards that will be impacted will also be given in brief.

**If the recommendations put forward at the end of this document are implemented, then, from a Heritage point of view, there would be no objection to the continuation of the proposed development. SAHRA's required comments on these reports will be required for the application for and issuing of the required permits.**

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## **1. INTRODUCTION**

APelser Archaeological Consulting was appointed by Usimbithi Mining (Pty) Ltd to undertake a Revision of a Phase 1 Heritage Impact Assessment (HIA) report done for the proposed Wonderfontein Colliery near Belfast in Mpumalanga. This was done initially in August 2008 by Dr. Julius Pistorius. The revision was necessitated by the Final Mine Plan layout, and the fact that APELSER ARCHAEOLOGICAL CONSULTING cc (in conjunction with Crossdale Projects & Mining Services) has been tasked with the exhumation and relocation of graves from a number of sites identified during the initial HIA and during subsequent site visits.

The 2008 HIA identified a range of heritage resources in the proposed mining development area, including formal & informal graveyards (11 in total) and Historical farmsteads and related outbuildings (2 in total). Of these 4 graveyards (1 newly identified) and the farmsteads will be negatively impacted by the mining development. The 2 farmsteads and a wagon shed have been subject to a Phase 2 Architectural documentation project by Mr. Sidney Miller in March 2013 in preparation for Demolition Permit applications.

The client (Usimbithi) provided all the relevant documents (previous and current reports) pertaining to this Mining Development Project for the required revision. The results of a site visit to various graveyards that will be impacted directly by the developments by A. Pelsler will also be discussed here in brief in relation to the same sites identified in the initial 2008 Phase 1 HIA.

## **2. TERMS OF REFERENCE**

The Terms of Reference for the study were to:

1. Provide a Revised Report on the 2008 Phase 1 HIA for the proposed Wonderfontein Colliery near Belfast in Mpumalanga, based on the Final Mine Layout
2. Propose suitable mitigation measures for the sites that will be negatively impacted
3. To submit the Revised report to SAHRA for their required final comments in order to apply for the relevant heritage permits regarding the graves exhumation and relocation project and the demolition of historical farmsteads and structures

## **3. LEGISLATIVE REQUIREMENTS**

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

### **3.1 The National Heritage Resources Act**

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

- a. **Archaeological artifacts, structures and sites older than 100 years**
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography

- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. **Historical objects, structures and sites older than 60 years**
- f. Proclaimed heritage sites
- g. **Grave yards and graves older than 60 years**
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The national estate includes the following:

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

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

### **Structures**

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

### Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

**The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.**

### Human remains

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

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

### **3.2 The National Environmental Management Act**

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

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

## **4. METHODOLOGY**

### **4.1 Survey of literature**

In this case all previous and current heritage studies were scrutinized for relevant information for the Revision Report. The sources consulted in this regard are indicated in the bibliography.

### **4.2 Field survey**

A visit to the various graveyards that will be impacted on by the mining development was undertaken during February 2013. The graveyards were document photographically and the number of graves located at each was estimated. The initial Phase 1 HIA was conducted during August 2008 by Dr. Julius Pistorius.

### **4.3 Oral histories**

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



#### 4.4 Documentation

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

### 5. DESCRIPTION OF THE AREA

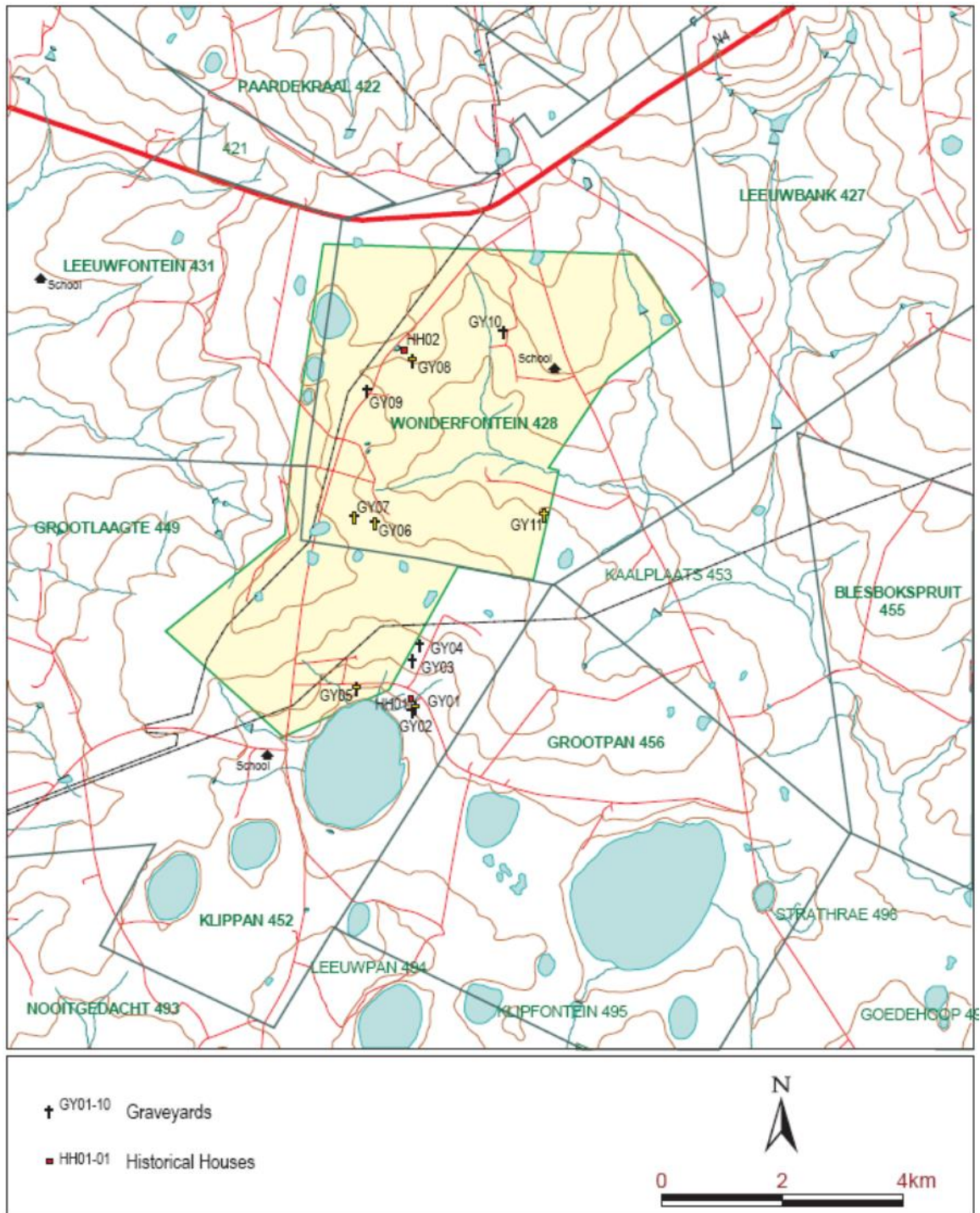
The proposed Wonderfontein Colliery is located south-west of Belfast in Mpumalanga. The Wonderfontein Project Area is situated directly to the south of the N4 and between the roads that are running to Hendrina (west) and Carolina (east) further to the south. The proposed Wonderfontein Colliery primarily covers the farm Wonderfontein 428 in the north and portions of the farms Klippan 452 and Grootpan 456 further to the south.

The Project Area runs from a number of pans in the south northwards to close to the N4 where the Hendrina and Carolina roads join each other. The Wonderfontein Project Area stretches across an undulating piece of land which is dotted with a few farmsteads and which is covered with agricultural fields as well as with pieces of land which have not been affected by development activities in the past.

Usimbithi Mining intends to establish open cast as well as underground mining activities in the proposed Wonderfontein Project Area (The Wonderfontein Colliery).

No mine plans or any footprint for the proposed new open cast and underground mining activities with associated infrastructure was available at the time when the Phase 1 HIA was conducted by Pistorius (in 2008). Pistorius made use of a map demarcating the study area when he did his work in 2008, and the latest (Final Layout) will be used in this revision to indicate the site found and those that will be directly impacted by the mining operations.

Details regarding the related infrastructure are provided in the Final EMP for the Wonderfontein Mine. Opencast mining operations will cover an area of around 1320ha, while 146ha of underground mining will form part of the operations. The depth of mining will vary between 19.72m & 33.62m for the three Coal Seams.



**Figure 2-** The Wonderfontein Project Area on the farms Wonderfontein 428, Grootpan 456 and Klippan 452 on the Eastern Highveld in South Africa. Note the presence of graveyards and historical structures in the project area (above).

**Figure 1:** The map used by Pistorius in his 2008 Phase 1 HIA. Note the sites that he identified (Pistorius 2008: 23).

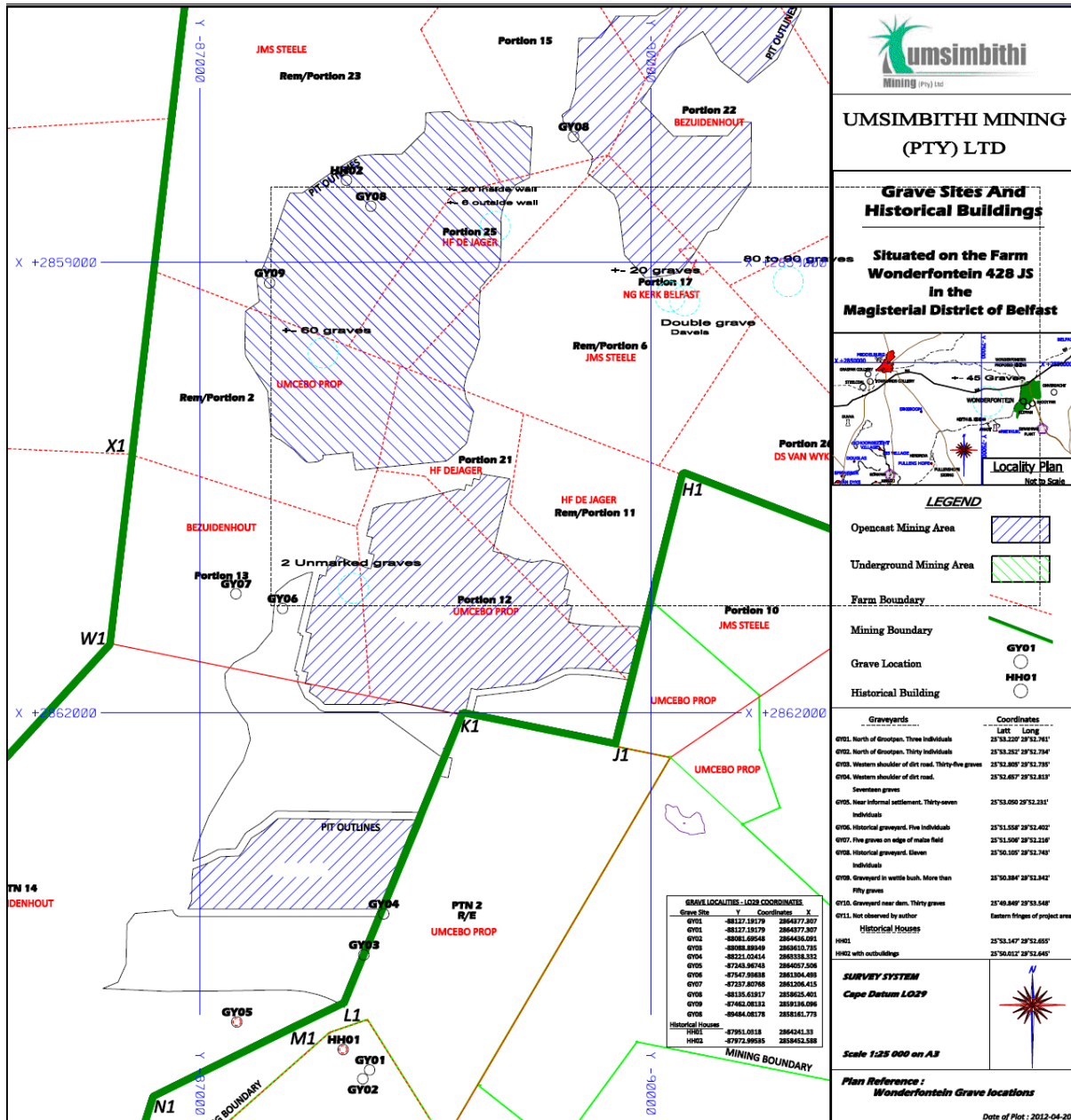


Figure 2: Mine operations layout plan indicating mine boundary, opencast and underground sections. The sites identified by Pistorius in 2008 are also shown. A number of the sites identified then fall outside the mining area.

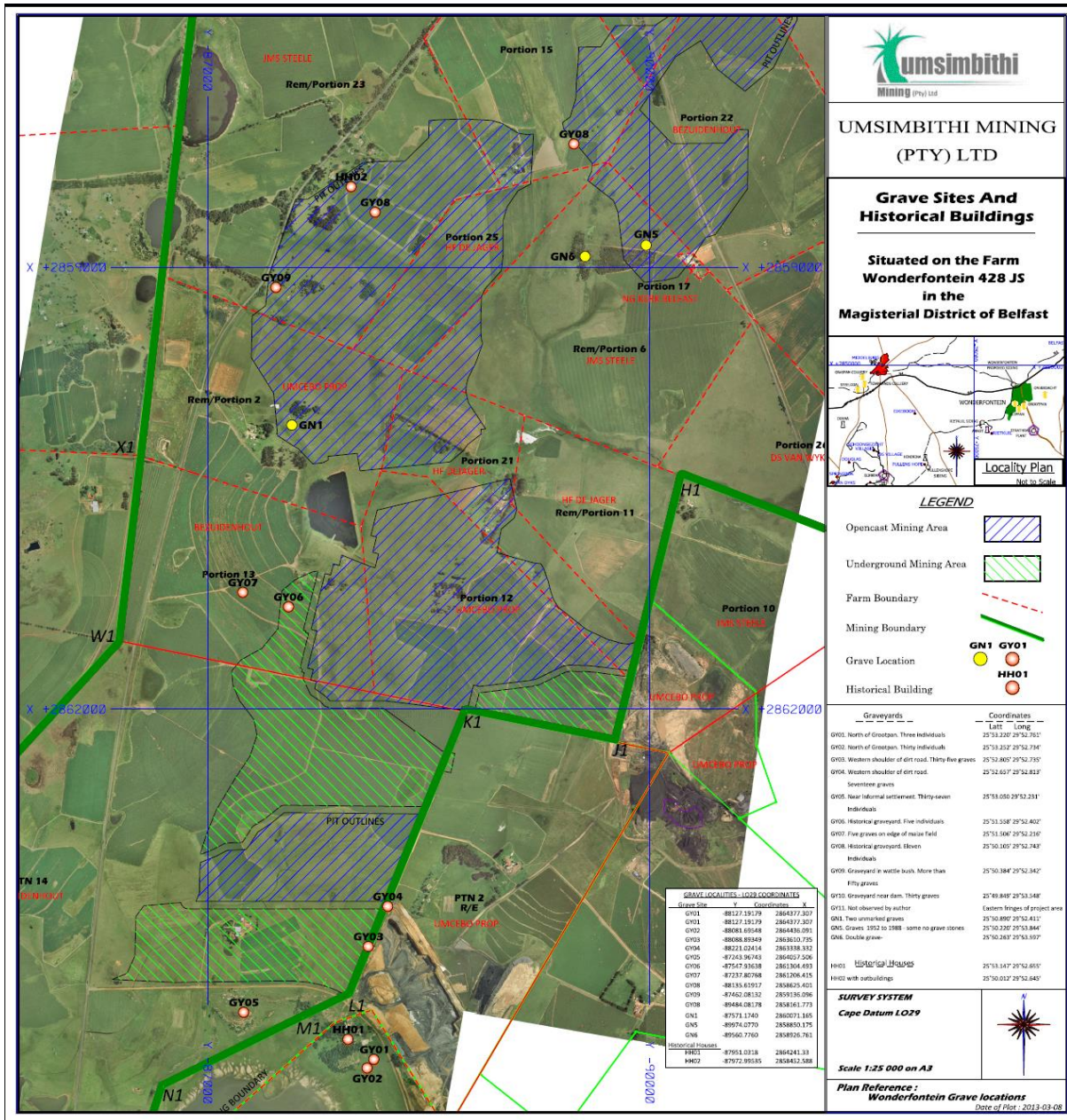


Figure 3: Aerial view of same Mine layout plan. The sites located in the opencast mining areas will be impacted and needs mitigation measures implemented.



**Figure 4: The typical landscape of the project area. It is characterized by an undulating, outstretched piece of land dotted with a few farmsteads surrounded by agricultural fields.**



**Figure 5: Another view of a section of the study area. Note the maize fields.**



**Figure 6: Rolling grass veld typical of the stretches not impacted by agriculture.**



**Figure 7: Another view of the study area taken at from one of the grave sites. Note the bluegum stand in the distance.**

## **6. DISCUSSION**

A short background to the archaeology & history of the larger geographical and specific study area is given in the section below before the results of the fieldwork will be discussed. The information was obtained from the 2008 Phase 1 HIA report done by Pistorius. This pre-historical and historical information helps to determine the significance of any heritage resources that occur in the Wonderfontein Project Area.

Stone Age sites are marked by stone artifacts that are found scattered on the surface of the earth or as parts of deposits in caves and rock shelters. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago  
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago  
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

The Later Stone Age is also associated with rock paintings and engravings which were done by the San, Khoi Khoi and in more recent times by Iron Age farmers (Pistorius 2008: 17).

Heritage surveys up to now have recorded few outstanding Stone Age sites, rock paintings and engravings near the project area - primarily as a result of limited extensive archaeological surveys.

The Iron Age is associated with the first agro-pastoralists who lived in semi-permanent villages and who practiced metal working during the last two millennia. The Iron Age is usually divided into the Early Iron Age (covers the 1st millennium AD) and the Later Iron Age (covers the first 880 years of the 2nd millennium AD) [Pistorius 2008: 17-18].

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

Early Iron Age (EIA) 250 – 900 A.D.  
Middle Iron Age (MIA) 900 – 1300 A.D.  
Late Iron Age (LIA) 1300 – 1840 A.D.

The Eastern Highveld had probably not been occupied by Early Iron Age communities but was occupied by Late Iron Age farming communities such as the Sotho, Swazi and Ndebele who established settlement complexes that were built with stone walls. These sites are more common towards the eastern perimeters of the Eastern Highveld (Pistorius 2008: 18).

No pre-historical sites, features or occurrences were recorded in the study area. This includes both Stone Age and Iron Age related sites. If any did exist here in the past it would have been disturbed or destroyed to a large degree by agricultural activities and other development during the recent historical past. A palaeontological study for the project area will be commissioned and submitted in due course.

Historical towns closest to Wonderfontein Colliery include Middelburg and Belfast. Middelburg is one of the oldest towns that were established by the Voortrekkers in the previous Transvaal. The town was established on the farms of Klipfontein and Keerom on the banks of the Klein Olifants River in 1859. It is generally accepted that Middelburg's name is derived from the fact that the Transvaal Republic established the town midway between Pretoria and Lydenburg (Pistorius 2008: 18).

The choice for Middelburg's location was not well accepted by the inhabitants and it was moved to the farm Sterkfontein. Here, a town was established and named Nasaret (Nazareth). However, the name did not appeal to the local community and its original name was reinstated. Middelburg temporary served as the seat of the Transvaal Republic after the siege of Pretoria during the Second Anglo Boer War (Pistorius 2008: 18).

Belfast was founded on 30 June 1890. Farmer Richard O' Neil bought the farm Tweefontein near where the expected railway line between Pretoria and Lourenço Marques in Mozambique would run. He set up a store and applied for permission to lay out a village. He named it Belfast in honour of the city in Ireland from where his father had immigrated. The railway reached the village in 1894 and the first village council took office in 1902 (Pistorius 2008: 18-19).

Coal mining on the Eastern Highveld is older than one century. The earliest use of coal (charcoal) in South Africa was during the Iron Age (300-1880AD) when metal workers used charcoal, iron and copper ores and fluxes (quartzite stone and bone) to smelt iron and copper in clay furnaces. Colonists are said to have discovered coal in the French Hoek Valley near Stellenbosch in the Cape Province in 1699. The first reported discovery of coal in the interior of South Africa was in the mid-1830 when coal was mined in Kwa Zulu/Natal (Pistorius 2008: 19).

The first exploitation for coal was probably in KwaZulu-Natal as documentary evidence refers to a wagon load of coal brought to Pietermaritzburg to be sold in 1842. In 1860 the coal trade started in Dundee when a certain Pieter Smith charged ten shillings for a load of coal dug by the buyer from a coal outcrop in a stream. In 1864 a coal mine was opened in Molteno. The explorer, Thomas Baines mentioned that farmers worked coal deposits in the neighbourhood of Bethal (Transvaal) in 1868. Until the discovery of diamonds in 1867 and gold on the Witwatersrand in 1886, coal mining only satisfied a very small domestic demand (Pistorius 2008: 19).

With the discovery of gold in the Southern Transvaal and the development of the gold mining industry around Johannesburg came the exploitation of the Boksburg-Springs coal fields, which is now largely worked out. By 1899, at least four collieries were operating in the Middelburg-Witbank district, also supplying the gold mining industry. At this time coal mining also has started in Vereeniging. The Natal Collieries importance was boosted by the need to find an alternative for imported Welsh anthracite used by the Natal Government Railways (Pistorius 2008: 20).

A unique stone architectural heritage was established in the Eastern Highveld during the second half of the 19th century well into the early 20th century. During this time period stone was used to build farmsteads and dwellings, both in urban and in rural areas. Although a contemporary stone architecture also existed in the Karoo and in the Eastern Free State Province of South Africa a wider variety of stone types were used on the Eastern Highveld. These included sandstone, ferricrete ('oukclip'), dolerite ('bloukclip'), granite, shale and slate (Pistorius 2008: 20).

The origins of a vernacular stone architecture in the Eastern Highveld may be ascribed to various reasons of which the ecological characteristics of the region may be the most important. The Eastern Highveld is generally devoid of any natural trees which could be used



as timber in the construction of farmsteads, outbuildings, cattle enclosures and other structures while the scarcity of fire wood also prevented the manufacture (firing) of baked clay bricks. Stone therefore served as the most important building material on the Eastern Highveld (Pistorius 2008: 20).

Late Iron Age communities who contributed to the Eastern Highveld's stone walled architecture were the Sotho, Ndebele and Swazi. The tradition set by these indigenous groups may have influenced the first settlers from Natal and the Cape Colony to utilize the same resources that their predecessors. Many farmers from Scottish, Irish, Dutch, German and Scandinavian descent, settled and farmed on the Eastern Highveld. They brought the knowledge of stone masonry from Europe which compensated for the lack of fire-wood which was necessary to fire clay bricks (Pistorius 2008: 21).

Farm homesteads with outbuildings that date from the more recent past occur throughout the project area. Many of these farm homesteads however hold little historical significance. However, buildings and other infrastructure which are part of these farm homesteads may be older than sixty years or may approach this age. Many of these farm homesteads are associated with formal and informal graveyards. Dwellings which have been used by farm labourers and which have disintegrated over time are in many instances associated with informal graves and sometimes with informal cemeteries (Pistorius 2008: 21)

The following section will contain the results of the 2008 Phase 1 HIA conducted by Pistorius, providing information on the sites found then and their significance, as well as the recommendations made for their mitigation. It will also indicate which of these sites will be impacted directly by the planned mining development and for which mitigation measures will be required, while some new sites subsequently identified will also be discussed.

At least eleven formal and informal graveyards were identified by Pistorius in the Wonderfontein Project Area, as well as on the area's perimeter. Some of these graveyards are older than sixty years and therefore qualify as historical graveyards. A number of grave sites were also identified in 2013 during a site visit by Pelsler, of which two will be directly impacted by the mining development.

### **Graveyard 01**

This historical graveyard (GY01) is located to the north of the Grootpan and contains the remains of at least three individuals. The graveyard is associated with an enclosure which was constructed with sandstone.

The three graves are respectively characterised by sandstone linings, a headstone which was carved from sandstone and the third by a pile of stones. A second headstone has fallen on its face. No inscriptions are visible on the two headstones.

### **Graveyard 02**

This informal graveyard (GY02) is located to the north of Grootpan, near GY01 and the sandstone enclosure. It holds the remains of approximately thirty graves mostly edged with clay bricks or with stone. Many of the graves are filled-in with rubble or gravel.

### **Graveyard 03**

GY03 is an informal graveyard which is located on the western shoulder of the dirt road running to the farm of Joon van Rooyen. It holds the remains of approximately thirty-five individuals, some of whom are fitted with cement headstones. Inscriptions on two of the headstones read as follow:

- 'Lala Ngoxolo Josephina Tholo 1903, 07-9-1983'
- 'Solomon Tholo wabekwa 17-7-1959'
- 'Elizabeth wabekwa 1945'

**No Photographs**

### **Graveyard 04**

GY04 is an informal graveyard which is also located on the western shoulder of the dirt road running to the farm of Joon van Rooyen. GY04 contains as many as seventeen graves most of which are covered with piles of stone.

**No Photographs**

### **Graveyard 05**

Informal GY05 is located near an informal settlement to the north of Grootpan. It holds the remains of approximately thirty-seven individuals. Most of the graves are covered with piles of stone while a few are fitted with cement headstones.

**No Photographs**

### **Graveyard 06**

This historical graveyard is located in the midst of a maize field. The graveyard is demarcated with a dolerite wall and holds the remains of approximately five individuals.

Two of the graves are fitted with marble headstones while the remaining graves are fitted with granite headstones.

### **Graveyard 07**

GY07 is an informal graveyard on the edge of a maize field. It consists of approximately five piles of stone.

**No Photographs**

### **Graveyard 08**

This historical graveyard is demarcated with a dolerite wall and holds the remains of approximately eleven individuals. Two of the graves are fitted with headstones carved from marble. The remaining graves are decorated with granite headstones and edged with granite strips. As many as eleven people may be interred in this graveyard.

Inscriptions on two of the marble headstones read as follow:

- 'Hier rust my tedergeliefde vader Johan Hendrik Breytenbach Geb 13 Feb 1847 Oorl 29 April 1933. Psalm 130 Vers 3'
- 'Hier rust my tedergeliefde echtgenote en onze moeder Elsie Magdalena Johanna Breytenbach Geb 7 Aug 1849 Overl 30 Junie 1928.
- 'Hier rus my geliefde eggenote Elizabeth Maria Grobler Geb Breytenbach Geb 17-11-1884 Oorl 17-11-1920'

During the February 2013 site visits by Pelsers the graves were re-counted. There are 20 graves inside the demarcated dolerite wall, while there is an informal cemetery just outside this wall containing 6 graves of black farm workers. A total of 26 graves are therefore located here. The farmworker graves contain Morabane, Kleinbooi, Geelbooi and Ntau family members, with the legible dates of death ranging between 1935 and 1936. Other European surnames were also identified, including Van Wyk, Van Zyl, Viljoen, Bull, Goss, Burger & Snyman. The youngest date of death is 1970/80 on a double grave. Most of the graves are older than 60 years of age.

**This site will be directly impacted on by the mining development and the graves need to be exhumed and relocated after the relevant processes have been adhered to. This will include consultation with descendants, obtaining their consent and the issuing of the required permits.**

### **Graveyard 09**

This informal graveyard (GY09) is located in a clump of wattle trees near an informal dwelling. The graveyard holds at least fifty graves - but possibly more. Many graves are covered with piles of stone although a number is fitted with granite headstones.

**This site was re-visited in 2013 and the graves counted. It holds at least 60 graves and will be impacted by the mining operations. The same mitigation as for Site GY08 will have to be adhered to.**

### **Graveyard 10**

GY10 is an informal graveyard located near a soil-walled dam. It holds approximately thirty graves. Most of the graves are covered with ferricrete stones. Some of the graves are edged with clay bricks and with cement.

This site was also re-visited during 2013. The numbers of graves could be at least 30 as mentioned earlier and contains mostly stone-packed graves. On those grave fitted with headstones family names such as Mtshweni, Skhosana, Motau and Kleinbooi could be discerned. Based on the Final Mine Plan the site will not be impacted by the mining operations.

## Graveyard 11

GY11 is located on the eastern fringes of the project area and was not visited by Pistorius during 2008. The site will not be impacted by the development activities.

### GPS Coordinates and Significance of Graveyards recorded by Pistorius in 2008.

Graveyards	Coordinates	Significance
GY01. North of Grootpan. Three individuals	25° 53.220' 29° 52.761'	<b>HIGH</b>
GY02. North of Grootpan. Thirty individuals	25° 53.252' 29° 52.734'	<b>HIGH</b>
GY03. Western shoulder of dirt road. Thirty-five graves	25° 52.805' 29° 52.735'	<b>HIGH</b>
GY04. Western shoulder of dirt road. Seventeen graves	25° 52.657' 29° 52.813'	<b>HIGH</b>
GY05. Near informal settlement. Thirty-seven individuals	25° 53.050' 29° 52.231'	<b>HIGH</b>
GY06. Historical graveyard. Five individuals	25° 51.558' 29° 52.402'	<b>HIGH</b>
GY07. Five graves on edge of maize field	25° 51.506' 29° 52.216'	<b>HIGH</b>
GY08. Historical graveyard. Eleven individuals	25° 50.105' 29° 52.743'	<b>HIGH</b>
GY09. Graveyard in wattle bush. More than fifty graves.	25° 50.384' 29° 52.342'	<b>HIGH</b>
GY10. Graveyard near dam. Thirty graves	25° 49.849' 29° 53.548'	<b>HIGH</b>
GY11. Not observed by author	Eastern fringes of project area	<b>HIGH</b>

**TABLE 1: From Pistorius (2008: 32).**

### New Grave Sites Visited and Recorded during February 2013

During February 2013 the author of this Revised Report also visited a number of grave sites not recorded by Pistorius during the 2008 Phase 1 HIA. Four sites were identified in 2013.

#### GN1

This site contains approximately 2 graves, demarcated only by a few stones each. The identity of the deceased and the ages of these graves have not been determined.

**The site will be impacted by the mining operations and will have to be exhumed and relocated.**

GPS Location: **S25 50.890 E29 52.411**

Significance: **High**

#### GN5

This site contains nearly 90 graves, mostly stone packed and unknown. Some has fitted cement headstones, although most have no or illegible inscriptions on them. The oldest identifiable date of death is 1952 and the most recent is 1988.

**The site will also be directly impacted by the mining operations and the graves on it will have to be exhumed and relocated.**

GPS Location: **S25 50.220 E29 53.844**

Significance: **High**

### **GN6**

The site contains the double grave of Wynand Jacobus Davel (died in 1964) and Hester Maria Davel (born Breytenbach) who passed away in 1978. The grave site is therefore younger than 60 years of age. The proposed mining development will not impact on the site.

GPS Location: **S25 50.263 E29 53.597**

Significance: **High**

### **GN7**

Site GN7 also falls outside the direct mining area and will not be impacted. It contains nearly 50 graves of which most are stone packed. Some do have fitted headstones with legible inscriptions. The family names identified include Mnisi and Maisela, although most of the graves are unknown. Dates of death that could be determined range between 1969, 1975 and 1989.

GPS Location: S25 50.476 E29 54.723



**Figure 8: GY01 (From Pistorius 2008).**



**Figure 9: GY02 (Pistorius 2008).**



**Figure 10: GY06 (Pistorius 2008).**



**Figure 11: Site GY08.**



**Figure 12: One of the Breytenbach graves on Site GY08.**



**Figure 13: Some of the other graves at the site. Note the dense grass cover.**



**Figure 14: Farmworkers' graves outside demarcated GY08.**





**Figure 15: Site GY09 location.**



**Figure 16: Some of the stone packed graves on GY09.**



**Figure 17: Some graves with headstones on GY09.**



**Figure 18: Location of GY10.**



**Figure 19: One of the graves with a headstone on GY10.**



**Figure 20: Site GN1.**



**Figure 21: One of the possible graves on GN1**



**Figure 22: View of Site GN5.**



Figure 23: One of the graves with a headstone on GN5.



Figure 24: Site GN6.



**Figure 25: View of Site GN7.**



**Figure 26: One of the graves on GN7.**

Historical structures consisting of houses with outbuildings and a wagon shed were recorded in the project area. It is possible that more historical structures may occur as some of these structures may have been missed as access to all farmsteads was not possible.

### **Historical house 01**

HH01 occurs in close proximity of Grootpan. This residence seems to date from the 1940's. It has been altered to some extent but used to consist of a four roomed house with a pitched corrugated iron roof.

## Historical houses 02

These historical structures on Wonderfontein 428 consist of a main residence with a second residence and wagon shed. Other structures include a second dilapidated wagon shed and a cattle enclosure which was constructed with dolerite stone.

This historical complex is associated with the historical Breytenbach graveyard (GY08) and therefore constitutes a cultural landscape. This complex probably dates from the late 19th century into the early 20th century.

### A wagon shed

A renovated wagon shed constructed with sandstone and with a pitched red corrugated iron roof occurs on the farm of the Bezuidenhout family on Wonderfontein 428.

### GPS Coordinates and Significance of historical structures

Historical Houses	Coordinates	Significance
HH01	25° 53.147' 29° 52.655'	<b>HIGH</b>
HH02 with outbuildings	25° 50.012' 29° 52.645'	<b>HIGH</b>

Table 2 (from Pistorius 2008: 32).



Figure 27: Main historical homestead on Wonderfontein (Pistorius 2008).



**Figure 28: Second historical homestead forming part of the historical complex on Wonderfontein (Pistorius 2008).**

These historical sites were not re-visited during the February 2013 field visit by Pelsler, as the re-visiting of the grave sites were the main focus of this survey. However, based on the significance ratings and mitigation recommendations made by Pistorius in his 2008 Phase 1 HIA these sites have been the subject of a Phase 2 study by Architectural Historian Mr.Sidney Miller during 2013. This detailed study (also commissioned by Crossdale Projects & Mining Supplies on behalf of Usimbithi Mining) is in preparation for the application for the relevant permits from SAHRA. The report will be submitted with this Revision Report for SAHRA'S comments.

According to the 2008 Phase 1 HIA report by Pistorius the significance of the heritage resources is indicated by means of stipulations derived from the National Heritage Resources Act (No 25 of 1999) and specific criteria relating to the type of heritage resource that is evaluated.

### **The graveyards**

All graveyards and graves can be considered to be of high significance and are protected by various laws (Table 1). 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).



## **The historical structures**

Historical structures older than sixty years or structures which are approaching this age are protected by Sections 34 and 38 of the National Heritage Resources Act (No 25 of 1999). The significance of historical structures therefore has been indicated as HIGH (Table 2).

The significance of each and every historical structure (house, outbuilding, etc) can further be scrutinized by specialists such as historical architects whenever these structures are to be affected by the development project. Criteria according to which these structures can be evaluated include the following: the cultural-historical background of structures; their scientific or architectural value; their use in the field of tourism, museums or education as well as their aesthetic appearance; repeatability (scarcity), or their emotional (ideological) value.

Pistorius recommended the following mitigation measures for the sites recorded:

## **The graveyards**

Graveyards can be mitigated by following one of the following strategies, namely:

- Graveyards can be demarcated with brick walls or with fences. Conserving graveyards in situ in mining areas create the risk and responsibility that they may be damaged, accidentally, that the mine remains responsible for its future unaffected existence, maintenance and that controlled access must exist for any relatives or friends who wish to visit the deceased.
- Graveyards can also 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.

**APelser Archaeological Consulting, in conjunction with Crossdale Projects & Mining Supplies, has been appointed by Umsimbithi to undertake the exhumation and relocation of those graves situated on Grave sites that will be DIRECTLY impacted by the proposed Wonderfontein Colliery. Sites GY08, GY09, GN1 & GN5 will be impacted.**

**The other grave sites will be indirectly impacted on by the mining activities. These indirect impacts will include the breaking/cracking of headstones as a result of blasting activities that will be ongoing for the duration of the mining operations, as well as the likely occurrence of soil subsidence. Furthermore, once mining operations are fully operational access to the sites for visits by relatives and other family members will be severely restricted for health, safety and security reasons.**

## **Historical structures**

Historical structures may not be affected (demolished, renovated, altered) by the mining development project prior to their investigation by a historical architect in good standing with the South African Heritage Resources Agency (SAHRA). The historical architect has to acquire a permit from the South African Heritage Resources Authority (SAHRA) prior to any of these structures been affected or altered (demolished, renovated) as a result of the mining development project.

As mentioned earlier, a Phase 2 Architectural documentation report has been prepared by Mr. Sidney Miller based on the above recommendations. The sites are graded based on a set of criteria, and varies between low, medium and high significance. From a Heritage point of view these sites have Local Significance giving them a Grade 3 rating. Of the 8 sites discussed in his report Site 1 will be directly impacted as a result of the mining activities, while Site will not. The other 6 sites (3-8) will be indirectly impacted as they will eventually be marginalized, isolated and condemned to destruction by neglect. A Demolition Permit for the Site 1 farmstead will have to be obtained.

## **7. CONCLUSIONS AND RECOMMENDATIONS**

In conclusion it can be said that the 2008 Phase 1 HIA done by Pistorius, taken certain limitations into mind (such as the fact that a Final Mine Plan/Layout was unavailable), was done successfully. A range of heritage resources were identified and recorded, including 11 formal and informal graveyards and two historical farmsteads with associated buildings. These sites were rated as of High Significance and mitigation measures to minimize the negative impacts of the proposed mining development were proposed. It was recommended that, should they be directly impacted, the grave sites be exhumed and relocated after following all the required consultation and permitting processes. It was also recommended that the historical farmstead be documented in detail before mining commences and prior to possible demolition.

The author of this report was subsequently tasked, in conjunction with Crossdale Projects & Mining Supplies, to undertake the graves exhumation work. In February 2013 the grave sites that will be impacted (based on the Final Mine Plan) were visited and documented in some detail. Four sites not identified by Pistorius during 2008 were also documented, and of these 2 will be impacted. Together with Pistorius's GY08 & GY09, GN1 and GN5 will be relocated. With the sites located in an area where both extensive opencast and underground mining will be undertaken there is no way in leaving them in situ. Social consultation with communities and descendants has indicated that the best way forward would be to exhume and relocate so that the graves can be visited freely by relatives and to prevent undue damage to the graves. During the 2013 site assessments the sites were densely vegetated, making detailed documentation and photo recording of all the graves on the sites difficult. The graves were however counted and general site photographs taken and individual graves recorded. During mitigation (grave exhumations) each grave will be documented in detail.

A Phase 2 Architectural documentation report has also been completed in 2013, and was submitted to SAHRA for their required comments. It should also be stated that no GPS Track Logs, as is required currently, was done in 2008 by the author of the first report. However, it is believed that the HIA work conducted in 2008 was done in a successful manner and that all

possible heritage resources existing in the study area were identified and recorded taking the limitations into consideration. The Final Mine plan provided in 2013 highlights this fact and clearly indicates which sites will be negatively impacted and requires mitigation.

From a Heritage point of view it is therefore recommended that the development be allowed to continue. **However, the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility and this aspect needs to be kept in mind at all times. This could include unknown and unmarked burials. If during any development activities, if any sites, features and objects of a cultural heritage (archaeological or historical) nature, are exposed, an expert should be called in to investigate and suitable mitigation measures are implemented. All development in these areas should be halted until the situation had been satisfactorily resolved.**

**A required Palaeontological study will also be commissioned and a report submitted to SAHRA for final comments once completed.**

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