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PREPARED FOR:
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**A HERITAGE IMPACT ASSESSMENT (HIA) STUDY FOR THE EMP AMENDMENT
FOR DOUGLAS COLLIERY IN THE MPUMALANGA PROVINCE OF SOUTH
AFRICA**

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EXECUTIVE SUMMARY

A Heritage Impact Assessment (HIA) study as required in terms of the National Heritage Resources Act (Act 25 of 1999) was done for the EMP amendment for Douglas Colliery in the Mpumalanga Province of South Africa.

The HIA study revealed the presence of the following types and ranges of heritage resources in the Douglas Colliery Mining Area: a Historical House (HH01); six Informal Graveyard (GY01 to GY06), remains (sites) dating from the Relatively Recent Past (Site RRP01 to Site RRP09) and a number of closed mine shafts. These resources have been mapped (Figure 1) while the coordinates of the graveyards and the remains dating from the Relatively Recent Past have been tabulated (Tables 1 & 2). The levels of significance of the Historical House and the remains dating from the Relatively Recent Past have been determined using various criteria (Table 2).

The graveyards can be considered to be of outstanding significance. Graveyards that will be affected by future mining activities must be relocated to accommodate expanding mining activities. This (Phase II) work must be done by forensic archaeologists who will acquire all the necessary permits for the exhumation and relocation of the graveyards. Various laws, provincial regulations and administrative procedures regulate this activity.

The Historical House (HH01) can be considered significant with regard to various criteria. However, this structure is dilapidated and can not be restored to its former grandeur. Outstanding examples of similar (colonial) sandstone farm homesteads exist near Middelburg on the Eastern Highveld. It is recommended that this structure be subjected to a Phase II investigation as required by the National Heritage Resources Act (Act No 25 of 1999). This investigation's aim will be to document the house prior to its destruction. This information will be stored in SAHRA's databank (register) for future use in research projects.

The remains (sites) dating from the Relatively Recent Past (Site RRP01 to Site RRP09) can not be considered to be of outstanding significance and can be demolished. However, a permit for their destruction is required.

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The closed mine shafts qualify as part of the national estate. Douglas Colliery started with coal mining more than a century ago. It is the oldest colliery on the Eastern Highveld and may consider preserving one of the impressive mine shafts in order to reflect its remarkable coal mining history which is only equalled by coal mines in Kwa Zulu/Natal. A rapid changing coal mining technology make some of these shafts (which only date from the last two/three decades) appear to be 'ancient' when compared with current opencast drag line operations that are used to main coal. The coal mine can over time be developed into an open-air mine museum to which other displays of abandoned equipment, etc. can be added. However, such a venture can only be undertaken taking into consideration regulations such as health and safety as laid down by mine legislation (e.g. the Mine Health and Safety Act [Act No 29 of 1996] and the Mineral Petroleum Resources Development Act [Act No 28 of 2002]).

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1 INTRODUCTION

This document contains the report on the results of a Heritage Impact Assessment (HIA) study done for the EMP amendment for Douglas Colliery on the farms Wolvekrans 171S, Kleinkopje 151S, Steenkoolspruit 181S and Van Dyksdrift 191S in the Eastern Highveld in the Mpumalanga Province of South Africa.

The Eastern Highveld as a whole has a rich archaeological heritage comprised of remains dating from the pre-historical and from the historical (or colonial) periods of South Africa. Pre-historical and historical remains in the Eastern Highveld 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 the National Heritage Resources Act) occur in this region (see Box 1).

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**BOX 1: TYPES AND RANGES OF HERITAGE RESOURCES AS OUTLINED IN THE
NATIONAL HERITAGE RESOURCES ACT (ACT NO 25 OF 1999)**

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

- (a) places, buildings structures and equipment of cultural significance;
 - (b) places to which oral traditions are attached or which are associated with living heritage;
 - (c) historical settlements and townscapes;
 - (d) landscapes and natural features of cultural significance;
 - (e) geological sites of scientific or cultural importance;
 - (f) archaeological and paleontological sites;
 - (g) graves and burial grounds including-
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders
 - (iii) graves of victims of conflict
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No 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 paleontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).
- The National Heritage Resources Act (Act No 25 of 1999, Sec 3) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following:
- (a) its importance in the community, or pattern of South Africa's history;
 - (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
 - (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
 - (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
 - (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
 - (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
 - (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
 - (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;
 - (i) sites of significance relation to the history of slavery in South Africa

2 AIMS WITH THIS REPORT

Douglas Colliery's mining activities are confined to the farms Wolvekran's 171S, Kleinkopje 151S, Steenkoolspruit 181S and Van Dyksdrift 191S to the south of Witbank in the Mpumalanga Province of South Africa. As Douglas Colliery intends to expand its mining activities the mine's EMP has to be amended. Heritage resources in the Douglas Colliery Mining Area may be endangered by new mining activities. Consequently, Douglas Colliery requires knowledge of the presence, relevance and the significance of any heritage resources that may occur in the Douglas Colliery Mining Area in order to take pro-active measures with regard to any heritage resources that may be affected, damaged or destroyed by the new mining activities. Douglas Colliery and Pulles, Howard and De Lange therefore commissioned the author to undertake a Heritage Impact Assessment (HIA) study of the Douglas Colliery Mining Area. The aims of the HIA study were:

- to establish whether any heritage resources do occur in the Douglas Colliery Mining Area and if so, to determine the nature, the extent and the significance of these remains;
- to determine whether such remains will be affected by mining activities; and
- to evaluate what appropriate actions could be taken to reduce the impact of the development activities on such remains.

3 METHODOLOGY

This HIA study was conducted by means of fieldwork, information derived from spokespersons, a survey of literature and the consulting of archaeological (heritage) data bases.

3.1 Fieldwork

The Douglas Colliery Mining Area was subjected to a survey with a vehicle while selected areas were subjected to a survey on foot.

Employees from Douglas Colliery and a spokesperson living on Kleinkopje 15IS provided important information which helped with the identification of the majority of graveyards in the Douglas Colliery Mining Area.

The author of this report has also done a few HIA studies in the immediate surroundings of the study area and is therefore not totally unacquainted with the broader area in which the development is planned (see Part 8, 'Selected Bibliography'). The possible presence as well as the types and ranges of heritage resources in the study area are therefore to a certain extent predictable on the basis of experience gained from earlier fieldwork in the broader area.

The coordinates for the various types and ranges of heritage were determined with a GPS instrument. These features were also mapped and their significance determined using various criteria (Figure 1; Tables 1 & 2).

3.2 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 was consulted to determine whether any heritage resources have been identified in the broader study area.

A survey of literature relating to the cultural and historical context of the Douglas Colliery was also undertaken in order to contextualise any possible heritage resources and sensitive remains that may occur in or near the Douglas Colliery Mining Area (see Parts 4 & 8).

3.3 Assumptions and limitations

It must be made aware that heritage resources at times appear in the most unexpected places. It must also be kept in mind that 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 mining) commences.

3.4 Some remarks on terminology

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 No 25 of 1999) (See Box 1).

Heritage resources (cultural 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-historical' 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

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historical period and historical remains refer, for the Witbank area, to the first appearance or use of 'modern' Western writing brought to Witbank by the first Colonists who settled in this area after c. 1840.

The term 'relatively recent past' refers to the 20th 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 head stones 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).

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The term 'Late Iron Age' refers to the period between the 17th century and the 19th 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-historical, historical or the relatively recent past.

The term 'study area', 'project area' or 'Douglas Colliery Mining Area' refers to the area where Douglas Colliery wants to focus its development activities (refer to plan).

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 co-operation and approval of SAHRA.

4 THE STUDY AREA

4.1 Location

Douglas Colliery is situated on the farms Wolvekraal 171S, Kleinkopje 151S, Steenkoodspuit 181S and Van Dyksdrift 191S to the south of Witbank in the Emalaheni Municipality in the East Vaal District of Mpumalanga. Douglas Colliery is located to the west of Road 544 running from Witbank in the north to Kinross in the south. The Olifants River runs along the western perimeter of Douglas Colliery (2629AB Van Dyksdrift [1:50 000]; 2628 East Rand [1: 250 000]) (Figure 1).

The study area is spread out over an undulating piece of land that is largely covered with agricultural fields and opencast mining activities. Few trees occur in the study area, the majority of which are blue gum trees and wattles. Blue gum trees may in some instances be associated with old farm homesteads (and graveyards) as some of these trees were planted by the first colonists who settled in the area.

4.2 Contextual background

Considering the types and ranges of heritage resources listed in the National Heritage Resources Act (see Box 1) together with previous research and literature reviews it is possible that the following types of heritage resources may exist in the Douglas Colliery Mining Area, namely:

- Stone tools that date from any of the Stone Age periods;
- Historical remains associated with the establishment of the earliest farmers (colonists) in the area
- Mining remains that can be associated with the earliest coal mining activities in the area.

- Remains dating from the more recent past such as homesteads occupied by farmers and their co-workers. These residential remains may be associated with single graves or with cemeteries.

The following brief historical overview will help to contextualise the Douglas Colliery Mining Area.

4.2.1 Stone Age sites

Stone Age sites are usually associated with stone artefacts usually found scattered on the surface or as part of deposits in caves and rock shelters. The Stone Age is divided into the Early Stone Age, the Middle Stone Age and the Late Stone Age. The Early Stone Age covers the period from 2.5 million years ago to 250 000 years ago. The Middle Stone Age refers to the time period from 250 000 years ago to 22 000 years ago and the Late Stone Age is the period 22 000 years ago to 2 000 years ago. Each of these 'ages' are divided into different 'cultural' periods, which may differ chronologically or which may have existed roughly simultaneous in different regions and therefore under different climatic conditions in South Africa.

Heritage surveys done in the wider study area where Douglas Colliery's activities are focussed has not revealed the presence of significant numbers of Stone Age sites from any of the different periods identified for the Stone Age. This little information about Stone Age sites can partly be attributed to a lack of archaeological surveys done in this part of South Africa. Stone Age sites are numerous all over South Africa and tend to crop up even where the presence of humans in the past was not remotely expected.

4.2.2 Late Iron Age remains

Numerous pre-*difaqane* and *difaqane* wars took place in the Bankenveld during the last quarter of the 18th century and the first three decades of the 19th century. These

wars led to the displacement of large numbers of Tswana clans in the Central Bankeveld where Mzilikazi's Ndebele caused chaos and havoc. The Ndebele established several settlement complexes in this region although it is possible that Mzilikazi may have had settlements in the Eastern Bankeveld, between Pretoria and Witbank, although the locations of these settlements have not yet been pointed out by research.

4.2.3 Historical remains

Modern towns closest to Douglas Colliery include Witbank and Middelburg. Witbank came into being as the railway line between Pretoria and Lourenzo Marques which was built in 1894 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.

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.

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.

Today Middelburg and Witbank are important centres where coal is mined and transported to Richards Bay from where it is exported all over the world. The 20th

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.

4.2.4 A coal mining heritage

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.

The first exploitation for coal was probably in Kwa Zulu/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.

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-Spring coal fields, which is now largely worked out. By 1899, at least four colliers 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.

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By 1920 the output of all operating colliers in South Africa attained an annual figure of 9,5million tonnes. Total in-situ reserves were estimated to be 23 billion tonnes in Witbank-Springs, Natal and Vereeniging. The total in situ reserves today are calculated to be 121 billion tonnes. The largest consumers of coal are Sasol, Iscor and Eskom.

Douglas Colliery emerged from the Witbank Colliery which was founded in the former Transvaal Republic in 1896. Coal mining operations began in the Witbank Main Seam (also known as the No. 2 Seam) two years later. The first dividends were paid to shareholders in 1903. Douglas Colliery was launched in 1973 when Witbank Colliery bought out the former Douglas Colliery from the Transvaal and Delagoa Bay Investment Company (Rand Mines). The export of Low Ash Coal also commenced during this year.

Figure 1. The Douglas Colliery Mining Area on the farms Wolvekran 171S, Kleinkopje 151S, Steenkoolspruit 181S and Van Dyksdrift 191S in the Eastern Highveld in the Mpumalanga Province of South Africa. The most important heritage resources discovered in the Douglas Colliery Mining Area include Informal Graveyards, a Historical House, remains dating from the Relatively Recent Past and closed mine shafts.

5 THE HERITAGE IMPACT ASSESSMENT STUDY (HIA)

The survey of the Douglas Colliery Mining Area revealed several types and ranges of heritage resources as outlined in the National Heritage Resources Act (Act No 25 of 1999). These resources are now listed and discussed.

5.1 Types and ranges of heritage resources discovered

The types and ranges of heritage resources discovered in the Douglas Colliery Mining Area on the farms Kleinkopje 15IS, Steenkootspruit 18IS and Van Dyksdrift 19IS include:

- One historical house (farm homesteads) with an outbuilding.
- Six Informal Graveyard which may be historical as some of the graves may be older than sixty years.
- Remains dating from the relatively recent past.
- Closed mine shafts.

The coordinates of the Informal Graves, Historical House and the remains from the Relatively Recent Past have been determined with a GPS instrument. These sites were also mapped (refer to Figure 1).

A broad description of these resources illustrated with photographs is now provided. The heritage resources have been designated a code and number to simplify the descriptions of these resources.

5.1.1 Historical houses and outbuildings

A historical house (farm homesteads) with an outbuilding was discovered on the farm Kleinkopje 15IS. This homestead and outbuilding date from the turn of the 19th century

and represent one of a number of pioneers (Colonial) dwellings that were established on the Eastern Highveld by the first colonists. Several of these farm homesteads were recently discovered on the eastern fringes of the coal fields near Middelburg.

These pioneer dwellings were square structures that were built with sandstone blocks. Sometimes ferricrete blocks were used in conjunction with the sandstone. The sandstone was probably quarried from sandstone outcrops that occur near the banks of the Olifants River. These farm homesteads were covered with pitch corrugated zinc roofs (Figure 2). Outbuildings mainly consisted of a shed and other secondary structures that were inferior in quality as the majority have disintegrated during the last decades.

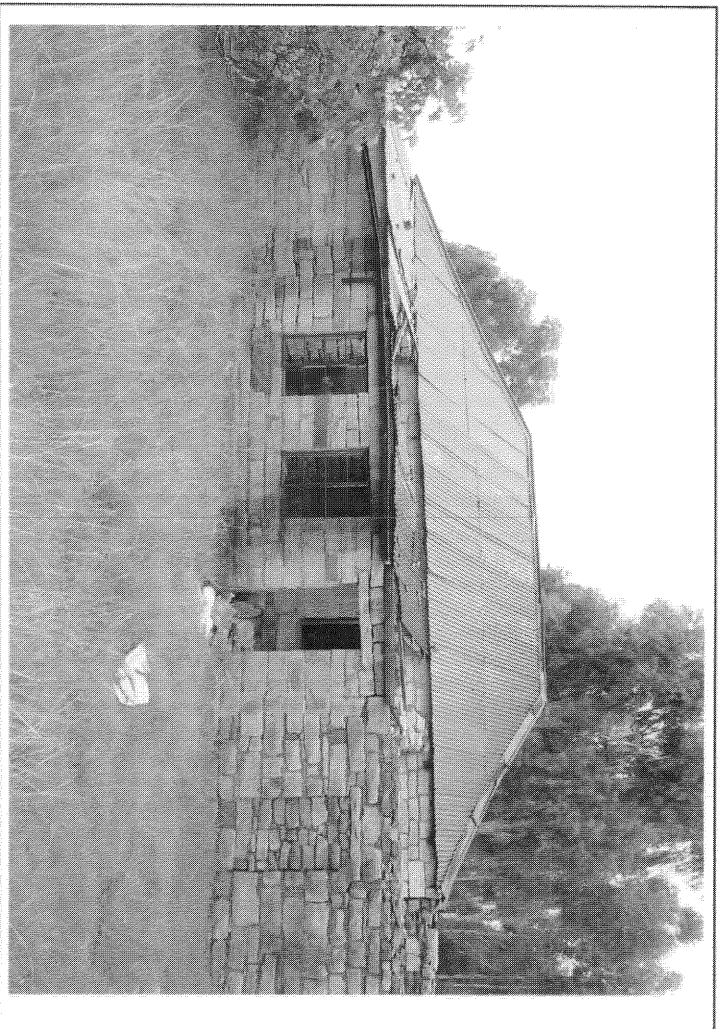


Figure 2- A historical house (farm homestead) OUTSIDE the Douglas Colliery near Middelburg. These dwellings were the first to be established by Colonists when they arrived in the Eastern Bankveld during the second half of the 20th century. The remains of the Historical House (HH01) on Kleinkopje probably resembled the structure above before it fell into ruins.

Historical House 01 (HH01)

This historical house and an outbuilding is situated in the northern part of the mining area on the farm Kleinkopje 151S. The house and outbuilding is located on a slope on the northern bank of the Olifants River in a clump of blue gum trees. From here the residents of the house looked down on the southern meandering course of the river.

The farm homestead was build with sandstone blocks and is associated with a circular outbuilding such as a rondavel. Only the foundations of both structures are visible (Figure 3). The sandstone that was used as building material was probably quarried from sandstone dykes such as the one near the banks of the Olifants River on Kleinkopje (Figure 4).

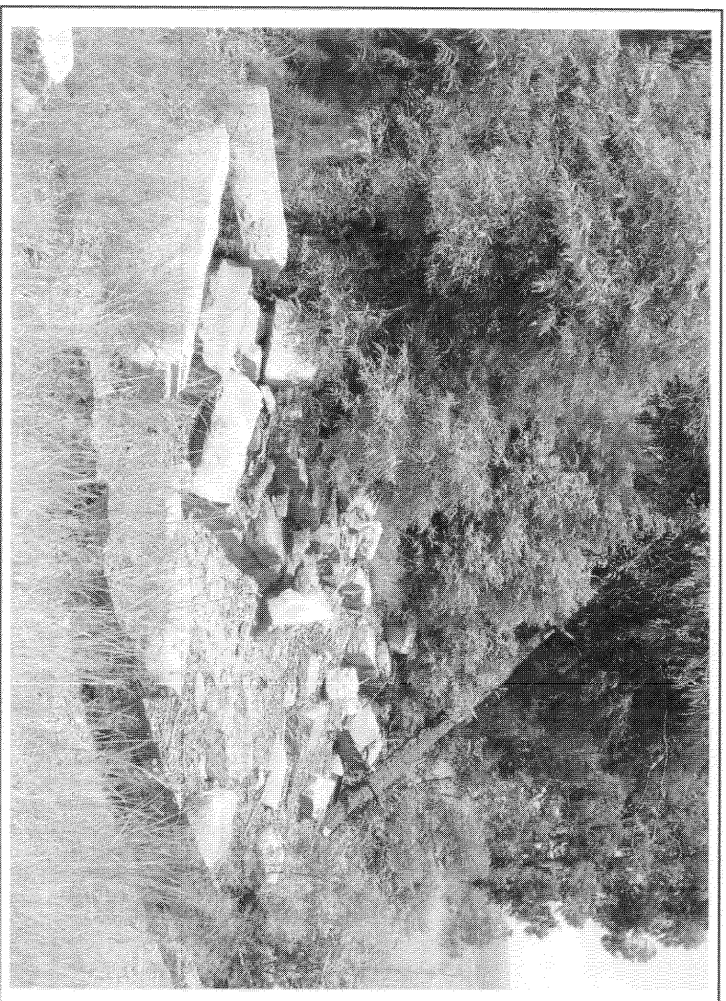


Figure 3- The remains of the historical farm homestead that was builds with sandstone blocks near the banks of the Olifants River on the farm Kleinkopje 151S. The house is in ruins and only the foundation has remained intact



Figure 4- Sandstone outcrops from where sandstone could have been mined for building material for early pioneer dwellings in the Eastern Bankveld. This sandstone outcrop occurs on Kleinkopje 15IS, close to the banks of the Olifants River.

5.1.2 Graveyards

Six informal graveyards were found in the Douglas Mining Area. Only one graveyard is currently located in the midst of mining activities (GY01, on Steenkoolspruit 18IS). The remaining five graveyards are located on Kleinkopje 15IS, one of which is located close to this farm's border with Steenkoolspruit 18IS (GY02) (Figure 1).

The graves were not counted as a tall grass cover prevented identifying all possible graves, especially those in GY01 which contains the majority of graves in the Douglas Mining Area. It is estimated that more than 100 individuals were buried in the six graveyards that were identified (Figure 1; Table1).

Graveyard 01 (GY01)

Graveyard 01 (GY01) is located in the midst of mining activities on the farm Steenkoolspuit 15IS. It is fenced in and may contain as many as eighty to one hundred graves. Most of the graves are covered with stones but only a few have headstones. Some of these headstones may have inscriptions of some kind identifying the deceased and the time of their burials. A large number of graves have no headstones or any other markings of any kind and their presence can only be assumed by uneven surfaces in the graveyard (Figures 5 & 6).

Graveyard 01 must have served as a central cemetery where people who lived in the wider area were buried from a certain time in the past. There is little doubt that some of the graves in this cemetery are older than sixty years which would mean that this graveyard would qualify as a historical cemetery (Figures 5 & 6).

Graveyard 01 is still being visited by relatives of the deceased. It is clear that various families were buried in the graveyard. Considering the numbers of sites that date from the relatively recent past in the Douglas Mining Area it must be assumed that the graveyard was used by black families who lived in the area and who were employed, initially by farmers, and later by various coal mines that arose in the area.

Inscriptions on a few of the head stones of the graves read as follow:

'Jesaya Ngwenya Uskone Mhlaka'

'Johnson Skante Geb 1914 Oorl 1995-2-23'

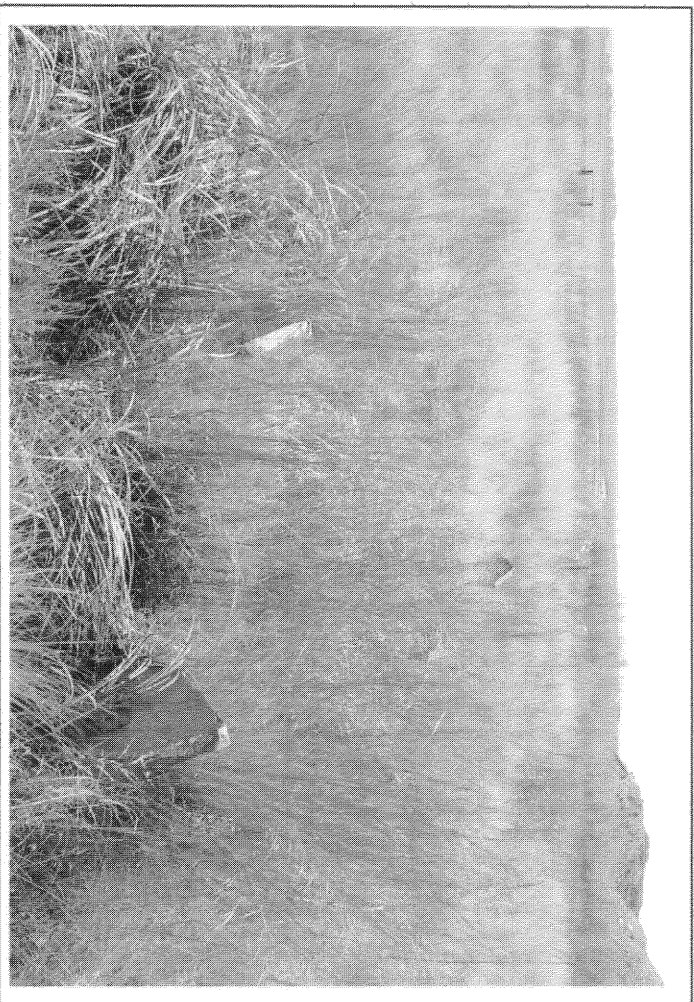


Figure 5- Informal Graveyard 01 (GY01) in the midst of mining activities in the Douglas Mining Area (above). This graveyard is fenced-in. A thick grass cover prevented establishing the number of graves in the cemetery.

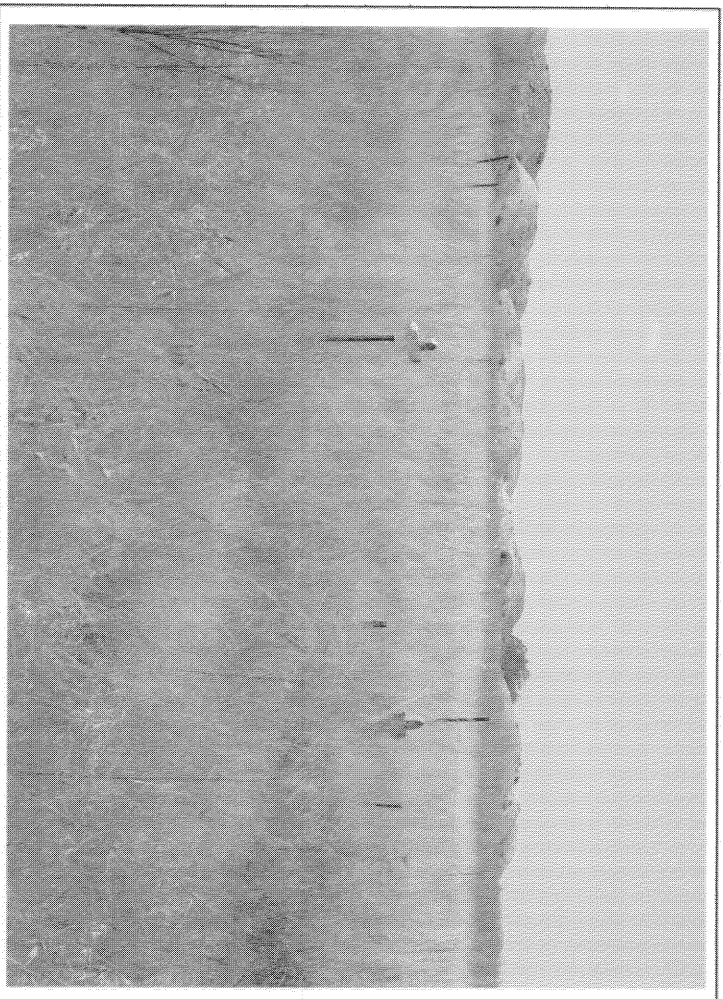


Figure 6- Only a limited number of graves in GY01 have head stones. The majority are covered with stones while an unknown number are unmarked. Note the encroaching mining activities in the background (above).

'Themba Amos Ngwenya Uhambe Hlaka'

'In memory of Emily Died 31st May 1973 R.I.P.'

'Betty Simelane Born 1909 Died 28-02-1964 Lala Ngokuthula'

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Graveyard 02 (GY02)

This informal graveyard is located near the Vlei Shaft at the end of a row of blue gum trees. This graveyard is located near the border between the farms Kleinkopje 151S and Steenkoolspuit 181S. It is composed of seven graves located in two rows. Three of the graves have granite tomb stones, three are equipped with head stones manufactured from corrugated zink and one is fitted with a cement head stone. This graveyard is primarily associated with the Mnguni family (clan) (Figure 7).



Figure 7 – GY02 is located along the end of an avenue of Blue Gum trees. It contains seven graves. Most of the deceased are members of the Mnguni family.

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Tomb stones with inscriptions in GY02 read as follow:

'Spokomani Moses Mnguni Died 24 Nov 1982 Rest in peace'

'Sali Mnguni Died 04-08-1950'

'Mnguni Masana'

'Kalkoen Mnguni Died 1963'

Graveyard 03 (GY03)

This informal graveyard is located approximately hundred and fifty meters from Site RRP01 on Kleinkopje 15IS and is probably associated with this village. It is composed of three graves, two with cement heads stones with no inscriptions while the third is covered with stones (Figure 8).

A fourth heap of stones may be a (fourth) grave although it seems as if these stones were merely collected to be placed on the third grave, a task which was never completed. A pile of bricks and cement between the two graves with cement head stones are the edgings of one of the graves that was upgraded but which was never removed out of the cemetery.

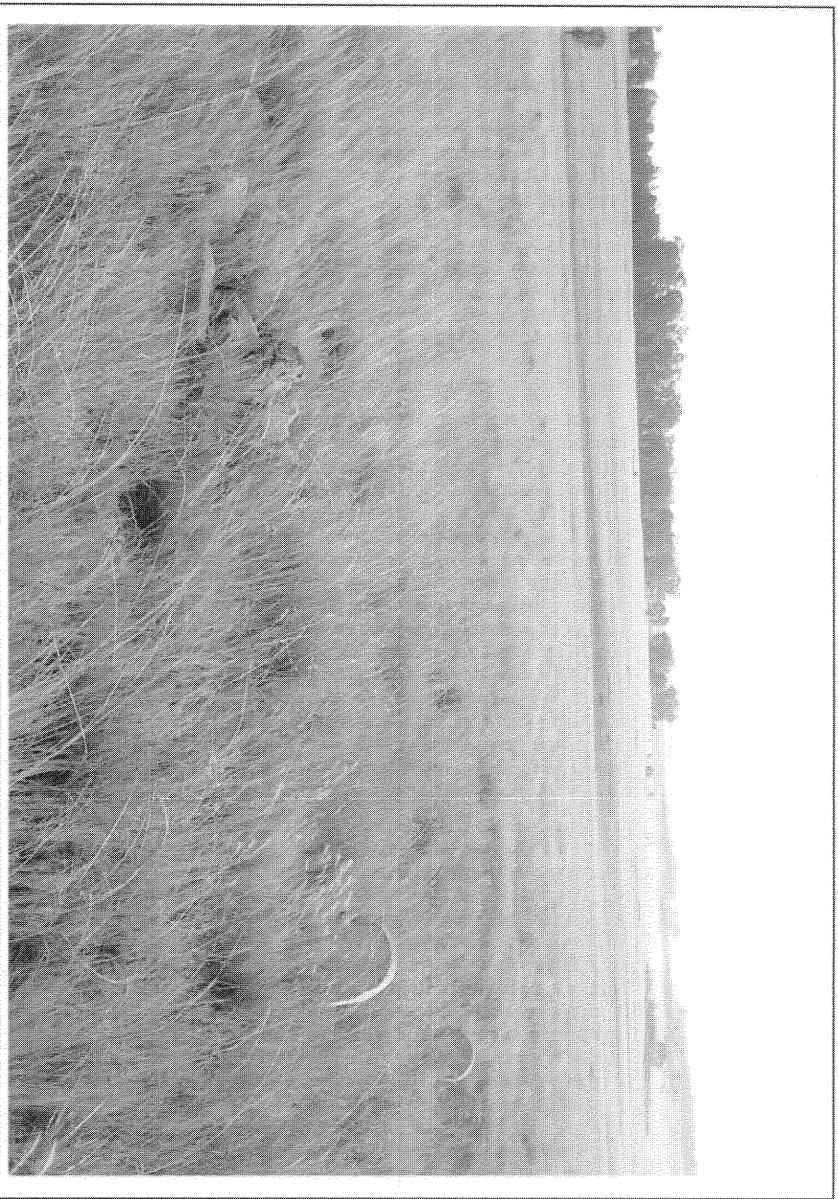


Figure 8- GY03 is situated near Site RRP01 (above). This informal graveyard has three graves, two with head stones with no inscriptions.

Graveyard 04

This graveyard is located on Kleinkopje 15IS in a wattle bush on the northern banks of the Olifants River. GY04 has been invaded by the wattle bush and it is possible that more graves may exist in this bush.

At least eight heaps of stones (graves) were counted in the wattle bush.

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Graveyard 05

Graveyard 05 is situated next to the wall of a cattle kraal that is part of a village that is occupied by the Mokwena family on Kleinkopje 15IS.

Graveyard 05 contains five graves, three of which are new (Figure 9). Two of the graves are old and were found by the Mokwena people when they established their homestead on Kleinkopje 15IS. The deceased in the three new graves are known to the Mokwena family.

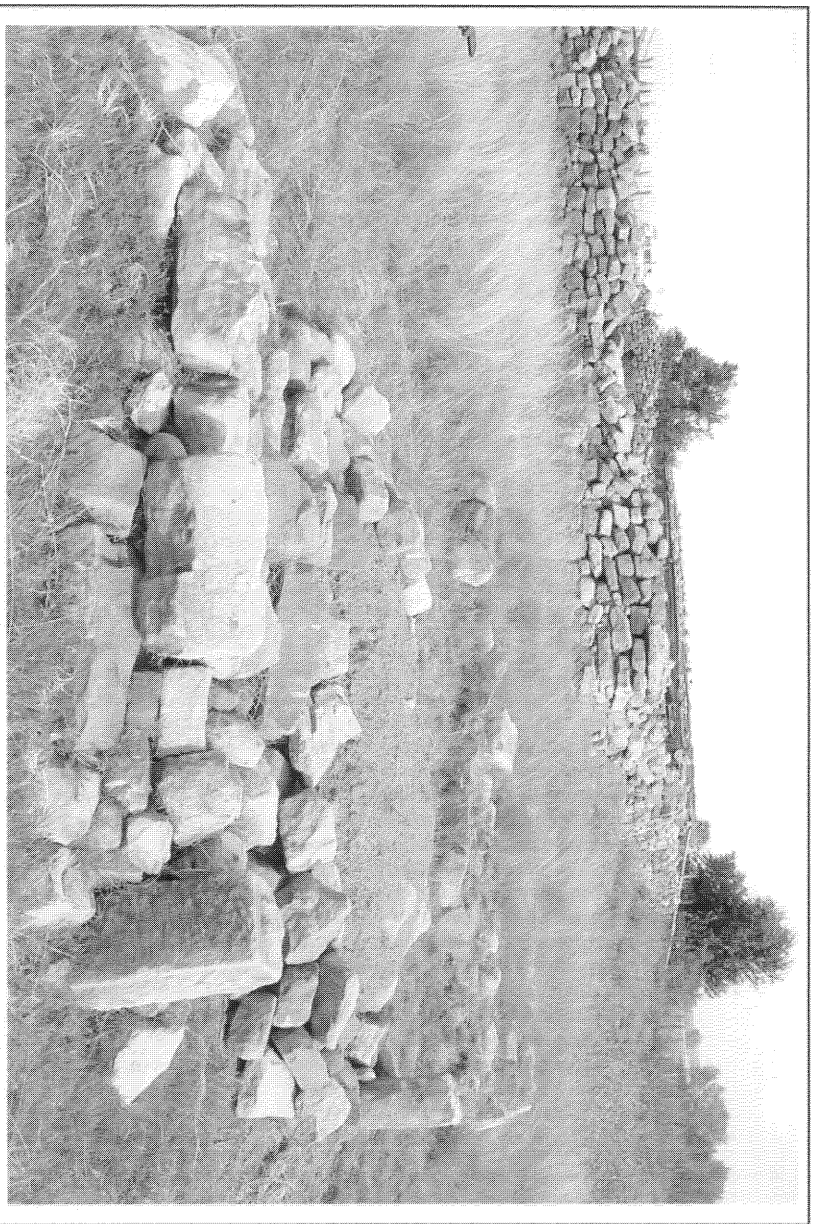


Figure 9– Graveyard 05 is located next to the village that is occupied by the Mokwena family on Kleinkopje 15IS. Three of the five graves in this graveyard are new.

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Graveyard 06

Graveyard 06 is located near Eskom's power lines in the north-western border of the Douglas Mining Area on the farm Kleinkopje 151S. It is situated within the flood line of the Olifants River (Figure 10).

This grave site is marked by a large cement headstone with inscriptions indicating that three Shabagu children were buried here next to each other. A small cement head stone indicates the position of a fourth Shabangu juvenile that is buried next to the other three.



Figure 10- GY06 is located near the northern banks of the Olifants River and contain the graves of four children of the Shabangu family.

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The inscriptions on the single large cement tomb stone that covers the Shanbagu children's grave read as follow:

'Elina Shabangu Wavela 10-01-1945 12-12-1947'

'Semson Shabangu Wavela 7-10-1943 12-12-1947'

'Miliyan Shabangu Wavela 22-11-1941'

(This child probably died together with Elina and Semson in a accident on 12-12-1947?).

The single small cement headstone bears the following inscription:

'Jheri Shabangu Wabhubha 01-12-1961 (died)'

5.1.3 Remains from the Relatively Recent Past

Remains from the relatively recent past were observed at various localities within the perimeters of the Douglas Mining Area (Figure 1; Table 2). These remains mainly consist of heaps of soil, upright foundation stones, long lines of stones and ruins of dwellings (mostly) occupied by families or mine workers. The presence of these remains can sometimes also be established from ecological indicators such as the presence of invader plants and grasses and mostly from aloes and sisal bush. These remains date from the recent past and have no historical significance. Informal graves or graveyards may sometimes be associated with these remains.

The remains that were observed are listed below and are illustrated with photographs. It is possible that not all the sites dating from the recent past have been recorded. The following sites dating from the relatively recent past were observed in the study area (Figure 1; Table 2):

Site RRP01

This site is located on Kleinkopje 15IS, close to massive rocks and outcrops of sandstone. It is associated with GY03. The site comprises of a number of structures of which at least one has a square foundation that was build with stone. It seems as if the majority of the structures in this village had square ground plan forms (Figures 11 & 12).

No archaeological material such as pottery, ceramics, middens, corrugated zink or other refuse are associated with these remains. It seems as if site RRP01 consisted of a small village with a number of houses that date from the recent past.



Figure 11 - Site RRP01 is located near a number of large sandstone rocks near a tributary of the Olifants River.

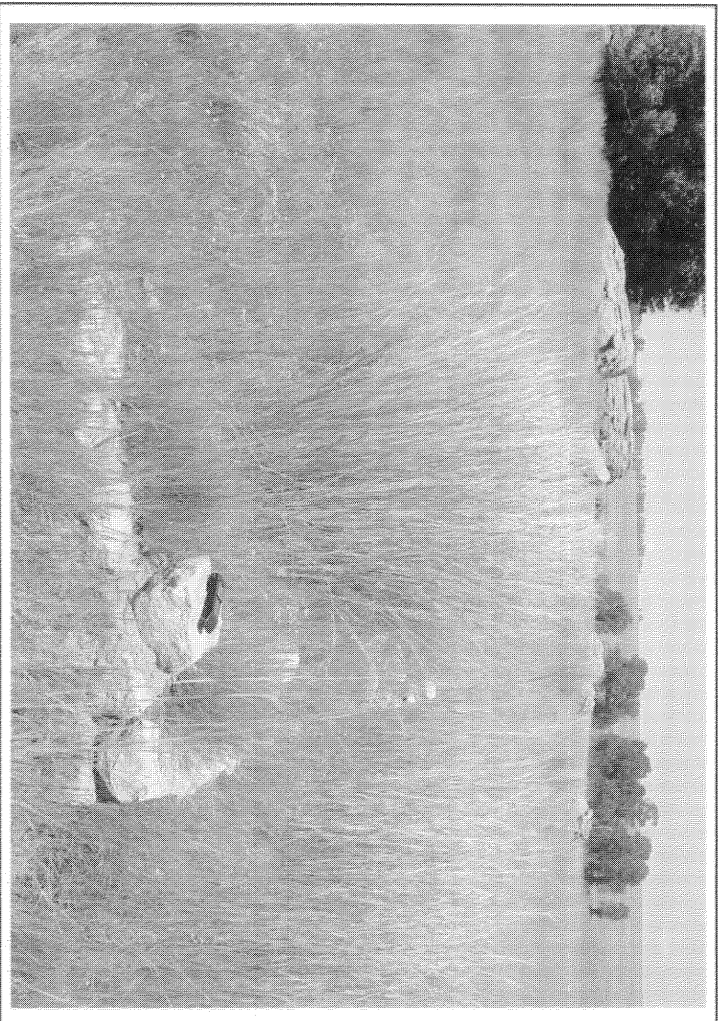


Figure 12- The remains of dwellings in Site RRP01 consist of at least one structure with a square foundation (above).

Site RRP02

This site consists of a number of ruins which include at least two residences, a cattle kraal, a soil dam and a stand for a water tank. The structures in this village complex were built with clay bricks, stones and cement and are relatively modern. This village complex is located on Kleinkopje 15IS, next to a tributary of the Olifants River (Figure 13).

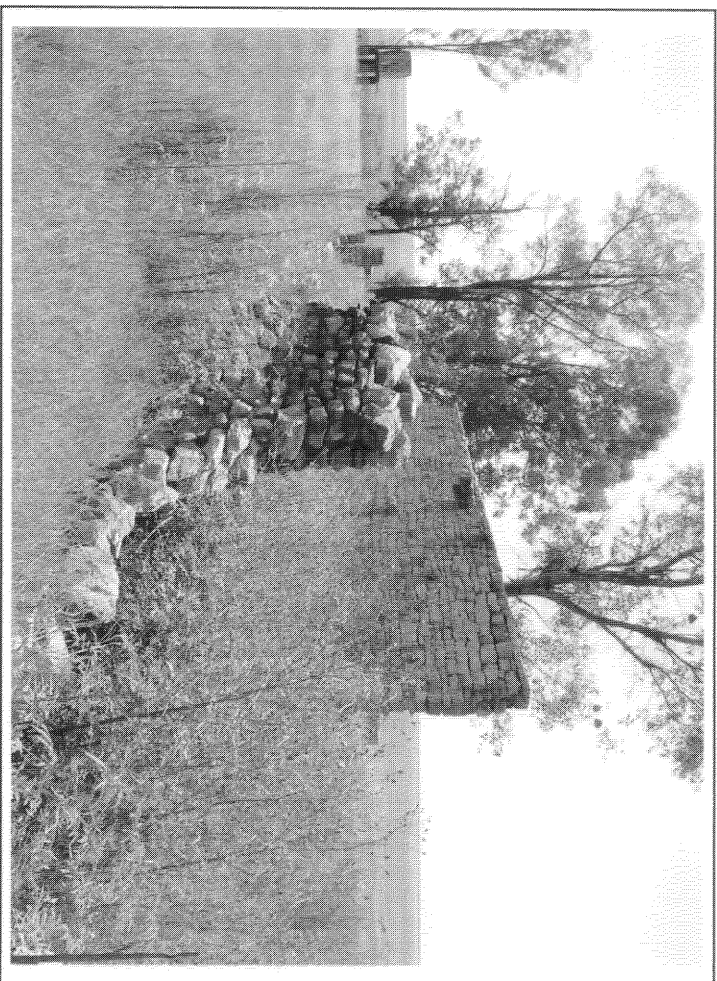


Figure 13- Ruins of a village complex which include two residences and a cattle kraal is part of Site RRP02 (above).

Site RRP03

This site is located on Kleinkopje 151S close to an avenue with blue gum trees. The site merely consists of a square mud foundation of a single structure while the surrounding area is deforested. The site is also marked by a single sisal plant standing close to the square foundation (Figure 14).

Site RRP03 was probably comprised of a small hamlet with a limited number of structures. It is associated with Graveyard 03 that is located near the end of the avenue with blue gum trees.



Figure 14- Site RRP01 consists of a single square raised mud foundation and a sisal plant (above). A small family group may have lived on this spot during the more recent past.

Site RRP04

Site RRP04 is located on Steenkoolspruit and consists of two structures, namely a large cattle kraal that was built with stone and cement and a square dwelling build with mud. These structures are still intact and were abandoned in the more recent past (Figure 15).



Figure 15- Site RRP04 includes a large cattle kraal that was built with stone and cement (above). The second structure in this site consists of a square mud dwelling.

Site RRP05

Site RRP05 is only marked by sisal bushes in an avenue with blue gum trees next to a haul road running into the open cast mining area. No remains of any dwellings are visible near this site any longer.

Site RRP06

Site RRP06 consists of the ruins of at least two dwellings on Steenkoolspruit 181S that have been demolished. It seems as if the two houses date from the recent past (Figure 16).

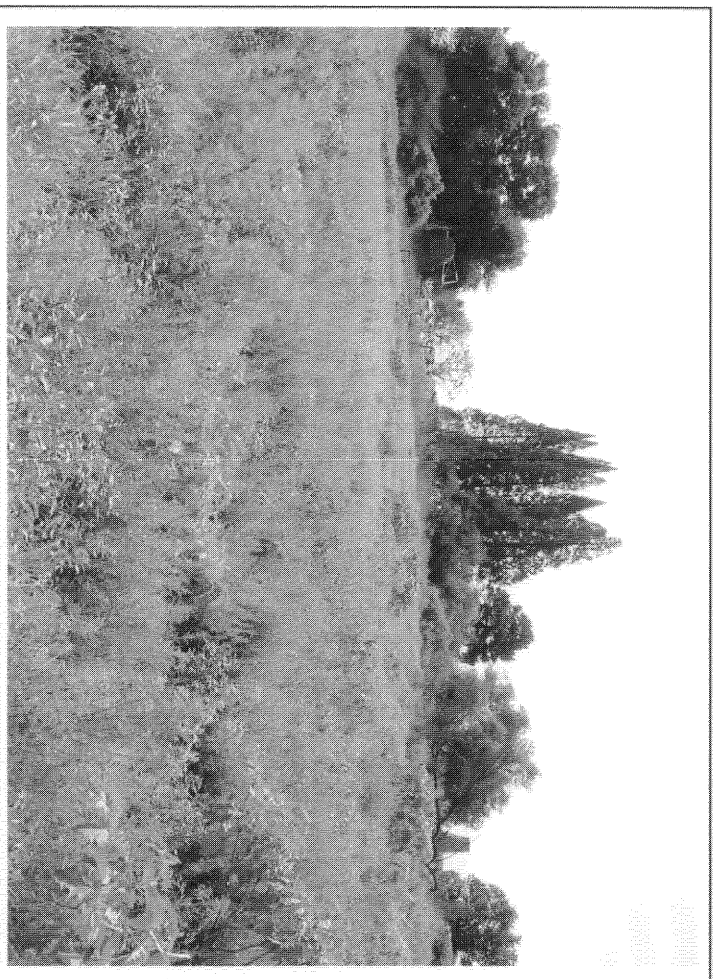


Figure 16- The ruins of two houses that date from the recent past comprise the bulk of Site RRP05 (above). This former farm homestead is now in ruins. A few pine and other exotic trees are still marking this site (above).

Site RRP07

Site RRP07 is located next to a haul road on Steenkoolspruit 181S (Figure 17). It consists of the ruins of two or more structures. These structures were probably dwellings as they were building with red clay bricks and cement. These structures are located along an avenue with blue gum trees. The site is also covered with several sisal bushes.



Figure 17. Remains of possible dwellings that date from the recent past (Site RRP07). These dwellings are located along an avenue with blue gum trees. A dense cover of vegetation hides these remains (above).

Site RRP08

This site consists of the remains of stone walls and stone heaps as well as heaps of soil. This site is probably part of several homesteads that used to exist on Kleinokopje 151S, close to the northern bank of the Olifants River (Figure 18).

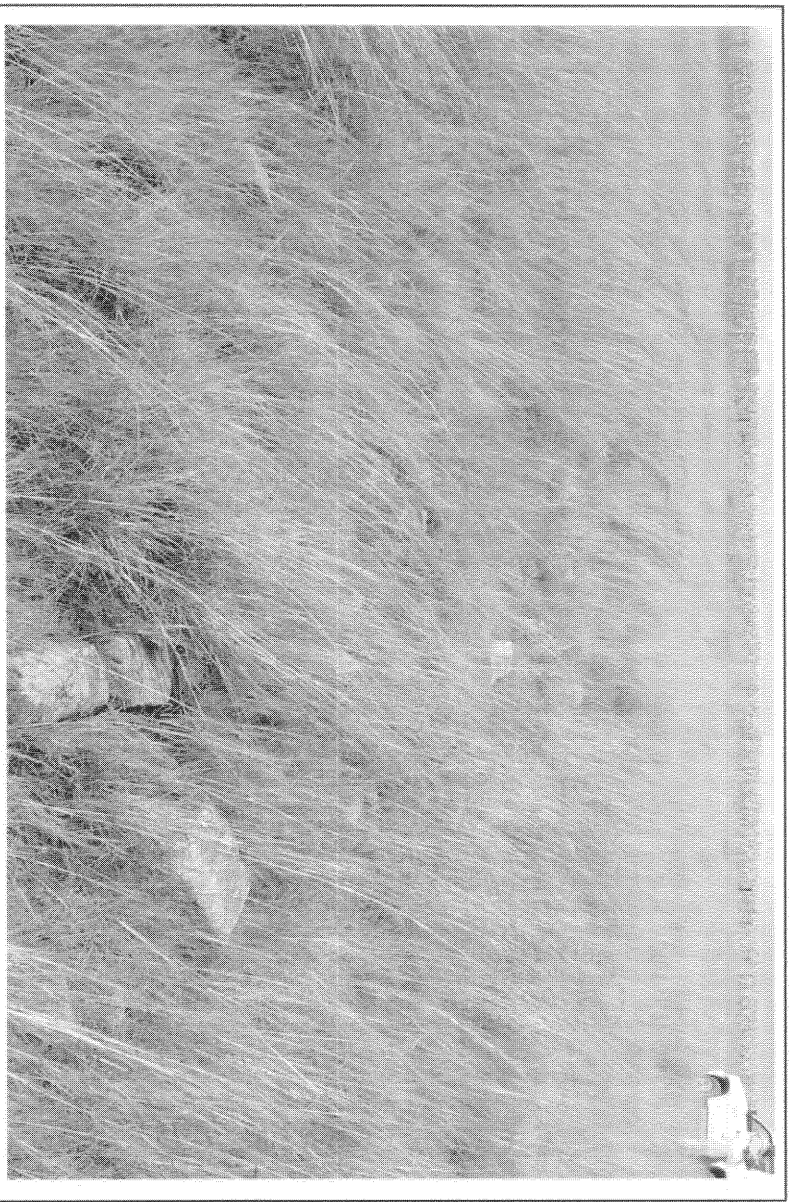


Figure 18. One of several ruins of dwellings along the northern bank of the Olifants River on Kleinokopje 151S. These remains have little historical significance.

Site RRP09

This site is similar to Site RRP08 and consists of the remains of stone walls and stone heaps as well as heaps of soil. This site may be one of several homesteads or small

villages that used to exist close to the northern bank of the Olifants River on Kleinkopje 15IS (see Figure 18, above).

5.1.4 Closed mine shafts

Several shafts that are closed occur in the Douglas Mining Area. These shafts, most with underground workings intact, were operational at different time periods during Douglas Colliers' existence. The construction dates for all these shafts cover the last twenty to thirty years. Shaft No 1 dates from the last fifty five years.

A shaft and its associated underground and aboveground infrastructures, buildings, equipment and features represent a coal mine. A 'traditional' (old) coal mine used to consist of a decline and a vertical shaft running into underground workings where production equipment and machines were used to mine the coal seams and surface infrastructure such as plants where the coal were processed and stock. Offices and other buildings were part of the surface infrastructure. The head gear of 'traditional' coal mines, some of which were clearly delineated with pine trees planted along the four (square) borders of the mine, used to be prominent features on the Eastern Highveld. Shaft No 12 is an excellent example of a particular coal mine during a particular period of coal mining (1980's) on the Eastern Highveld (Figure 19).

Closed shafts in the Douglas Colliery Mining Area include Shaft No 1, Shaft No 6, Shafts No 8 & 9, 'the Picnic Shaft', Shaft 12, Shaft 15 and the Vlei Shaft. Some of these shafts are still in relative good conditions (Shaft No 6, Shaft No 12 and Shaft No 15). Shafts with few surface infrastructure mainly consisting of a shaft structure also occur (Shaft No 1 and Shaft No 6). These shafts have visually little to offer although they may be older and therefore historically more significant than the more recent shafts with their impressive and elaborate surface infrastructure. The Vlei Shaft which is in a pristine condition is still operational and will only be closed in 2006.

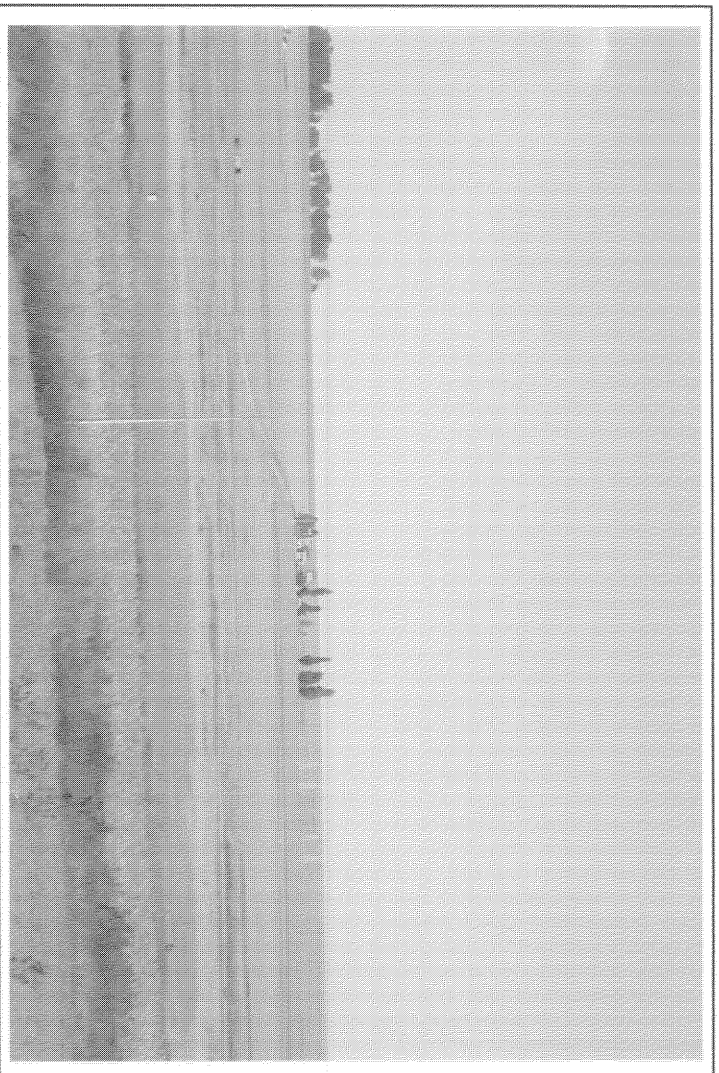


Figure 19- The Shaft No 12 complex seen from afar. Note the pine trees that demarcate the mine's boundaries. The surface infrastructure of this mine has been vandalised. It is located near Douglas Colliery's perimeter, outside the main focus area where coal mining is taking place.

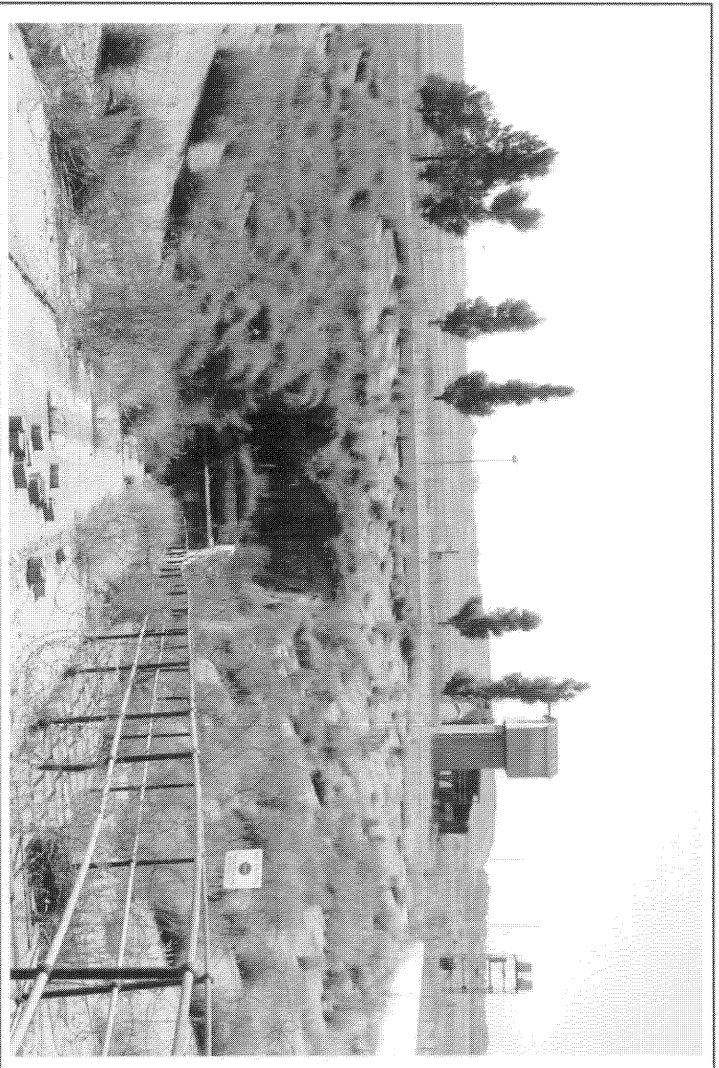


Figure 20. The decline shaft of Shaft No 12. Part of the infrastructure of this mine can be seen in the background. More elaborate infrastructure also occurs to the back of the photographer.

5.2 Possible impact on the heritage resources

Heritage resources that were observed in the Douglas Colliery Mining Area which may be affected by existing and newly planned mining activities are the following:

5.2.1 Historical Houses

Historical House 01 (HH01)

5.2.2 Graveyards

Graveyards 01 to 06 (GY01 to GY06)

5.2.3 Remains from the relatively recent past

Site RRP01 to 09 (RRP01 to RRP09)

5.2.4 Closed mine shafts

Closed mine shafts in the Douglas Colliery Mining Area include Shaft No 1, Shaft No 6, Shafts No 8 & 9, 'the Picnic Shaft', Shaft 12 and Shaft 15.

6 THE SIGNIFICANCE OF HERITAGE RESOURCES IN THE DOUGLAS MINING AREA

The heritage resources that occur in the Douglas Mining Area include a Historical House (HH01); Informal Graveyards (GY01 to GY06); remains dating from the Relatively Recent Past (Site RRP01 to Site RRP09) and closed mine shafts. These resources have been mapped (Figure 1). The coordinates of the Informal Graveyards, the remains from the Relatively Recent Past and the Historical House have been tabulated (Tables 1 & 2).

6.1 The Historical House and remains from the Relatively Recent Past

The levels of significance of the Historical House and the remains dating from the Relatively Recent Past have been determined by means of various criteria (Table 2). The values accorded to each of these criteria varied between 1 (low significance), 2 (medium significance) and 3 (high significance). This scheme considers criteria such as the following (Tables 1 & 2):

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, structures or features 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.

6.2 The Informal Graveyards

The Informal Graveyards can be considered to be of high significance and need not to be rated to any criteria as graves are protected by various laws.

6.3 Closed mine shafts

The closed coal mines qualify as part of the national estate when considering criteria outlined in Section 3(2)(a) and Section 3(3) (a), (b), (c) and (f) listed in the National Heritage Resources Act (also see Box 1). These criteria are the following:

- 3(2)(a) places, buildings, structures and equipment of cultural significance
- 3(3)(a) its importance in the community, or pattern of South Africa's history;
- 3(3)(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- 3(3)(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- 3(3)(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;

The level of significance of the closed coal mines were merely determined by means of a single criterion, namely visible surface infrastructure associated with these mines and the condition of this infrastructure. When applying this criterion it is clear

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that Shaft No 6 and Shaft No 12 (as well as the operational Vlei Shaft) are unequalled with regard to their physical appearance when compared to the other shafts. These shafts have the potential to contribute to 'social and economic development', heritage education, etc. (National Heritage Resources Act, Sec 5(7)).

GRAVEYARDS	Longitude	Latitude
Graveyard 01	26° 01' 11" S	29° 47' 57" E
Graveyard 02	26° 03' 28" S	29° 16' 57" E
Graveyard 03	26° 00' 00" S	29° 00' 00" E
Graveyard 04	26° 02' 48" S	29° 15' 58" E
Graveyard 05	26° 02' 23" S	29° 16' 05" E
Graveyard 06	26° 04' 59" S;	29° 16' 34" E

Table 1. Coordinates for the Graveyards in the Douglas Colliery Mining Area.

HERITAGE RESOURCES	Ideological/symbolic significance	Aesthetic significance	Uniqueness	Cultural significance	State of preservation	Research value
Historical House (HH01)	3	1	2/3	3	1	3
Site RRP01	1	1	1	2	1	1
Site RRP02	1	1	1	2	1	1
Site RRP03	1	1	1	2	1	1
Site RRP04	1	1	1	2	1	1
Site RRP05	1	1	1	2	1	1
Site RRP06	1	1	1	2	1	1
Site RRP07	1	1	1	2	1	1
Site RRP08	1	1	1	2	1	1
Site RRP09	1	1	1	2	1	1

Table 2. Levels of significance of remains (sites) dating from the Relatively Recent Past and for the Historical House discovered in the Douglas Colliery Mining Area.

Low significance (1);

Medium significance (2); High significance (3)

7 CONCLUSION AND RECOMMENDATIONS

The HIA study revealed the presence of heritage resources in the Douglas Colliery Mining Area. These heritage resources include a Historical House (HH01); Informal Graveyards (GY01 to GY06), remains dating from the Relatively Recent Past (Site RRP01 to Site RRP09) and abandoned coal mines.

The Informal Graveyards (GY01 to GY06) can be considered to be of outstanding significance. These graveyards have to be relocated if expanding mining activities are going to impact on these graveyards. It is recommended that the deceased be exhumed and relocated. This work must be done by forensic archaeologists.

The forensic archaeologists will acquire all the necessary permits for the exhumation of the graves and the relocation of the graveyards. Various laws, provincial regulations and administrative procedures regulate this activity.

The Historical House (HH01) can be considered to be of some significance with regard to criteria such as ideological/symbolic and cultural historical significance, research value and uniqueness. However, this structure is severely dilapidated. Excellent examples of similar historical farm homesteads exist on the Eastern Highveld closer to Middelburg. It is recommended that this structure be subjected to a Phase II investigation before it is being demolished by mining activities. Mitigation measures are described in Phase II reports which are incorporated in SAHRA's data banks (registers) and is required by the National Heritage Resources Act (Sec 38(3)(f)(g)).

The remains dating from the Relatively Recent Past (Site RRP01 to Site RRP09) can not be considered to be of outstanding significance and can be demolished after the necessary permit has been acquired from SAHRA.

The closed mine shafts qualify as part of the national estate. Douglas Colliery is the oldest coal mine on the Eastern Highveld of South Africa. It is appropriate that the mine

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promote its role as a global producer of coal and its South African coal mining roots in a tangible way, perhaps by preserving part of its remarkable heritage for present and future generations and particularly as a token to the numerous unacknowledged workers who created this history. This can be achieved by considering preserving one of the closed mine shafts. The National Heritage Resources Act (Sec 5(7)) encourages the conservation and use of heritage resources for social and economic development, enjoyment, heritage education, etc. An open-air coal mine museum could be an appropriate start for other heritage projects and will contribute to Douglas Colliers' social obligations and Billiton's commitment (manifest) to the protection of heritage. However, such a venture can only be undertaken taking into consideration regulations such as health and safety as laid down by mine legislation (e.g. the Mine Health and Safety Act [Act No 29 of 1996] and the Mineral Petroleum Resources Development Act [Act No 28 of 2002]).

Heritage resources (such as graves) may have been missed during this Heritage Impact Assessment (HIA) study. However, the same mitigation measures as those proposed for the heritage resources that have been discovered will apply to these resources if they belong to the same types and ranges that have been discovered in the Douglas Colliery Mining Area. It is highly unlikely that any other types and ranges of heritage resources will occur in the Douglas Colliery Mining Area.

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