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A REVISED PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY FOR THE PROPOSED RIETVLEI OPEN CAST COAL MINING OPERATION BETWEEN MIDDELBURG, BELFAST AND STOFBERG IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA

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EXECUTIVE SUMMARY

A Phase I Heritage Impact Assessment (HIA) study was done for the proposed Rietvlei Open Cast Coal Mining Operation in April 2011. This study has been updated with this revised Phase I HIA study for the proposed Rietvlei Coal Mine and was done as required by Section 38 of the National Heritage Resources Act (No 25 of 1999).

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

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Box 1) do occur in the Project Area and, if so, what the nature, the extent and the significance of these remains are.
- To outline the significance of these remains and to evaluate what appropriate mitigation measures could be taken if any of these types and ranges of heritage resources may be affected by the proposed Rietvlei Coal Mine.

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

• Five graveyards.

These graveyards were geo-referenced and mapped (Figure 7, Table 1). The significance of the graveyards is indicated as well as the significance of any potential impacts on the graveyards (Tables 1 & 2). Mitigation measures are outlined for graveyards which will be affected by the coal mining activities and the construction of mine infrastructure.

The significance of the graveyards

All graveyards and graves can be considered to be of high significance and are protected by various laws (Tables 1 & 2). 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).

Possible impact on the graveyards

It is clear that all the graveyards will be affected during the construction phase when the open cast mining activities commences except GY01 and GY03 which will be affected when the construction activities for the mine's surface infrastructure commences.

The significance of the graveyards therefore is indicated whilst mitigation measures are outlined for the graveyards.

The significance of any potential impact on the graveyard

The significance of possible impacts on the graveyards was determined using a ranking scale based on various criteria.

The significance of any possible impact on the graveyards is High (Table 2). However, the impacts on the graveyards are partially reversible and will only result in a partially irreplaceable loss of the graveyards.

Cumulative impact

The cumulative impact on the graveyards (local and national) can be conserved to be low when considering the current state of the graveyards which are abandoned, neglected and which are deteriorating as a result of natural occurrences. The impact is even less significant after the graveyards have been exhumed and relocated (mitigated) in consultation with descendants of the deceased. Mitigation will imply that the graveyards are removed to preferred localities where they are maintained, monitored and where descendants can pay homage to the deceased.

Mitigating the graveyards

The graveyards must be mitigated by means of exhumation and relocation. 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 Prevince and the local police.

The relocation (mitigation) of the graveyards has high potential for better conservation as these cemeteries will be managed whilst the current graveyards are abandoned, neglected and are falling into disrepair.

A Conservation Management Plan for graveyards which may be left unaffected must be included in the mine's EMP to ensure their continued existence during the construction, operation and decommissioning phase of the Rietvlei Coal Mine. This plan must provide for the following:

- Demarcation of graveyards with fences or walls and fitted entrance gates to provide access to family and friends.
- Regulated visitor hours compatible with mine safety rules.
- Maintaining corridors of at least 30m between graveyard borders and developmental activities.

General (disclaimer)

It must be pointed out that heritage resources can be found in the most unexpected places. It must also be borne in mind that surveys may not detect all heritage resources in a given Project Area, particularly considering the size and inaccessible nature of the Blue Gum plantations on Rietvlei. While some remains may simply be missed during surveys, others may occur below the surface of the earth and may only be exposed once mining development commences.

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

CONTENTS

Execu	Executive summary	
1	INTRODUCTION	7
2	AIMS WITH THIS REPORT	9
3	METHODOLOGY	10
3.1	Desktop study	10
3.2	Fieldwork and research	11
3.3	Spokespersons consulted	13
3.5	Assumptions and limitations	13
3.6	Some remarks on terminology	13
4	THE PROJECT AREA	17
4.1	Location	17
4.2	The nature of the Project Area	18
4.3	The nature of the Rietvlei Coal Mine Project	18
5	CONTEXTUALISING THE PROJECT AREA	20
5.1	Stone Age sites	20
5.2	Late Iron Age	21
5.3	The Historical Period	23
5.4	A coal mining heritage	24
5.5	A vernacular stone architecture	25
6	THE PHASE I HERITAGE IMPACT ASSESSMENT	27
6.1	The fieldwork survey	27
6.2	Types and ranges of heritage resources	29
6.2.1	Graveyard 01	31
6.2.2	Graveyard 02	32
6.2.3	Graveyard 03	33
6.2.4	Graveyard 04	34
6.2.5	Graveyard 05	34

6.3	Table
0.0	1 4010

7	THE SIGNIFICANCE, POSSIBLE IMPACT ON AND THE		
	MITIGATION OF THE HERITAGE RESOURCES	37	
7.1	The significance of the graveyards	37	
7.2	Possible impact on the graveyards	37	
7.3	The significance of any potential impact on the graveyard	37	
7.4	Mitigating the graveyards	39	
8	CONCLUSION AND RECOMMENDATION	41	
9	SELECT BIBLIOGRAPHY	44	
10	BIBLIOGRAPHY RELATING TO EARLIER HERITAGE		
	STUDIES	47	
		10	
11	SPOKESPERSONS CONSULTED	48	
	ENDIX A: DETAILS OF THE SPECIALIST	49	
APP	ENDIX B: DECLARATION OF INDEPENDENCE	50	

1 INTRODUCTION

This document contains the report on a revised Phase I Heritage Impact Assessment (HIA) study which was done for the proposed Rietvlei Open Cast Coal Mining Operation situated between Middelburg, Belfast and Stofberg in the Mpumalanga Province of South Africa.

Previous heritage surveys conducted on the Eastern Highveld indicated that the most common types and ranges of heritage resources in this part of Mpumalanga Province include historical farmstead complexes associated with formal and informal graveyards. Stone walled settlements dating from the Late Iron Age and Historical Period also occur, but are limited to areas where low, dolerite kopjes and randjes exist. However, various types and ranges of heritage resources that qualify as part of South Africa's 'national estate' as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) do occur across the Mpumalanga Province (see Box 1, next page).

The identification, evaluation and assessment of heritage resources in South Africa are also regulated by the following legislation:

- National Environmental Management Act (NEMA) Act 107 of 1998
- National Heritage Resources Act (NHRA) Act 25 of 1999
- Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
- Development Facilitation Act (DFA) Act 67 of 1995.

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

The National Heritage Resources Act (Act 25 of 1999, Section 3) outlines the following types and ranges of heritage resources that qualify as part of the national estate: places, buildings structures and equipment of cultural significance; (a) places to which oral traditions are attached or which are associated with living heritage; (b) historical settlements and townscapes; (c) (d) landscapes and natural features of cultural significance; geological sites of scientific or cultural importance; (e) (f) archaeological and palaeontological sites; graves and burial grounds including-(q) (i) ancestral graves; (ii) royal graves and graves of traditional leaders; (iii) graves of victims of conflict; (iv) graves of individuals designated by the Minister by notice in the Gazette; (v) historical graves and cemeteries; and (vi) other human remains which are not covered in terms of the Human Tissue Act (Act 65 of 1983); (h) sites of significance relating to the history of slavery in South Africa; (i) moveable objects, including -(i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, material, meteorites and rare geological specimens; (ii) objects to which oral traditions are attached or which are associated with living heritage; (iii) ethnographic art and objects; (iv) military objects; (v) objects of decorative or fine art; (vi) objects of scientific or technological interest; and (vii) books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act (Act 43 of 1996). The National Heritage Resources Act (Act 25 of 1999, Sec 3) also distinguishes nine criteria for a place and/or object to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following: its importance in the community, or pattern of South Africa's history; (a) (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage; its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage; (c) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or (d) 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; its strong or special association with a particular community or cultural group for social, cultural or spiritual (g) reasons; (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and/or its significance relating to the history of slavery in South Africa. (i)

2 AIMS WITH THIS REPORT

The proposed Rietvlei Open Cast Coal Mining Operation will produce coal for the generation of power as well as for the international coal market. The Rietvlei Open Cast Coal Mining Operation proposes to mine approximately 807 hectares of reserves by means of open cast and surface mining methods. The mine also intends to utilize at least 622 hectares of land for its surface infrastructure.

In order to comply with legislation, Anglo Coal requires knowledge of the presence, relevance and the significance of any heritage resources that may occur in the Project Area. Anglo Coal needs this information in order to take pro-active measures with regard to any heritage resources that may be affected by the proposed mine development. WSP Environmental (Pty) Ltd (WSP) who is responsible for compiling the Environmental Impact Assessment (EIA) report for the proposed Rietvlei Open Cast Mining Operation therefore commissioned the author to undertake a Phase I Heritage Impact Assessment (HIA) study for the mine.

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

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Box 1) do occur in the Project Area and, if so, what the nature, the extent and the significance of these remains are.
- To outline the significance of these remains and to evaluate what appropriate mitigation measures could be taken if any of these types and ranges of heritage resources may be affected by the proposed Rietvlei Coal Mine.

3 METHODOLOGY

The Phase I HIA study was conducted by means of the following:

3.1 Desktop study

Literature relating to the pre-historical and the historical unfolding of the Eastern Highveld was reviewed. This review focused primarily on the pre-history as well as the Historical Period on the Eastern Highveld. It also provided a broad outline of the coal mining history of the region as well as its indigenous architecture. The literature research contextualises the pre-historical and historical background of the Eastern Highveld which again contributes to a better understanding of the identity and meaning of heritage sites which occur in and near the Project Area.

The desktop study also involved consulting heritage data banks maintained at institutions such as the Mpumalanga Provincial Heritage Resources Agency in Barberton, the Archaeological Data Recording Centre at the National Flagship Institute (Museum Africa) in Pretoria and the national heritage resources register at the South African Heritage Resources Agency (SAHRIS) in Cape Town.

A number of heritage studies were done in close proximity of Middelburg and Belfast which outline the nature and heritage character of the area and which also provide some predictive evidence regarding the types and ranges of heritage resources to be expected in any new area to be surveyed, namely: (see 'Select Bibliography', Part 10).

- Pistorius, J.C.C. 2002. A Heritage Impact Assessment (HIA) study for a new power line on the farm Rietvallei 397JS between Middelburg and Arnot in the Mpumalanga Province of South Africa. Unpublished report done for Eskom, Menlyn.
- Pistorius, J.C.C. 2003. A Heritage Impact Assessment study for the proposed 22kV Duvha Colliery power line deviation near Middelburg in the Mpumalanga Province of South Africa. Unpublished report done for Eskom, Menlyn.

- Pistorius, J.C.C. 2007. A Phase I Heritage Impact Assessment study for the proposed new Zonnebloem Coal Mine between Middelburg and Belfast in the Mpumalanga Province of South Africa. Unpublished report prepared for Clean Stream Environmental Services.
- Pistorius, J.C.C. 2007. A Phase I Heritage Impact Assessment study for the proposed new Mafube Coal Mine between Middelburg and Belfast in the Mpumalanga Province of South Africa. Unpublished report prepared for Anglo Coal and Eyesizwe.
- Pistorius, J.C.C. 2007. A Phase I Heritage Impact Assessment study for a proposed new 22kV power line on Hartzogshoop 410 near Middelburg in the Mpumalanga Province of South Africa. Unpublished report done for Eskom, Menlyn.
- Pistorius, J.C.C. 2009. A Phase I Heritage Impact Assessment (HIA) study for X Strata Coal SA's Elandspruit Coal Mine near Middelburg in the Mpumalanga Province of South Africa. Unpublished report done for Clean Stream Environmental Services.

In addition, the Project Area was also studied by means of maps on which it appears (2529DA Selonsrivier & 2529DC Pan 1: 50 000 topographical maps) as well as the 1:250 000 map (2528 Pretoria).

3.2 Fieldwork and research

The proposed Project Area was surveyed with a vehicle whilst pedestrian surveys were undertaken where possible heritage resources may exist. The larger part of the Project Area is covered with Blue Gum plantations whilst open patches with agricultural fields occur. The Blue Gum plantations were surveyed with the help of a grid of roads which used to exist in the forest. However, the grid with roads has now largely disappeared (although it is still visible on Google) as these roads are no longer in use and are gradually being covered as a result of the natural proliferation of the various plantations in the forest.

A total coverage of the Project Area by means of a pedestrian survey is impossible considering the size of the area, the impenetrable nature of some of the stands of Blue Gum trees and the time available for fieldwork. Visibility in most of the plantations is also restricted as a result of the collection of bark, leaves and other vegetation matter in the plantations. A tall grass cover also hampered the first survey for the Project Area which was conducted at the end of summer (March) 2011.

It is therefore likely that undiscovered heritage resources such as isolated graves and small graveyards may still be found in the Project Area in the future.

Photographs illuminate the characteristic features of the Project Area (see Part 6.1 'Fieldwork survey', Figures 3 –6).

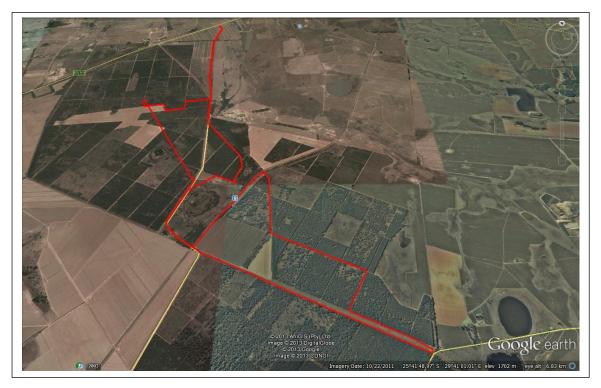


Figure 1- A track log was registered when the Project Area was revisited in September 2013. The original survey for the Project Area was done at the end of summer in 2011 when three days were spent criss-crossing a grid of roads between the Blue Gum plantations. Most of these roads have disappeared as a result of no use and the proliferation of the forest. No track log for the 2011 survey exists as it was not a requirement at the time when the survey was done (above).

3.3 Spokespersons consulted

Spokespersons living in a rural homestead complex in the Project Area were consulted with regard to the possible presence of graveyards and abandoned farm homesteads as these individuals are usually intimately acquainted with the area, particularly if they were born there or have been living in the area over a long period of time (see Part 9, 'Spokespersons consulted').

3.4 Assumptions and limitations

It must be pointed out that heritage resources can be found in the most unexpected places. It must also be borne in mind that surveys may not detect all heritage resources in a given Project Area, particularly considering the size and inaccessible nature of the Blue Gum plantations on Rietvlei. While some remains may simply be missed during surveys, others may occur below the surface of the earth and may only be exposed once mining development commences.

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

3.5 Some remarks on terminology

Terms that may be used in this report are briefly outlined below:

 Conservation: The act of maintaining all or part of a resource (whether renewable or non-renewable) in its present condition in order to provide for its continued or future use. Conservation includes sustainable use, protection, maintenance, rehabilitation, restoration and enhancement of the natural and cultural environment.

- Conservation (*in-situ*): The conservation and maintenance of ecosystems, natural habitats and cultural resources in their natural and original surroundings.
- Cultural (heritage) resources: A broad, generic term covering any physical, natural and spiritual properties and features adapted, used and created by humans in the past and present. Cultural resources are the result of continuing human cultural activity and embody a range of community values and meanings. These resources are non-renewable and finite. Cultural resources include traditional systems of cultural practice, belief or social interaction. They can be, but are not necessarily identified with defined locations.
- Cultural (heritage) resource management: A process that consists of a range of interventions and provides a framework for informed and value-based decision-making. It integrates professional, technical and administrative functions and interventions that impact on cultural resources. Activities include planning, policy development, monitoring and assessment, auditing, implementation, maintenance, communication, and many others. All these activities are (or will be) based on sound research.
- Heritage resources: The various natural and cultural assets that collectively form the heritage. These assets are also known as cultural and natural resources. Heritage (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.
- 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 300 years ago).
- Iron Age: Refers to the last two millennia and 'Early Iron Age' to the first thousand years AD. 'Late Iron Age' refers to the period between the 16th century and the 19th century and can therefore include the Historical Period.

- Historical period: Refers to the first appearance or use of 'modern' Western writing in a particular area or region of the world.
- 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.
- 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.
- Maintenance: Keeping something in good health or repair.
- Preservation: Conservation activities that consolidate and maintain the existing form, material and integrity of a cultural resource.
- Protected area: A geographically defined area designated and managed to achieve specific conservation objectives. Protected areas are dedicated primarily to the protection and enjoyment of natural or cultural heritage, to the maintenance of biodiversity, and to the maintenance of life-support systems.
- Reconstruction: Re-erecting a structure on its original site using original components.
- Replication: The act or process of reproducing by new construction the exact form and detail of a vanished building, structure, object, or a part thereof, as it appeared at a specific period.
- Restoration: Returning the existing fabric of a place to a known earlier state by removing additions or by reassembling existing components.
- Sustainability: The ability of an activity to continue indefinitely, at current and projected levels, without depleting social, financial, physical and other resources required to produce the expected benefits.
- Translocation: Dismantling a structure and re-erecting it on a new site using original components.
- Project Area: refers to the area (footprint) where the developer 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 and ranges of heritage resources in any given Project 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 human remains and the relocation of graveyards, etc. Phase II work involve permitting processes, require the input of different specialists and the co-operation and approval of SAHRA.

4 THE PROJECT AREA

4.1 Location

The proposed Rietvlei Open Cast Coal Mining Operation is located twenty three kilometres to the north-east of Middelburg on the Eastern Highveld in the Mpumalanga Province of South Africa. The Project Area covers part of the farm Rietvlei 397JS which is located between Middelburg, Belfast and Stofberg. The Project Area is situated to the south of the R555 which runs between Middelburg and Stofberg and is bisected from the north to the south by a dirt road that that runs from the R555 in the north to the Pan Forest Siding further to the south (2529DA Selonsrivier & 2529DC Pan; 1: 50 000 topographical maps) (Pretoria [2528]: 1: 250 000) (Figure 2).

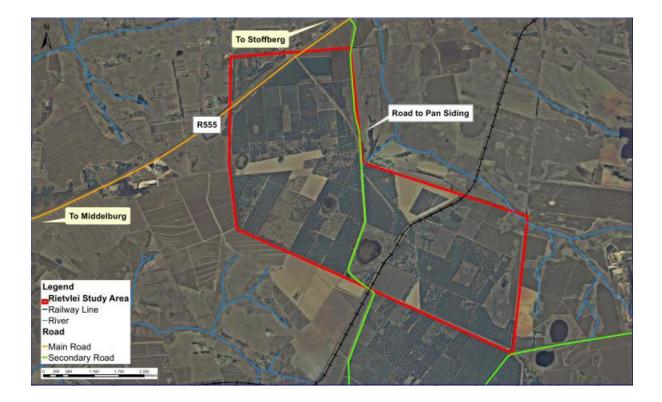


Figure 2- The proposed Rietvlei Open Cast Coal Mining Operation covers the farm Reitvlei 397 JS to the north-east of Middelburg on the Eastern Highveld in the Mpumalanga Province (above).

4.2 The nature of the Project Area

The Project Area covers an undulating piece of land that is marked by vast outstretched plantations with Blue Gum trees which are interspersed with smaller patches with agricultural fields. A few pans are scattered across the Project Area. A railway and power line cut, from the north to the south, across the eastern part of the Project Area. A few informal dwellings with no heritage significance occur towards the central part of the Project Area.

The nature of the Project Area is illuminated with a few photographs in Part 6.1 'The Field Survey'.

The Project Area cannot be described as pristine any longer.

4.3 The nature of the Rietvlei Coal Mine Project

The proposed Rietvlei Open Cast Coal Mining Operation (henceforth referred to as the Rietvlei Coal Mine) will be an opencast coal mine producing an export grade thermal coal as well as an Eskom grade thermal coal for consumption in one of the power stations in the area. The final determination of exactly which power station is to be targeted has not been finalized.

The Rietvlei Project has been earmarked by Anglo American Thermal Coal (AATC) as a project to be developed, operated, and owned by a Black Economic Empowerment (BEE) Company. Butsanani has been identified as the BEE Company and forms part of the AATC strategy to assist emerging Black-owned companies to develop mining projects.

The proposed Rietvlei Coal Mine proposes to mine approximately 807 hectares of reserves by means of open cast and surface mining methods. The mine also intends to utilize at least 622 hectares of land for its surface infrastructure. The mine surface infrastructure will incorporate amongst others:

• A primary crusher

- ROM product stockpile conveyor
- Plant
- Primary and secondary stockpile conveyor
- Plant water dam
- Water treatment plant
- Pollution control dam
- Hards and softs
- Haul roads
- An office block,
- Ablution facilities
- Workshop
- Bus parking
- Weigh bridge, etc..

The extent of the mine infrastructure is indicated in the yellow and light blue shaded areas in Figure 7.

5 CONTEXTUALISING THE PROJECT AREA

The following overview of pre-historical, historical and cultural evidence indicates the wide range of heritage resources which do occur across the larger Project Area and the Mpumalanga Province.

5.1 Stone Age and rock art sites

Stone Age sites are marked by stone artefacts that are found scattered on the surface of the earth or as parts of deposits in caves and rock shelters. The Stone Age is divided into the Early Stone Age (ESA) (covers the period from 2.5 million years ago to 250 000 years ago), the Middle Stone Age (MSA) (refers to the period from 250 000 years ago to 22 000 years ago) and the Late Stone Age (LSA) (the period from 22 000 years ago).

Dongas and eroded areas at Maleoskop near Groblersdal is one of only a few places in Mpumalanga where ESA Olduwan and Acheulian artefacts have been recorded. Evidence for the MSA has been excavated at the Bushman Rock Shelter near Ohrigstad. This cave was repeatedly visited over a prolonged period. The oldest layers date back to 40 000 years BP and the youngest to 27 000BP (Esterhuysen & Smith 2007).

LSA occupation of the Mpumalanga Province also has been researched at Bushman Rock Shelter where it dates back 12 000BP to 9 000BP and at Höningnestkrans near Badfontein where a LSA site dates back to 4 870BP to 200BP (Esterhuysen & Smith 2007).

The LSA is also associated with rock paintings and engravings which were done by San hunter-gatherers, Khoi Khoi herders and EIA farmers (Maggs 1983, 2008). Approximately 400 rock art sites are distributed throughout Mpumalanga, notably in the northern and eastern regions at places such as Emalahleni (Witbank) (4), Lydenburg (2), White River and the southern Kruger National Park (76), Nelspruit and the Nsikazi District (250). The Ermelo area holds eight rock paintings (Smith & Zubieta 2007).

The rock art of the Mpumalanga Province can be divided into San rock art which is the most widespread, herder or Khoe Khoe paintings (thin scattering from the Limpopo Valley) through the Lydenburg district into the Nelspruit area) and localised late white farmer paintings. Farmer paintings can be divided into Sotho-Tswana finger paintings and Nguni engravings (Only 20 engravings occur at Boomplaats, north-west of Lydenburg). Farmer paintings are more localised than San or herder paintings and were mainly used by the painters for instructional purposes (Smith & Zubieta 2007).

During the LSA and Historical Period, San people called the Batwa lived in sandstones caves and rock shelters near Lake Chrissie in the Ermelo area. The Batwa are descendants of the San, the majority of which intermarried with Bantu-Negroid people such as the Nhlapo from Swazi-descend and Sotho-Tswana clans such as the Pai and Pulana. Significant intermarriages and cultural exchanges occurred between these groups. The Batwa were hunter-gatherers who lived from food which they collected from the veldt as well as from the pans and swamps in the area. During times of unrest, such as the *difaqane* in the early nineteenth century, the San would converge on Lake Chrissie for food and sanctuary. The caves, lakes, water pans and swamps provided relatively security and camouflage. Here, some of the San lived on the surfaces of the water bodies by establishing platforms with reeds. With the arrival of the first colonists in the nineteenth century many of the local Batwa family groups were employed as farm labourers. Descendants of the Batwa people still live in the larger Project Area (Schapera 1927, Potgieter 1955, Schoonraad & Schoonraad 1975).

5.2 Iron Age remains

The Iron Age is associated with the first agro-pastoralists or farming communities who lived in semi-permanent villages and who practised metal working during the last two millennia. The Iron Age is usually divided into the Early Iron Age (EIA) (covers the 1st millennium AD) and the Later Iron Age (LIA) (covers the first 880 years of the 2nd millennium AD).

Evidence for the first farming communities in the Mpumalanga Province is derived from a few EIA potsherds which occur in association with the LSA occupation of the Höningnest Shelter near Badfontein. The co-existence of EIA potsherds and LSA stone tools suggest some form of 'symbiotic relationship' between the Stone Age huntergatherers who lived in the cave and EIA farmers in the area (also note Batwa and Swazi/Sotho Tswana relationship) (Esterhuysen & Smith 2007).

The Welgelegen Shelter on the banks of the Vaal River near Ermelo also reflects some relationship between EIA farmers who lived in this shelter and hunter-gatherers who manufactured stone tools and who occupied a less favourable overhang nearby during AD1200 (Schoonraad & Beaumont 1971).

EIA sites were also investigated at Sterkspruit near Lydenburg (AD720) and in Nelspruit where the provincial governmental offices were constructed. The most infamous EIA site in South Africa is the Lydenburg head site which provided two occupation dates, namely during AD600 and from AD900 to AD1100. At this site the Lydenburg terracotta heads were brought to light. Doornkop, located south of Lydenburg, dates from AD740 and AD810 (Evers 1981, Whitelaw 1996).

The Late Iron Age is well represented in Mpumalanga and stretches from AD1500 well into the nineteenth century and the Historical Period. Several spheres of influence, mostly associated with stone walled sites, can be distinguished in the region. Some of the historically well-known spheres of influence include the following:

- Early arrivals in the Mpumalanga Province such as Bakone clans who lived between Lydenburg, Badfontein and Machadodorp and Eastern Sotho clans such as the Pai, Pulana and Kutswe who established themselves in the eastern parts of the province (Collett 1979, 1983;. Delius 2007; Makhura 2007; Delius & Schoeman,2008).
- Swazi expansion into the Highveld and Lowveld of the Mpumalanga Province occurred during the reign of Sobhuza (AD1815 to 1836/39) and Mswati (AD1845 to 1868) while Shangaan clans entered the province across the Lembombo Mountains in the east during the second half of the nineteenth century (Delius 2007, Makhura 2007.).
- The Bakgatla (Pedi) chiefdom in the Steelpoort Valley rose to prominence under Thulare during the early 1800's and was later ruled by Sekwati and Sekhukune from the village of Tsjate in the Leolo Mountains. The Pedi maintained an

extended sphere of influence across the Limpopo and Mpumalanga Provinces during the nineteenth century (Mönnig 1978, Delius 1984).

- The Ndzundza-Ndebele established settlements at the foot of the Bothasberge (Kwa Maza and Esikhunjini) in the 1700's and lived at Erholweni from AD1839 to AD1883 where the Ndzundza-Ndebele's sphere of influence known as KoNomthjarhelo stretched across the Steenkampsberge.
- The Bakopa lived at Maleoskop (1840 to 1864) where they were massacred by the Swazi while the Bantwane live in the greater Groblersdal and Marble Hall areas.
- Corbelled stone huts which are associated with ancestors of the Sotho on Tafelkop near Davel which date from the AD1700's into the nineteenth century (Hoernle 1930).
- Stone walled settlements spread out along the eastern edge of the Groot Dwarsriver Valley served as the early abode for smaller clans such as the Choma and Phetla communities which date from the nineteenth century.

5.3 The Historical Period

Historical towns closest to the Project Area include Witbank, Middelburg and Belfast.

Witbank came into being as the railway line between Pretoria and Lourenço 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 was 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.

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.

5.4 A coal mining heritage

Coal mining on the Eastern Highveld is now older than one century and has become the most important coal mining region in South Africa. Whilst millions of tons of highgrade coal are annually exported overseas more than 80% of the country's electricity is generated on low-grade coal in Eskom's power stations such as Duvha, Matla and Arnot situated near coalmines on the Eastern Highveld.

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 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.

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.

5.5 A vernacular stone architectural heritage

A unique stone architectural heritage was established in the Eastern Highveld from 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 in

the Eastern Highveld. These included sandstone, ferricrete ('ouklip'), dolerite ('blouklip'), granite, shale and slate.

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. Whilst this region is generally devoid of any natural trees which could be used as timber in the construction of farmsteads, outbuildings, cattle enclosures and other structures, the scarcity of fire wood also prevented the manufacture of baked clay bricks. Consequently stone served as the most important building material in the Eastern Highveld (Naude 1993, 2000). One of these historical structures were excavated and described after a heritage mitigation project was conducted for a coal mine (Pistorius 2005).

LIA Sotho, Pedi, Ndebele and Swazi communities contributed to the Eastern Highveld's stone walled architecture. The tradition set by these groups influenced settlers from Natal and the Cape Colony to utilize the same resources to construct dwellings and shelters. Farmers from Scottish, Irish, Dutch, German and Scandinavian descent settled and farmed in the Eastern Highveld. They brought the knowledge of stone masonry from Europe. This compensated for the lack of fire wood on the eastern Highveld which was necessary to bake clay bricks.

6 THE PHASE I HERITAGE SURVEY

6.1 The fieldwork survey

The fieldwork survey was undertaken with a vehicle whilst more detail pedestrian surveys were conducted from the grid of roads that criss-cross the plantations. These surveys focussed on parts of the plantations that were deforested and which were covered with patches of grass veld as these spots in some instances represent areas where disturbances may have occurred in the past.

Although some of the graveyards that were found in the Project Area occur in open spaces in the Blue Gum forests these areas are devoid of any building rubble or other ecological indicators which suggest that small groups of people have lived in the plantations in the past.



The following photographs illuminate the nature and character of the Project Area.

Figures 3- One of the Project Area's main environmental features is Blue Gum plantations which are sometimes interspersed with tall grass (above).



Figure 4- A second environmental feature of the Project Area is outstretched agricultural fields (above).



Figures 5- An informal dwelling complex is located towards the central part of the Project Area (above).



Figures 6- One of a number of pans which occur scattered across the Project Area (above).

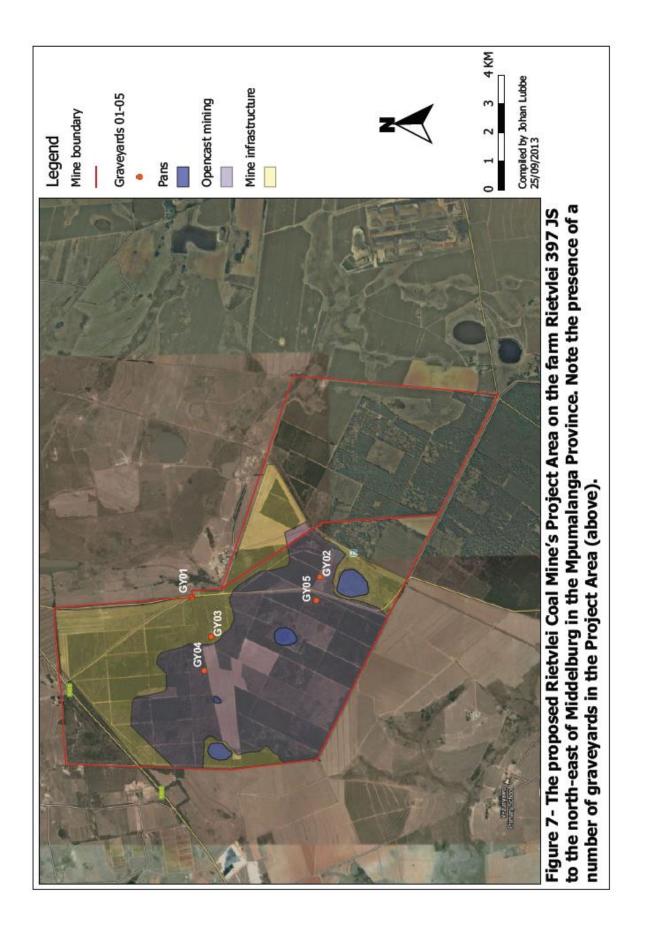
6.2 Types and ranges of heritage resources

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

• Five graveyards.

These graveyards were geo-referenced and mapped (Figure 7, Table 1). The significance of the graveyards is indicated as well as the significance of any potential impacts on the graveyards. Mitigation measures are outlined for graveyards which will be affected by the coal mining activities and the construction of mine infrastructure.

The Phase I HIA study is now briefly discussed and illuminated with photographs.



6.2.1 Graveyard 01

GY01 with thirty five graves occurs on the shoulder of the main dirt road which runs from the north to the south across the Project Area (Figure 8).

Most of the graves are decorated with headstones and with granite or cement trimmings. At least five graves merely comprise heaps of stone whilst at least one grave's slab was coffin-shaped and manufactured with cement.

Inscriptions on some of the headstones read as follow:

'Ter gedagtenis aan my eggenoot en ons vader A de Villiers Geb 16 Nov 1869
 Oorl 6 April 1935 Nader my God by U'



Figure 8- GY01 next to the main road holds approximately thirty five graves, most of which are historical as they are sixty years or older (above).

- 'Hier rus my geliefde eggenoot en grootvader Johan George Max Geb 24-6-1883 Oorl 13-12-1956 Veilig in Jesus arms'
- Ter herinnering aan ons geliefde vader Egnatius Christiaan Scchutte Geb 26 Junie 1831 Ovl 10 Aug 1922 Ges 84 Vers 7 Heiland eindloos van ontferming'
- 'Hier rus Johan Willem Marx Geb 1924 11 de Feb Oorl 28 Aug 1832 Hal 4:4
 Welk een vriend enz Als ouders AA MH Marx'

GY01 is older than sixty years.

6.2.2 Graveyard 02

GY02 is situated near a number of informal dwellings which are located to the north of a pan. It holds approximately thirty graves most of whom are merely covered with heaps of stone (Figure 9).



Figure 9- GY02 is located near the informal dwelling complex and a pan and holds approximately thirty graves of which a few are decorated (above).

Inscriptions on some of the headstones read as follow:

- 'In loving memory of Gogo Maseka'
- In loving memory of Mmayosi Buthawa'

This graveyard is older than sixty years.

6.2.3 Graveyard 03

GY03 holds three graves and is located in the midst of Blue Gum plantations (Figure 10). Two of the graves are covered with stones and fitted with small signposts with the following inscriptions:

- 'Robin Skosana Born 08-02-1917 Died 11-03-1947 RIP'
- Mamukula Skosana Born 25-06-1918 Died 07-05-1943 RIP'

GY03 is older than sixty years.



Figure 10- GY03 in the Project Area holds three graves two of which belong to the Skosana family (above).

6.2.4 Graveyard 04

GY04 is located in a Blue Gum plantation near a surveyors beacon near the edge of an agricultural field. Two cement headstones with no decipherable inscriptions indicate the position of the graveyard. One of the graves is also edged with cement strips. According to a spokesperson GY04 may hold as many as nineteen graves (Figure 11).

It is highly likely that GY04 is older than sixty years.



Figure 11- GY04 in the Project Area is represented by two cement headstones. A spokesperson claims that as many as nineteen individuals are buried in this graveyard (above).

6.2.5 Graveyard 05

GY05 is located in the midst of a Blue Gum plantation near the main road that transverses the Project Area from the north to the south (Figure 12). Most of the graves are neatly ornamented with granite headstones and other trimmings. One grave is covered with a pile of stones.

Inscriptions on some of the headstones read as follow:

- 'Nabuso Mabhuma 1942 lala ngokuthula lala Nghoku'
- 'Ngozi Mabhuma 1940 lala ngokuthula'
- 'Mavula Mabhuma'
- Kosi Soveli 1902-04-22 1950-08-10'

This graveyard is older than sixty years.



Figure 12- GY05 with as many as seven graves of which six are decorated with granite headstones and trimmings is located in the midst of a Blue Gum plantation (above).

6.3 Table

The coordinates for the graveyards which were recorded in the Project Area are the following:

Table 1- Coordinates and significance rating for five graveyards in the ProjectArea (above).

Graveyard	Coordinates	Significance
GY01. Approximately 35 graves.	25° 40' 32.21"S 29° 40' 01.93"E	HIGH
Next to main road.		
GY02. Approximately 27 to 30	25° 41.625"S 29° 40.226"E	HIGH
graves. Near dwelling complex.		
GY03. Three graves in Blue Gum	25° 40.703"S 29° 39.661"E	HIGH
plantation.		
GY04. According to spokesperson	25° 40.649''S 29° 39.346''E	HIGH
approximately 19 graves. Only two		
headstones visible.		
GY05. Approximately 7 graves in	25° 41.599"S 29° 40.001"E	HIGH
Blue Gum plantation.		

7 THE SIGNIFICANCE, POSSIBLE IMPACT ON AND THE MITIGATION OF THE HERITAGE RESOURCES

7.1 The significance of the graveyards

All graveyards and graves can be considered to be of high significance and are protected by various laws (Table 2). 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).

7.2 Possible impact on the graveyards

It is clear that all the graveyards will be affected during the construction phase when the open cast mining activities commences except GY01 and GY03 which will be affected when the construction activities for the mine's surface infrastructure commences.

The significance of the graveyards therefore is indicated whilst mitigation measures are outlined for the graveyards.

7.3 The significance of any potential impacts on the graveyards

The significance of possible impacts on the graveyards was determined using a ranking scale based on the following criteria:

- Occurrence
 - Probability of occurrence (how likely is it that the impact may/will occur?), and
 - Duration of occurrence (how long may/will it last?)
- Severity
 - Magnitude (severity) of impact (will the impact be of high, moderate or low severity?), and

- Scale/extent of impact (will the impact affect the national, regional or local environment, or only that of the site?).

Each of these factors has been assessed for each potential impact using the following ranking scales:

Probability:	Duration:		
5 – Definite/don't know	5 – Permanent		
4 – Highly probable	4 - Long-term (ceases with the		
3 – Medium probability	operational life)		
2 – Low probability	3 - Medium-term (5-15 years)		
1 – Improbable	2 - Short-term (0-5 years)		
0 – None	1 – Immediate		
Scale:	Magnitude:		
5 – International	10 - Very high/don't know		
4 – National	8 – High		
3 – Regional	6 – Moderate		
2 – Local	4 – Low		
1 – Site only	2 – Minor		
0 – None			

The environmental significance of each potential impact was assessed using the following formula:

Significance Points (SP) = (Magnitude + Duration + Scale) x Probability

The maximum value is 100 Significance Points (SP). Potential environmental impacts are rated as very high, high, moderate, low or very low significance on the following basis:

- More than 80 significance points indicates VERY HIGH environmental significance.
- Between 60 and 80 significance points indicates HIGH environmental significance.
- Between 40 and 60 significance points indicates MODERATE environmental significance.

- Between 20 and 40 significance points indicates LOW environmental significance.
- Less than 20 significance points indicates VERY LOW environmental significance.

The significance of any possible impacts on the graveyards is High (Table 2). However, the impacts on the graveyards are partially reversible and will only result in a partially irreplaceable loss of the graveyards.

Grave-	Magnitude	Scale	Duration	Probability	Significance	Significance
yard					points	rating
GY01	10	1	5	5	80	HIGH
GY02	10	1	5	5	80	HIGH
GY03	10	1	5	5	80	HIGH
GY04	10	1	5	5	80	HIGH
GY05	10	1	5	5	80	HIGH

Table 2: The significance of any potential impacts on the graveyards in the Project Area (above).

7.4 Mitigating the graveyards

The graveyards must be mitigated by means of exhumation and relocation. 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.

The relocation (mitigation) of the graveyards has high potential for better conservation as these cemeteries will be managed whilst the current graveyards are abandoned, neglected and are falling into disrepair.

A Conservation Management Plan for graveyards which may be left unaffected must be included in the mine's EMP to ensure their continued existence during the construction, operation and decommissioning phase of the Rietvlei Coal Mine. This plan must provide for the following:

- Demarcation of graveyards with fences or walls and fitted entrance gates to provide access to family and friends.
- Regulated visitor hours compatible with mine safety rules.
- Maintaining corridors of at least 30m between graveyard borders and developmental activities.

8 CONCLUSION AND RECOMMENDATIONS

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

• Five graveyards.

These graveyards were geo-referenced and mapped (Figure 7, Table 1). The significance of the graveyards is indicated as well as the significance of any potential impacts on the graveyards (Tables 1 & 2). Mitigation measures are outlined for graveyards which will be affected by the coal mining activities and the construction of mine infrastructure.

The significance of the graveyards

All graveyards and graves can be considered to be of high significance and are protected by various laws (Tables 1 & 2). 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).

Possible impact on the graveyards

It is clear that all the graveyards will be affected during the construction phase when the open cast mining activities commences except GY01 and GY03 which will be affected when the construction activities for the mine's surface infrastructure commences.

The significance of the graveyards therefore is indicated whilst mitigation measures are outlined for the graveyards.

The significance of any potential impact on the graveyards

The significance of possible impacts on the graveyards was determined using a ranking scale based on various criteria.

The significance of any possible impact on the graveyard is High (Table 2). However, the impacts on the graveyards are partially reversible and will only result in a partially irreplaceable loss of the graveyards.

Cumulative impact

The cumulative impact on the graveyards (local and national) can be conserved to be low when considering the current state of the graveyards which are abandoned, neglected and which are deteriorating as a result of natural occurrences. The impact is even less significant after the graveyards have been exhumed and relocated (mitigated) in consultation with descendants of the deceased. Mitigation will imply that the graveyards are removed to preferred localities where they are maintained, monitored and where descendants can pay homage to the deceased.

Mitigating the graveyards

The graveyards must be mitigated by means of exhumation and relocation. 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.

The relocation (mitigation) of the graveyards has high potential for better conservation as these cemeteries will be managed whilst the current graveyards are abandoned, neglected and are falling into disrepair.

A Conservation Management Plan for graveyards which may be left unaffected must be included in the mine's EMP to ensure their continued existence during the construction, operation and decommissioning phase of the Rietvlei Coal Mine. This plan must provide for the following:

- Demarcation of graveyards with fences or walls and fitted entrance gates to provide access to family and friends.
- Regulated visitor hours compatible with mine safety rules.
- Maintaining corridors of at least 30m between graveyard borders and developmental activities.

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11 SPOKESPERSONS CONSULTED

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APPENDIX A: DETAILS OF THE SPECIALIST

Profession: Archaeologist, Museologist (Museum Scientists), Lecturer, Heritage Guide Trainer and Heritage Consultant

Qualifications:

BA (Archaeology, Anthropology and Psychology) (UP, 1976)

BA (Hons) Archaeology (distinction) (UP, 1979)

MA Archaeology (distinction) (UP, 1985)

D Phil Archaeology (UP, 1989)

Post Graduate Diploma in Museology (Museum Sciences) (UP, 1981)

Work experience:

Museum curator and archaeologist for the Rustenburg and Phalaborwa Town Councils (1980-1984)

Head of the Department of Archaeology, National Cultural History Museum in Pretoria (1988-1989)

Lecturer and Senior lecturer Department of Anthropology and Archaeology, University of Pretoria (1990-2003)

Independent Archaeologist and Heritage Consultant (2003-)

Accreditation: Member of the Association for Southern African Professional Archaeologists. (ASAPA)

Summary: Julius Pistorius is a qualified archaeologist and heritage specialist with extensive experience as a university lecturer, museum scientist, researcher and heritage consultant. His research focussed on the Late Iron Age Tswana and Lowveld-Sotho (particularly the Bamalatji of Phalaborwa). He has published a book on early Tswana settlement in the North-West Province and has completed an unpublished manuscript on the rise of Bamalatji metal workings spheres in Phalaborwa during the last 1 200 years. He has excavated more than twenty LIA settlements in North-West and twelve IA settlements in the Lowveld and has mapped hundreds of stone walled sites in the North-West. He has written a guide for Eskom's field personnel on heritage management. He has published twenty scientific papers in academic journals and several popular articles on archaeology and heritage matters. He collaborated with environmental companies in compiling State of the Environmental Reports for Ekhurhuleni, Hartebeespoort and heritage management plans for the Magaliesberg and Waterberg. Since acting as an independent consultant he has done approximately 800 large to small heritage impact assessment reports. He has a longstanding working relationship with Eskom, Rio Tinto (PMC), Rio Tinto (EXP), Impala Platinum, Angloplats (Rustenburg), Lonmin, Sasol, PMC, Foskor, Kudu and Kelgran Granite, Bafokeng Royal Resources etc. as well as with several environmental companies.

APPENDIX B: DECLARATION OF INDEPENDENCE

I, Julius CC Pistorius, declare that:			
•I act as the independent environmental prac	titioner in this application		
•I will perform the work relating to the application	ation in an objective manner, even if this results in views and findings that are		
not favourable to the applicant			
•I declare that there are no circumstances that	at may compromise my objectivity in performing such work;		
	ental impact assessments, including knowledge of the National Heritage		
	elines that have relevance to the proposed activity;		
•I will comply with the Act, regulations and all			
-	ble, the matters listed in regulation ${f 8}$ of the regulations when preparing the		
application and any report relating to the app			
•I have no, and will not engage in, conflicting			
	and the competent authority all material information in my possession that		
	f influencing - any decision to be taken with respect to the application by the		
	any report, plan or document to be prepared by myself for submission to the		
competent authority;	relevant facts in respect of the application is distributed or mode quailable to		
-	relevant facts in respect of the application is distributed or made available to and that participation by interested and affected parties is facilitated in such a		
	es will be provided with a reasonable opportunity to participate and to provide		
comments on documents that are produced t			
-	rested and affected parties are considered and recorded in reports that are		
	ect of the application, provided that comments that are made by interested and		
	hat will be submitted to the competent authority may be attached to the report		
without further amendment to the report;			
	ected parties that participated in a public participation process; and		
	ccess to all information at my disposal regarding the application, whether such		
information is favourable to the applicant or n			
•all the particulars furnished by me in this for	m are true and correct;		
•will perform all other obligations as expecte	d from an environmental assessment practitioner in terms of the Regulations;		
and			
	e in terms of regulation 71 and is punishable in terms of section 24F of the Act.		
Disclosure of Vested Interest			
-	terest (either business, financial, personal or other) in the proposed activity		
2010.	performed in terms of the Environmental Impact Assessment Regulations,		
Juliin Orston 1			
function i			
·			
Signature of the environmental practitioner:	-		
Private Consultant			
Name of company:	-		
27 June 2014			
Date:			
Signature of the Commissioner of Oaths:			
Date:			
	-		
Designation:			