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Heritage Management Plan for Kolomela Mine In the Postmasburg District Municipality of the Northern Cape Province



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Prepared for: Kumba Iron Ore Kolomela Mine

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Note that this Management Plan is based on the 2008 SAHRA guidelines for the compilation of *Site Management Plans: Guidelines for the development of plans for the management of heritage sites or places*

Executive Summary

The purpose of this Heritage Management Plan for the Farms Wolhaarkop 485, Welgevonden 476, Welgevonden 486, Portions 1-3 and the remainder of the farm Kapstevel 541, Ploegfontein 487, the remainder of the farm Leeuwfontein 489, Strydfontein 514, the remainder of the farm Klipbankfontein (collectively referred to as the Kolomela property) is to ensure:

- the sustainable and long-term conservation, management, development and maintenance of the heritage resources
- balance opportunities for research, education and tourism without comprising the integrity of the site
- a balanced approach between development, conservation and utilization

Note that this document must be seen as a dynamic document that needs to be reviewed and updated from time to time but at least on a biannual basis.

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Glossary and acronyms

AIA *Archaeological Impact Assessment*

EIA's *Environmental Impact Assessments*

HIA *Heritage Impact Assessment*

Archaeological remains can be defined as any features or objects resulting from human activities, which have been deposited on or in the ground, reflecting past ways of life and are older than 100 years.

Conservation as used in this report in relation to heritage resources “includes protection, maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance” (1999: Act 25:2iii).

Cultural significance means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance” (1999: Act 25:2(vi)).

Development means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being” (1999: Act 25:2(viii)).

Heritage. Heritage resources have lasting value in their own right and provide evidence of the origins of South African society. They are limited and non-renewable. The National Heritage Resources Act section 32, p. 55 defines these as “*An object or collection of objects, or a type of object or list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object*”.

These include historical places, objects of archaeological, cultural or historical significance; objects to which oral traditions are attached and which are associated with living heritage; objects of scientific value, fossils, etc.

NHRA. National Heritage Resources Act.

SAHRA. South African Heritage Resources Agency.

The Act means the National Heritage Resources Act, 1999 (Act No. 25 of 1999).

The Stone Age: **ESA** (Earlier Stone Age), **MSA** (Middle Stone Age), **LSA** (Later Stone Age).

1 Introduction and Background

Kumba Iron Ore is currently developing the Kolomela Mine as part of the Sishen South Project close to the town of Postmasburg in the Northern Cape. The Kolomela mine is situated on the Farms Wolhaarkop 485, Welgevonden 476, Welgevonden 486, Portions 1-3 and the remainder of the farm Kapsteviel 541, Ploegfontein 487, the remainder of the farm Leeuwfontein 489, Strydfontein 514, the remainder of the farm Klipbankfontein (collectively referred to as the Kolomela property). A further three farm portions outside the mine area but owned by the mine, Kappies Kareeboom, Gruispan, and Farm 538 were also briefly inspected for heritage resources.

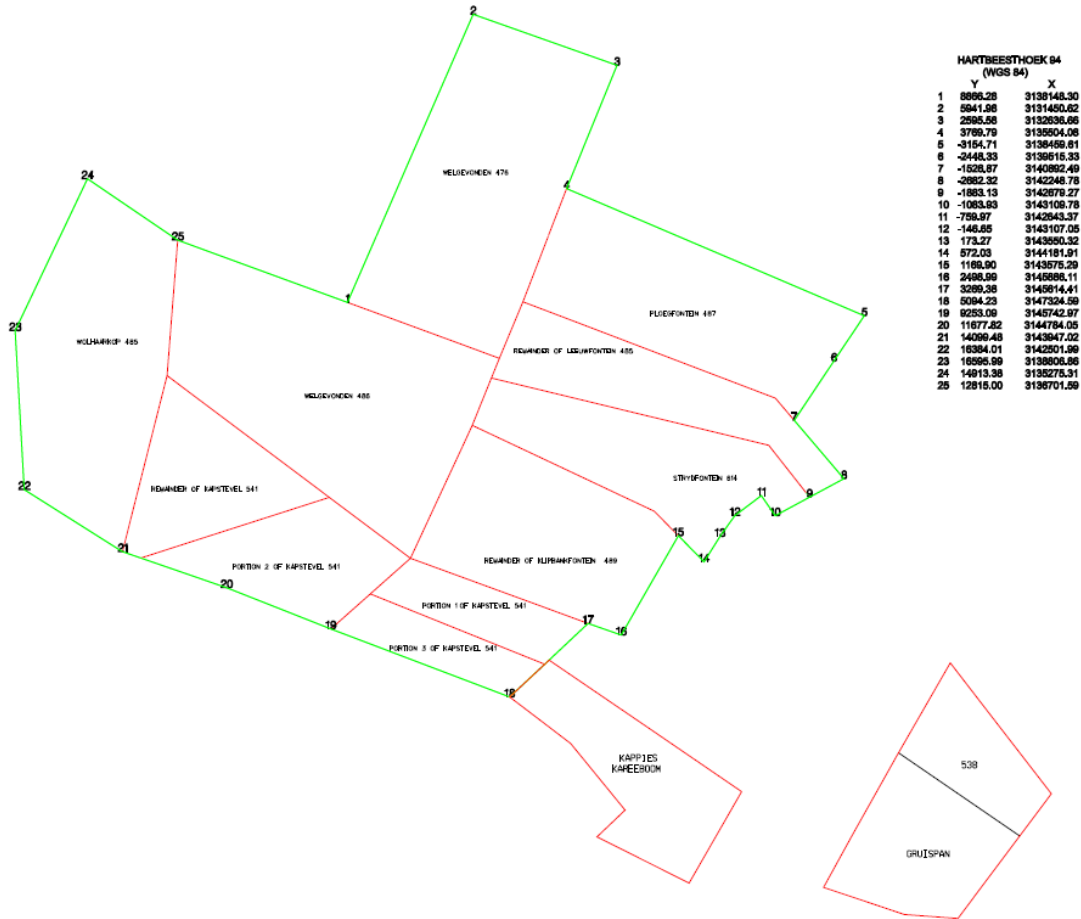


Figure 1: The Kolomela mine boundary (green) and farms owned by the mine (red)

The mining right area is located in the Northern Cape Province near Postmasburg (Figure 1). It is situated on the southern tip of the narrow north-south trending belt of iron-bearing lithologies of the Griqualand West Supergroup that host the Sishen Mine deposit towards the north.

Similarly to Sishen Mine, iron ore at Sishen South is preserved in the chemical and clastic sediments of the Proterozoic Transvaal Supergroup, which define the western margin of the Kaapvaal Craton in the Northern Cape Province. The stratigraphy has been deformed by thrusting from the west and has undergone extensive karstification. The thrusting has produced a series of open, north-south plunging anticlines, synclines and grabens. Karstification was responsible for the development of deep sinkholes and the iron ore at Sishen South has been preserved from erosion within these geological structures.

“The Sishen South has been designed as a direct shipping ore operation, where conventional open pit drilling and blasting, shovel loading and truck hauling will be used to mine the ore from three different pits.

A combination of run-of-mine buffer- and product- stockpiles will be used for blending to ensure that the product complies with the required specifications. Product size will be controlled via a crushing and screening plant for all buffer stockpile and run-of-mine material.

The proposed mine has a life expectancy of 30 years with a possible future extension thereafter. The total iron ore resources are estimated to exceed 400 metric tonnes. Mining operations will be from three open cast pits utilising the standard shovel and truck method. The iron ore will be dry crushed and screened before being hauled further by rail.”

(http://www.kumba.co.za/reports/kumba_afs_08/res_minerals.php)

In 2005 a Phase 1 Archaeological Impact Assessment of the proposed mining areas for the Kolomela Mine on the farms Ploegfontein, Klipbankfontein, Welgevonden, Leeuwfontein, Wolhaarkop and Kapsteviel, west of Postmasburg, Northern Cape (Map Reference 1:50 000 2822BD Beeshoek) was undertaken by David Morris. Kumba Resources observe environmental guidelines whereby a reappraisal of heritage resources at their mining localities is generally required at five-year intervals.

African Heritage Consultants was accordingly appointed to conduct an investigation in order to provide an update review of the heritage resources at Kolomela and to compile a management plan of the heritage resources for Kolomela.

The following table provides a summary of the heritage resources are located on the Kolomela mine property:

	Site:	Recommendations:
STONE AGE	Stone Age sites associated with pans and drainage lines	The survey confirmed low-density or isolated occurrences of stone tools on the plains and the periphery of the pans with a notably higher occurrence of lithics within the pan hollows. Should future mining or infrastructural development impact on the localities where pans occur Phase 2 mitigation is proposed under a permit issued by the South African Heritage Resources Agency (SAHRA).
	Wolhaarkop LSA site	This locality also contains some exceptional animal rubbing stones on the periphery of the haematite outcrops. The site is deemed to be of ideational and cultural significance in view of its setting within the physical and psychological landscape and the relationship between people and place (SAHRA1999:Act 25:3(3)(vi)). The area is of high significance. It is consequently recommended that an undisturbed zone in a radius of two kilometres around this locality should be imposed.
	Stone Age occurrences on the future plant area	Generally low densities of surface scatters of stone tools were recognised within the thin layer of calcrete capping. To ensure legal compliance the mine must commission a Phase 2 assessment on this area before applying for a destruction permit to SAHRA before any development or expansion of the mining activities

IRON AGE		in this area.
	Pre-colonial mine.	<p>Pre-colonial open haematite mine workings consisting of a narrow trench with two stopes are also present on a hill on the Wolhaarkop farm. An estimated 3000 to 4000 tons of haematite ore have been removed before the mine was backfilled.</p> <p>The area is of high significance. Current mining activities are some distance away, but if there should be any impact on the archaeological site, Phase 2 mitigation under a permit issued by SAHRA is recommended.</p>
HISTORICAL	The herder dwelling.	It is recommended that this feature is retained and incorporated into the management plan of the proposed mine, possibly as a permanent environmental monitoring station.
	Leeuwfontein Farmyard	It is recommended that the historical elements be restored. Exotics and invaders outside the farmyard must be removed. Historic features should be retained and incorporated into the management plan of the Kolomela mining operations.
	Kappies se Plek	<p>This farmyard appears to have had two phases of structural rendering dating to early in the 20th century (1st phase) and the 1960s (2nd phase). It is recommended that the animal enclosures and water complex are renovated by competent craftsmen under supervision of a restoration architect. It is further suggested that the second phase sites are to be utilised when future building sites are required. It is also recommended that any new buildings in the future development phase should be fashioned in a sympathetic architectural style.</p> <p>The cemetery: It is recommended that the cemetery be conserved fenced and retained.</p>
	Welgevonden Farmyard.	<p>The present farmyard configuration consists of structural rendering dating to early in the 20th century.</p> <p>The main dwelling has been sympathetically renovated and is in good use at present. It is suggested that it is conserved <i>in situ</i>. It is also recommended that the current blue car ports are to be relocated to an appropriate area when the other temporary buildings are demolished. This clearance and new layout between the dwelling and barn should be designed by the mine’s architect in accordance to mining requirements and the period style.</p> <p>The barn must be retained within the mines’ safety requirements and heritage specifications. The preservation processes are left to the decisions of the structural engineer and architect of the mine.</p>
	Kapstevl Farmyard.	<p>This is the best preserved, renovated and restored site on Kolomela property. This farmyard retains the architectural memory of the differential periods of development and the imprint of ownership. The farm has retained features that collectively form the ‘The Kapstevl Farmyard’ that integrates elements from the late 19th century to the present day.</p> <p>It is recommended that the Kapstevl complex be declared a</p>

		<p>Provincial Heritage Site and that an extent of at least 50 hectares surrounding the farmyard be excluded from any future mining operations. It is strongly recommended that the farmyard and buildings should be developed. It is also recommended that Mr Bredenkamp, the former owner of the farm Kapstevel, should be interviewed and the family history recorded.</p> <p>The cemetery: It is recommended that the cemetery be conserved, fenced and retained.</p>
	The Kameelfontein Ruins	<p>The site comprises various foundations of outbuildings and other farm infrastructure including two wells. All structures are older than 60 years and are protected by law.</p> <p>The site falls outside the mining area.</p>
	Gruispan	<p>The site comprises various foundations of outbuildings, gardens and other farm infrastructure including a well. Some of the structures are older than 60 years and are protected by law.</p> <p>The site falls outside the mining area.</p>

2 Purpose/Intent of the Management Plan

The main purpose or intent of this Management Plan is to provide a framework for the conservation, management and development of the heritage resources associated with Wolhaarkop 485, Welgevonden 476, Welgevonden 486, P 1, 2, 3 and R Kapstevl 541, Ploegfontein 487, R Leewfontein 489, Strydfontein 514, R Klipbankfontein.

Based on the Phase 1 and 2 assessments of heritage resources and for the purpose of this management plan, the heritage resources associated with the Kolomela Mine can be grouped into the following heritage management clusters for further management:

	Site:	Heritage features :
STONE AGE	Stone Age sites associated with pans and drainage lines	Middle (MSA) and Later Stone Age (LSA) lithic assemblages
	Wolhaarkop LSA site	Later Stone Age assemblage and rubbing stones
	Stone Age occurrences on the future plant area	Middle and Later Stone Age lithic assemblages
IRON AGE	Pre-colonial mine	Mine pit and back fill
HISTORICAL	The herder dwelling	Single dwelling
	Leeuwfontein Farmyard	Historic structures, farm yard, animal enclosures, water infrastructure.
	Strydfontein Ruins	Farm house, garden, water infrastructure
	Kapjes Kareeboom 'Kappies se Plek'	Historic structures, farm yard, animal enclosures, water infrastructure, sheep dip and cemetery
	Welgevonden Farmyard.	Farm house and barn.
	Kapstevl Farmyard.	Historic structures, farm yard, animal enclosures, water infrastructure and all other elements associated with the farmyard.
	Remainder of Leeuwfontein 485 Ruins, east of the Groenwater Spruit.	Foundations and wells.
	Gruispan	The site comprises various foundations of outbuildings, gardens and other farm infrastructure including a well. Some of the structures are older than 60 years and are protected by law. The site falls outside the mining area.

3 Goals and objectives of the Management Plan

3.1 Goals

- To ensure the sustainable and long-term conservation, management, development and maintenance of the heritage resources associated with Wolhaarkop 485, Welgevonden 476, Welgevonden 486, P 1,2,3 and R Kapsteviel 541, Ploegfontein 487, R Leeuwfontein 489, Strydfontein 514, R Klipbankfontein
- To ensure the long-term protection of the heritage resources through an open and transparent process.
- To balance opportunities for research, education and tourism without comprising the integrity of the site.
- To ensure a balanced approach between development, conservation and utilization.
- To ensure ease, and limit the cost, of maintenance and management.
- To promote general heritage awareness at the site.

3.2 Objectives

- To conserve the various heritage resources in a sustainable manner.
- To develop/define management responsibilities and actions for the different sites.
- To set a framework for the monitoring and evaluation of the success of the management plan.

4 Statement of Significance

Section 3(3) p. 14 of the South African Heritage Resources Act (Act No. 25 of 1999) specifically states the following with regard to significance:

“... a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—

- (a) its importance in the community, or pattern of South Africa’s history;*
- (b) its possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage;*
- (c) its potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage;*
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa’s natural or cultural places or objects;*
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;*
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;*
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;*
- (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and*
- (i) sites of significance relating to the history of slavery in South Africa”.*

For the purposes of this Management Plan the significance was assessed by investigating and rating (assigning a value of High, Medium or Low) to each of the following:

- **Cultural value:** the value that a site holds for the community or a section thereof;
- **Social value:** refers to the qualities of the locality making it a place that has become a focus of spiritual, cultural, local, provincial or national identity;
- **Historic value:** recognising the contribution a place makes to the achievements and our knowledge of the past;
- **Scientific/Research or Archaeological value:** refers to the potential of a site to contribute unique knowledge that is not obtainable elsewhere.
 - **Site integrity:** Elements to consider can include the extent of preservation as based on a surface survey and any observable disturbances that may impact on the integrity (cultural/non-cultural/environmental degradation).
 - **Richness:** This can refer the range of features present, depth of deposit and/or quantities of artefactual objects, e.g. Stone Age, Iron Age and historical occupations.
 - **Proximity or accessibility.** This can be either positive or negative depending on the specific future site use, proposed developments or the impact on local communities. For instance a site that is easily accessible and in close proximity to an existing community provides various opportunities for either future development or conservation that can also contribute to economic upliftment and growth. Such a site should accordingly be assigned a higher value
- **Aesthetic value:** Refers to the inherent beauty, sense of place, design, form, style and artistic expression that a specific place holds.
- **Hierarchal significance rating:** In terms of the Act (No. 25 of 1999:55, par. 8) sites may have local, regional or national significance. We also have to recognise the limitations of existing knowledge or the political paradigm and, moreover, that changes in these may impact on future significance. Hardesty & Little (2009:12) take this one step further and recognize sites of worldwide importance.

Value: - High - Medium - Low	Stone Age			Iron Age	Historical Structures							
	Lithics at Stone Age at pans and drainage lines	Wolhaarkop LSA site and rubbing stones	Stone Age lithic occurrences in the future plant area	Pre-colonial mine	The herder dwelling	Leeuwfontein Farmyard	Strydfontein Ruins	Kapjes Kareeboom Ruins	Weigevonden Farmyard.	Kapstevel Farmyard.	R Leeuwfontein 485 Ruins, east of Groenwaterspruit	Gruispan
Cultural value:	L	L	L	L	M	M	L	M	M	H	L	L
Social value:	L	L	L	L	L	L	L	L	L	L	L	L
Historic value:	M	M	M-L	H	L	M	M	M	M	M-H	L	L
Scientific/ Research or Archaeological value:	M	M	M	H	L	M	M	M	M	H	L	L
Aesthetic value:	M-H	H	L	H	M	M	L	L	L	H	L	L
Hierarchical significance rating: - National - Regional - Local	R	N	L	N	L	L	L	L	L	R	L	L

5 Site Description and Environmental Setting

The Kolomela Mine is largely situated within the Postmasburg Thornveld vegetation type but with elements of both the Kuruman Mountain Bushveld and Northern Upper Karoo also present.

The area is characterised by summer and autumn rains with dry to very dry winters. The mean annual precipitation ranges from 250 to 320 mm per year.

6 History of the Sites

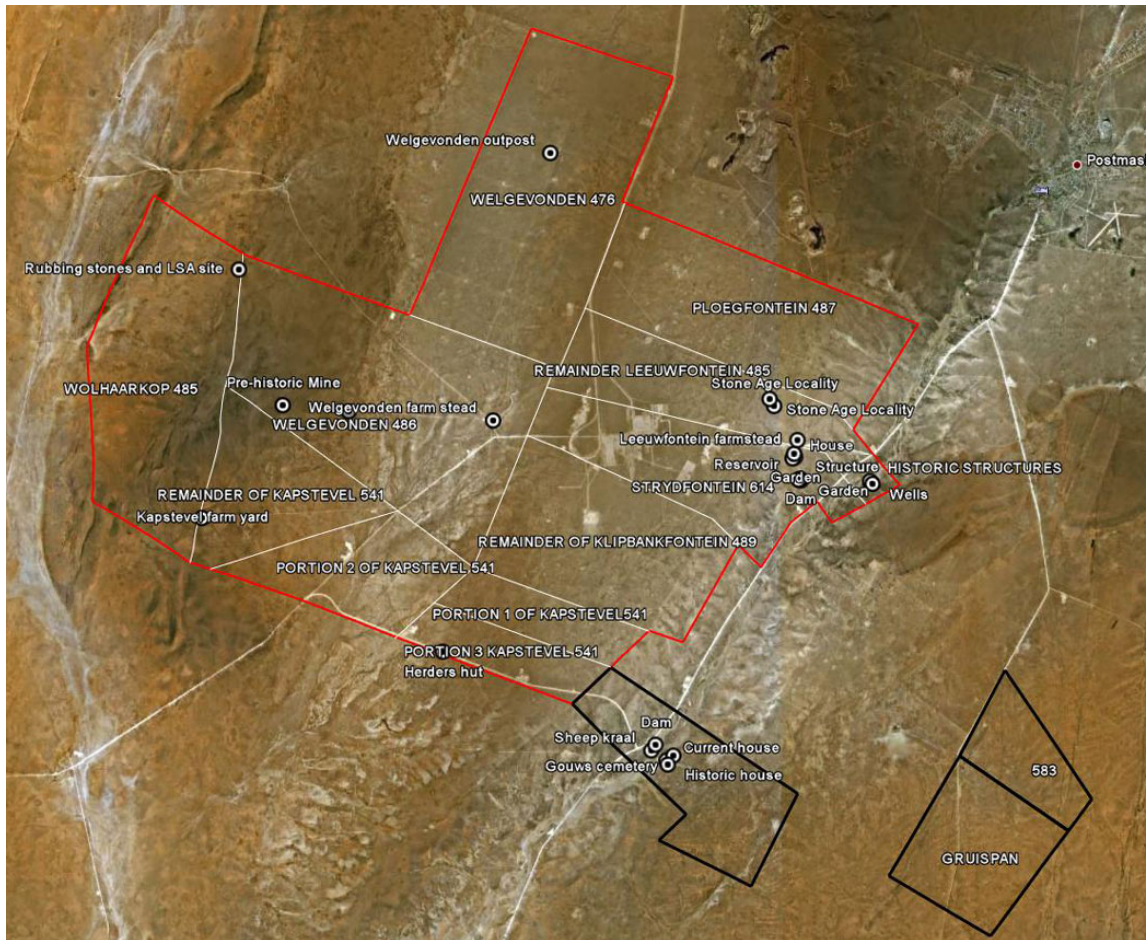


Figure 1: Heritage Resources and farm portions

6.1 Introduction

The history of the utilisation of the Northern Cape resources dates back to the Earlier Stone Age (ESA). Archaeological traces in the form of mostly stone tools suggest a widespread presence of tool-producing hominins in the Northern Cape. The archaeology of this region is dominated by millions of stone tools that derived from very early occupations by tool-manufacturing hominins up to intensive utilisation by hunter-gatherers until the recent past. The upland savannas of southern Africa are seen as a focal region of biological and cultural evolution during this period (Beaumont and Vogel 2006).

The Stone Age sequence can be divided into the following periods:

Period	Approximate dates
Earlier Stone Age	more than 2 million years ago - 250 000/200 000 years ago

Middle Stone Age	200 000/250 000 years ago – 25 000 years ago to around the Last Glacial Maximum (LGM) in some regions
Later Stone Age (Includes Rock Art)	25 000 years ago - AD 200 and up to historic times in certain areas

From the site surveys conducted on the Kolomela property it is evident that Stone Age artefacts from all three these periods are present on the mine property.

Prehistoric mining in the South African context dates back to at least BP 40 000 years ago. The specularite mines at Tsantsabane/Blinkklipkop and Doornfontein 1 near Postmasburg were rich and well-known ore sources that were quarried extensively over a long period of time (Beaumont and Thackeray 1981:1-2; Beaumont and Morris 1990:65-74; Mitchell 2002:256-7; Morris 2004). Dunn (1931:110) was told that “it was from here that the Bushmen and other natives for hundreds of miles obtained their supplies of specular iron ore, which becomes red when burnt”. The pigment was widely bartered and exchanged for goods such as iron knives, assegais, axes, tobacco, copper and iron ornaments and also beads (Campbell 1822:Vol II; Burchell 1967; Arbousset and Daumas 1968). Investigations at the Tsantsabane/Blinkklipkop locality established a date of AD 800 for the utilization of this particular rich source (Thackeray et al 1983; Beaumont and Morris 1990).

Postmasburg has its origins in a London Missionary Society station known as Sibiling. As more Griqua settlers moved into the area, it developed into a rural settlement called Blinkklip. When the white migrating stock farmers moved into the area, the need for a church arose. A village was formally proclaimed on 6 June 1892 and named after the Reverend Dirk Postma, one of the founders of the Dutch Reformed Church.

Due to climatic conditions, farming is and was mainly limited to animal husbandry. By the early 1900s the farms around the district were surveyed and stock farmers settled these permanently or semi-permanently. In the latter half of the 1900s these stock farmers became more and more prosperous due to the need of the mining industry to obtain meat supplies.

Originally Postmasburg was little more than a cattle-ranching station, but the town has developed into a commercial and distribution centre for mining and stock farming. The railway from Kimberley reached Postmasburg in 1930 and was later extended to Dingleton (Sishen) and Hotazel.

Diamonds were the first commercial mineral to be mined after a diamond was found in 1918 by a prospector named Casper Venter in a meerkat hole. The modern mining history dates to the first geological exploration of the broader region in 1906 by the geologist Dr AW Rogers of the Geological Commission of the Cape Colony. Following on intensive prospecting between 1923 and 1926 the first economically exploitable manganese deposit in South Africa was proven to be on the farm Gloucester in the Northern Cape Province, occurring along a ridge between Postmasburg and Sishen.

In 1926 Guido Sacco acquired the farm and formed The Gloucester Manganese Mines (Postmasburg) Limited. The land was held for future development as reasonable transportation facilities were not available at that time.

In 1929 overseas interests formed the Manganese Corporation Limited and secured an agreement with the South African Railways to extend the railway line from Koopmansfontein (near Kimberley) to the Mancorp mine on the farm Beeshoek. However, the September 1929 crash on the New York Stock Exchange, followed by the Great Depression, brought all manganese mining operations to a halt, rendering the newly constructed Koopmansfontein/Beeshoek railway line dormant.

May 1930 saw the launch of the Ore & Metal Company Limited to import and export mineral concentrates, including manganese. The African Mining and Trust Company Limited was formed in December 1931 to acquire mineral rights and explore mineral deposits. In exchange for shares in African Mining and Trust, the founders transferred their entire Ore & Metal Company shareholding to the new company, while Guido Sacco transferred his Gloucester Manganese Mines shares. Thus, Ore & Metal and Gloucester Manganese Mines became subsidiaries of African Mining and Trust, now a wholly owned subsidiary of Assore Limited (previously The Associated Ore & Metal Corporation Limited), which was formed in 1950.

During 1934 the South African Railways re-opened the railway line and extended it to Gloucester. In 1935 the Associated Manganese Mines of South Africa Limited (Assmang) was formed. Anglovaal acquired all the mineral leases of the Manganese Corporation and these were ceded to Assmang, as were the shares of the Gloucester Manganese Mines Limited held by African Mining and Trust in exchange for shares in Assmang. The first shipment of manganese ore left Durban harbour in March 1936 and subsequent shipments continued uninterrupted.

Sishen Mine was established in the Northern Cape Province in 1954 as a mine that served Iscor only. In 1976, however, the South African Government invested in the infrastructure to enable the export of iron ore from the Sishen mine via the Sishen-Saldanha rail link and port facility. This opened up a new era of growth for the iron ore business.

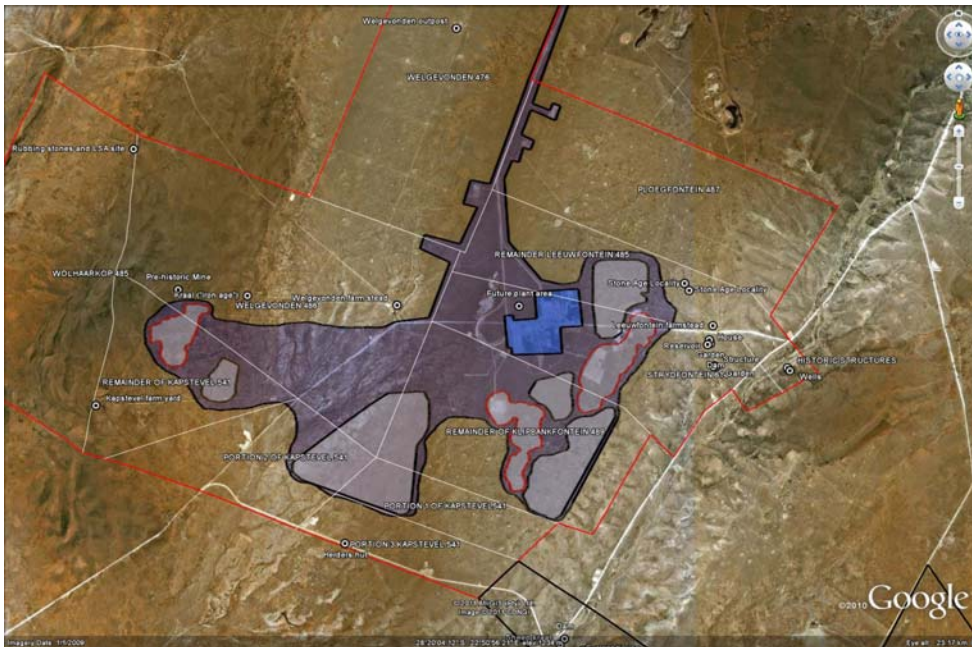


Figure 2: Areas affected by mining

7 Stakeholder Consultation and Public Participation

During the heritage surveys local residents and farm workers were interviewed. As part of the Mining Permit application process an extensive public participation and stakeholder consultation process was also initiated as required by the National Environmental Management Act (No. 107 of 1998).

As a result of the long mining history of the area as well as for economic reasons the various farm portions under survey have been owned by mines for a long time so that virtually all commercial farming activities came to an end.

No direct oral traditions or histories for sites have been recorded.

8 Guiding Principles

Although conservation is site-specific there is an international guiding philosophy with the principle aim to ensure sympathetic restoration and conservation by protecting the academic and social integrity of a site (HARCH5J:2009). These guidelines have been drawn up by ICOMOS (the International Council for Monuments and Sites); the most frequently cited being the Burra Charter (the Australian ICOMOS Charter for the Conservation of Places of Cultural Significance 1988). In summary this states that:

- *place is important*
- *understand the significance of the place*
- *understand the fabric*
- *consult with all stakeholders and reach agreement*
- *significance should guide decisions*
- *retain significant elements*
- *do as much as necessary and as little as possible*
- *interventions should be reversible*
- *copies of original fabric should be identifiable*
- *keep records of decisions and changes to the place*
- *do everything in logical order*

9 Legal Framework

1. The South African Heritage Resources Act 1999, (Act No. 25 of 1999).
2. Site Management Plans: Guideline for the development of plans for the management of heritage sites or places – South African Heritage Resource Agency 1999.
3. National Environmental Management Act, (Act No. 107 of 1999).

9.1 Archaeological resources

All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999, section 35). No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the South African Heritage Resources Agency (SAHRA).

Human remains older than 60 years are protected by the National Heritage Resources Act Section 36. Human remains that are less than 60 years old are protected by the Human Tissue Act (Act 65 of 1983 as amended).

The following sections of the South African Heritage Resources Act, 1999 (Act 25 of 1999) must be noted:

In term of the South African Heritage Resources Act,1999 (Act 25 of 1999) the following applies:

Structures

34. (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Archaeology, palaeontology and meteorite

35.(4) No person may, without a permit issued by the responsible heritage resources authority—

- (a) *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) *destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (c) *trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*
- (d) *bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

Burial grounds and graves

36.(3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

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

10 Site Analysis and SWOT Analysis

A Phase 1 Impact Assessment of the site was undertaken prior to the preparation of this report. The following heritage resources were recorded on site:

10.1 Stone Age Sites associated with pans and drainage lines

Status quo:

The south-eastern part of the Kolomela Mine property consists of mainly calcrete-capped plains. Very numerous small shallow pans, also known as dolines, of 100 to 200 m in diameter with a couple of larger pans, occur over most of this area.

During the survey the archaeological patterning observance by Morris (2005) of a generally dispersed scatter of stone tools across the landscape, but with a major focus on the utilization of stonetool materials and also the plant and water resources provided by the numerous small pans settings, was substantiated.

Surface sampling of the highly dispersed lithics was undertaken at a number of pans to obtain an understanding of the utilization of pan environments and the relative abundance of lithics over the sites. The pan localities delivered mostly diagnostic tool types of MSA tools with a thin overlay of LSA tool types. ESA Large Cutting Tools (LCT’s) were not common finds during the current survey and only a few examples were identified.



Figure 3: Pan associated with Stone Age lithic assemblages

<p>Strengths</p> <p>The sites are protected by the Act. A large number of sites fall outside the area impacted upon by mining.</p>	<p>Weakness</p> <p>The heritage features associated with the pan localities are not obvious to the untrained eye and there is always a risk of impact and destruction</p>
<p>Opportunities</p> <p>Within the mine area access to sites will be strictly controlled.</p>	<p>Threats</p> <p>A number of the pans have been impacted on by the existing infrastructure development process. It is anticipated that some localities will also be impacted on in future.</p>

Management requirement:

The pan localities are assigned to be of medium to high significance. The survey confirmed low-density of stone tools on the periphery of the pans with a notably higher occurrence of lithics on pan surfaces.

Should future mining or infrastructural development impact on the localities where pans occur Phase 2 mitigation is proposed under a permit issued by the South African Heritage Resources Agency (SAHRA).

10.2 Wolhaarkop Later Stone Age (LSA) site and rubbing stones



Figure 4: LSA site with rubbing stones

Status quo:

An LSA site (28° 20' 874"; 22° 252' 111") on the south-eastern side of the haematite outcrop is situated above an annual stream. This sheltered area found by Morris (2005) was relocated through the presence of LSA microlithic tools in association with weathered fragments of ostrich eggshell. Stone tools from both the MSA and LSA occur in the vicinity of the outcrop, but LSA types dominate. Tool knapping is particularly evident in the north-western portion where the level surface areas are scattered with stonetool materials, cores, flakes and waste from stone tool reduction technologies.

Mega herbivores such as rhino and elephant, but also warthogs, use a particularly favoured locality after a mud wallow as a rubbing stone to remove ectoparasites (Smithers 1983). As early as 1779 Wikar, while travelling along the Orange River, noted that the rhinoceros frequently use specific boulders in the landscape as rubbing stones (Skead 1976).

Such rubbing stones are sometimes a feature at Stone Age localities and may contain engravings or rock paintings and then often of rhinoceroses (Ouzman 2001). These sites are usually situated near a water source. Stone Age research has demonstrated the importance of water to prehistoric communities not only as a subsistence resource, but also as a spiritual resource (Van der Ryst et al 2003). The use of a specific locale by both humans and animals over time also strengthen the continuous process of socializing the landscape (Taçon et al 1997). Among the Bushmen certain animals, for instance rhinoceroses, feature in rain-control ceremonies and other rituals (Ouzman 1996, 2001, 2002). The layered use of localities by both animals and humans would have created a sense of place and added to the energy of locales such as Wolhaarkop.

<p>Strengths</p> <p>The sites are protected by the Act. The site is situated towards the edge of the property and unlikely to be impacted on. The site is relatively inaccessible and some distance from existing roads.</p>	<p>Weakness</p> <p>The heritage features associated with the pan localities are not obvious to the untrained eye and there is always risk of impact and destruction by the uninformed.</p>
<p>Opportunities</p> <p>Within the mine area access to sites will be strictly controlled. The site has potential to be developed as a Point of</p>	<p>Threats</p> <p>Any future infrastructure development or noise pollution will have a negative impact on the site and the sense of place.</p>

Interest.	
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Management requirement:

High significance is assigned to this locality. The Wolhaarkop LSA site with the rubbing stones is deemed to be of ideational and cultural significance in view of its setting within the physical and psychological landscape and the relationship between people and place (SAHRA1999:Act 25:3(3)(vi)). It is consequently recommended that an undisturbed zone in a radius of **at least two kilometres** around this locality should be imposed to protect the landscape and associated site.

10.3 Pre-historical mine Wolhaarkop.

Status quo:

A historic open-mine working is present within the prospecting area of the Wolhaarkop open-cast pit. The area surrounding the workings has been heavily prospected during current mining activities. The mine working has been identified as pre-historical on the absence of any mechanical drilling or blasting marks and also because it has been back-filled —an attribute of ancient mines. The open-mine workings of haematite consist of a narrow trench with two stopes on the highest section. Ancient open mining technology resulted in a narrow deep trench and was suited to rocks that dip steeply or are vertical (Hammer et al 2000:51). The mine workings drain towards the east. A drainage feature is evident at most ancient mines as it prevented flooding. Ancient mining activities were usually scheduled for the winter months because of a relatively lower water table during the drier months (Hammer et al 2000:52).

<p>Strengths</p> <p>The site is protected by the Act. The site is relatively inaccessible and some distance from existing roads.</p>	<p>Weakness</p> <p>The site was unrecognized to date. We have no other historical or other records of the site</p>
<p>Opportunities</p> <p>It is recommended that the mine be subjected to a Phase 2 assessment to obtain a full understanding of the site</p>	<p>Threats</p> <p>The site is situated within 400m of the Wolhaarkop open cast pit and may be impacted on by blasting activities.</p>



Figure 5: The historic mine. Note the position of the new mine pit 400m south-east of the site.

Management requirement:

A high significance is assigned to this feature. The mine will be directly impacted upon by the open-cast mining. A Phase 2 mitigation under a permit issued by SAHRA is recommended. The Phase 2 assessment needs to confirm the nature and extent of the ancient mining activities and at least partially re-open the mine to investigate mining practices. It is recommended that a 400m buffer be established around the site.

10.4 The Stone Age site at the future plant area

Status quo:

A survey was conducted on the section where the footprint of the mining plant is to be extended for a beneficiation process. Generally low densities of surface scatters of stone tools were recognized within a thin layer of calcrete capping. The assemblage is dominated by MSA tool types such as blades and convergent flakes. The presence of many cores indicates *in situ* manufacturing. Only a few examples of LSA lithics were documented.

Strengths The site is protected by the Act.	Weakness The heritage features associated with the site are not obvious to the untrained eye and there is always risk of impact and destruction by the uninformed.
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<p>Opportunities N/A</p>	<p>Threats The site is situated an area earmarked for further expansion of the beneficiation plant</p>
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Management requirement:

The area is of relatively low significance. To ensure legal compliance the mine must commission a Phase 2 assessment on this area as part of the destruction permit to be issued by SAHRA prior to the commencement of any development or expansion of the mining activities.

10.5 Herder dwelling

Status quo:

The period of origin of this attractive little structure is difficult to estimate as it is totally isolated in the landscape and has the universal appearance of dwelling used by labourers. It has lost its roof similar to current practices elsewhere in South Africa where the removable materials of any abandoned structure or building are almost immediately recycled into the architecture of the poor and needy. The extended base of the chimney forms an internal fireplace, generally known as a *komy*. This house could also have been the permanent dwelling of a single person or a small family rather than a seasonal herder post. The absence of any animal enclosures or shelters for animal stock also suggests a dwelling rather than a herding outpost.

<p>Strengths The building is structurally stable. The setting within the landscape is impressive.</p>	<p>Weakness The site is situated on the periphery of the property.</p>
<p>Opportunities The site can be utilised as accommodation for contractors or for housing environmental monitoring equipment.</p>	<p>Threats If left as is the building will further deteriorate.</p>

Management requirement:

Even if the building is of relatively low significance in the greater context, and might even fall outside the protection of heritage legislation, it is suggested that within the spirit of heritage preservation already demonstrated by Kolomela, the structure should be retained and used.

10.6 The walled site (kraal) previously identified as an Iron Age site.

Status quo:

As far as the present investigative team is concerned, the stone walls are in fact historical enclosures for animals, possibly associated with the earthen-walled dam and other ruined buildings in the vicinity. Due to the lack of any cultural material it is difficult to date the structure.

Management requirement:

It is recommended that the structure be retained in its present condition. It is not threatened by any of the proposed infrastructural upgrades and is quite inaccessible.

10.7 Leeuwfontein farmstead.

Status quo:

As with most other farms in South Africa the infrastructure has undergone a number of renewals over time. The original dwelling associated with the limestone-block animal enclosures and dam has disappeared, possibly with the recent renovation of the 1960s farm dwelling for the use of contractors to Kolomela. The remains of such buildings can be seen where they were bulldozed into the drainage line below the dam. One can also observe the buildings on the 2002 Google Earth system.

We can therefore identify at least three structural phases possibly dating to the early 20th century (1st phase), the 1960s (2nd phase) and present (3rd phase). What remains of the first occupation are elements of demarcation walls, a dam structure and the animal enclosures built from limestone blocks quarried in the nearby drainage line. These structures are protected by the Act.

As all other remains of the farmyard from the first period were apparently destroyed, the preservation value of the remaining structures has increased. Even though elements of the 1960s structure survive in the renovated dwelling, it is not protected by law.

<p>Strengths</p> <p>The building is structurally stable. The site is currently being used for accommodation by contractors.</p>	<p>Weakness</p> <p>Some of the modern structures are unsympathetic. Some of the farm infrastructure cannot be reused but needs to be retained.</p> <p>Employees, contractors and other visitors must be informed of the heritage value of the site.</p>
<p>Opportunities</p> <p>The site can be utilised as accommodation for contractors and should be restored and renovated</p>	<p>Threats</p> <p>If left as is the existing farm infrastructure will further deteriorate.</p>

Management requirement:

It is recommended that the demarcation walls, animal enclosure and dam are renovated by competent craftsmen under supervision of a restoration architect. These features should be retained and incorporated into the management plan of the Kolomela mining operations.

10.8 Strydfontein farmstead. (Referred to as secondary Leeuwfontein farmstead by Miller)

Status quo:

A second farmyard located to the south of the main Leeuwfontein site was identified by van der Ryst, Sparks and Küsel. It contains the foundation of a building consisting of a single layer of cut limestone blocks, a limestone dam structure and a cemented irrigation canal. These features most probably relate to the first phase of settlement on Strydfontein and are therefore protected by the Heritage Act. However, owing to the state of preservation of the dwelling, it is not worth preserving. The dam and irrigation structure are well preserved and still retain heritage integrity.

Strengths The sites are inaccessible	Weakness Employees, contractors and other visitors must be informed of the heritage value of the site to ensure protection.
Opportunities N/A	Threats No direct threats were observed.

Management requirement:

It is recommended that the structures be retained due to the fact that the sites will not be impacted on by infrastructure upgrades.

6.10 Kappies se plek (Kapjes Kareeboom). (Referred to as the Strydfontein farm by Miller)

Status quo:

This farmyard appears to have had two phases of construction dating to the early 20th century (first phase) and the 1960s (second phase). At present a third phase is planned for the placement of new Kolomela infrastructure.

From the early period farmhouse and outbuildings there remains only faint outlines consisting of limestone bricks. The actual plan can be observed in the Google Earth images of the site, just to the south-east of the existing dwelling and shed. Furthermore a cemetery, an animal enclosure complex, and an innovative water collection complex survive. These are protected by Act 25 of 1999.

The third phase is planned to be implemented on an area to the south-west from the original phase one site. In proximity of this site is an archaeological site that may have been the location of the houses of workers associated with the first phase.

Strengths The site has good access and is not within the restricted mining area.	Weakness Some of the modern structures are unsympathetic. Some of the farm infrastructure cannot be reused but needs to be retained. Employees, contractors and other visitors must be informed of the heritage value of the site.
Opportunities The site can be utilised as accommodation for contractors and farm managers and should be restored and renovated	Threats If left as is the existing farm infrastructure will further deteriorate.

Management requirement:

It is recommended that the animal enclosures and water complex are renovated by competent craftsmen under supervision of a restoration architect. It is further suggested that the Phase 2 site is to be utilised when future building sites are required. It is also recommended that any new buildings in phase three are to be in a complementary architectural style. It is recommended that the nearby cemetery be fenced and maintained as is.

6.11 Welgevonden farmstead

The present farmyard configuration consists of structures dating to early in the 20th century (2nd phase) and the 1990s (3rd phase). The presence of a well to the south-east of the barn suggests that a 1st phase of an earlier phase of buildings probably existed.

During the geological exploration phase at the mine, the farmhouse was renovated for the use of offices. Modern buildings were added for accommodation and storage, especially to store core samples. As these adaptations apparently took place before modern legislation no plans were lodged to the then heritage authorities. Fortunately the renovations of the main dwelling were done in a sympathetic way accommodating modern use. Unfortunately the original layout of the farmyard was lost and therefore resulted in the present dilemma concerning the barn, well and reservoir.

The main dwelling is an exceptional example of the affluence of some farming community of the Postmasburg and Kuruman regions resulting from the requirements of provisions for the diamond mining industry of Kimberly. It was providentially saved and preserved by the current use as an infrastructure element in the present iron ore mining processes.

Unfortunately the original barn/wagon shed deteriorated over time. As this is the only other remaining element of the Welgevonden farmyard apart from the dwelling, and even though appearing to be structurally deficient, is still worth preserving. It can also (with alterations as necessary) be converted for use by the mining company.

As the well represents a serious safety hazard on the property (and within mining safety regulations) it is suggested that it is preserved by filling-in with a soil distinct from the rest of the area, and marked with an appropriate sign to be selected by the client. The water reservoir, which is in working order, must be retained in its present form as it is both historically correct and functional.

<p>Strengths Some of the heritage resources have been restored. The old farm house is being reused.</p>	<p>Weakness Some of the modern structures are unsympathetic. Some of the farm infrastructure cannot be reused but needs to be retained. Employees, contractors and other visitors must be informed of the heritage value of the site.</p>
<p>Opportunities The existing barn can be developed into a boardroom or similar and must be retained.</p>	<p>Threats The unsympathetic placement of modern buildings and infrastructure impact negatively on the historical structures and setting.</p>

Management requirement:

The renovations of main dwelling have been done with an understanding of the history of the structure and in main an adherence to the period of construction. It is in good use at present. It is suggested that it is retained in its current form. It is also recommended that the blue-roofed car port should be relocated to an appropriate area when the other temporary buildings are demolished. This clearance and new layout between dwelling and barn should be designed by the mine’s architect in accordance to mining requirements and the period style of the house.

The barn must be retained within the mine’s safety requirements and heritage specifications. The preservation processes are left to the mine’s structural engineer and architect’s decisions.

6.11 Kapsteval farmstead

The best preserved, renovated and functional site on the Kolomela property is this farmyard that retains the architectural memory of both period and ownership over time. Retained in the fabric of the present milieu are all the elements that in time contributed to the Kapsteval farmyard from the late 19th century to the present.

To the north-east of the dwelling are two generations of valley dams that are typical of water capture in this region being placed for the retention of periodic storm water occurrences. Below these retention structures the irrigation fields that were part of the farming history of Kapsteval over time are apparent on Google images. To the south-east of the farmyard is the first the family cemetery and, further away, the present and past site for labour accommodation. The farm road that used to be the communication link from Postmasburg over Leeuwfontein and Welgevonden runs through the farmyard.

The farmyard comprises the main dwelling that feature several phases of expansion, a wagon shed from the 1920s, a kitchen with bakery extension, a school, a power generation shed, a cooler room and an exemplary array of early 20th century tools associated with farming practices.

The most important aspect of this locality is that while it is currently used it also retains and effectively communicates the history and farming character of the Kolomela farms.

Strengths The old farm house is still being reused. The site falls outside the impact area of the mine.	Weakness Some of the modern structures are indifferent. Some of the farm infrastructure cannot be reused but needs to be retained. Employees, contractors and other visitors must be informed of the heritage value of the site.
Opportunities The farm and existing buildings can be used as a residence and/or environmental centre.	Threats The unsympathetic placement of modern buildings and infrastructure can impact negatively on the historical structures and setting.

Management requirement:

It is recommended that the Kapsteval complex be declared a Provincial Heritage Site according to Provincial Heritage Regulations and that an area of at least 50 hectares surrounding the farmyard is excluded from any future mining operations. It is strongly recommended that this farmyard ought to be retained as an environmental centre for the Kolomela mine that can both serve as a base for farm management and all other environmental functions required by law. It is recommended that the existing cemetery be fenced and retained in its present condition.

It is also recommended that Mr Bredenkamp, the former owner of Kapsteval, should be interviewed and the family history recorded.

11 Heritage Sensitivity

Due to the scale and extent of the Kolomela property it was not feasible to survey the entire site. This is further compounded by the fact that the site is an operational mine with diverse access and other restrictions such as blast zones. In addition the impact areas on the property are well defined (see attached maps). From a heritage perspective the impact areas were prioritised for surveying and other areas and features were recorded through a combination of techniques. In following a risk adverse and cautionary approach to the management heritage resources a composite site-sensitivity map was developed. The composite site sensitivity map provides a spatial framework for heritage management of the entire mine property. The sensitivity map illustrates the location of all existing heritage resources, with appropriate buffers, and also highlights areas that have a high probability to contain heritage resources.

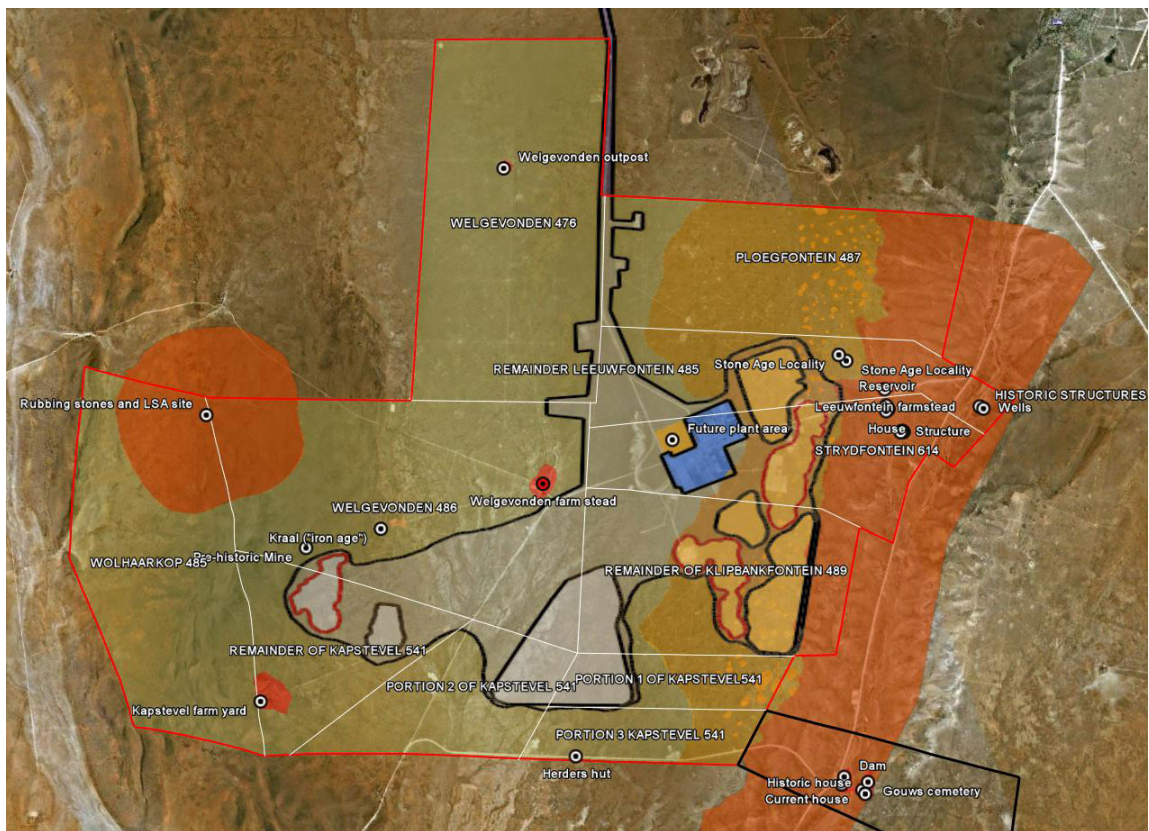


Figure 6: Heritage Sensitivity Map: Red = High sensitivity areas, Bright Orange = Medium-High sensitivity areas, Ochre = Medium sensitivity, Yellow = Low sensitivity areas.

High sensitivity areas: Areas with important heritage resources or sites sensitive to disturbance.

Medium - high sensitivity areas: Areas with localised heritage resources or sites sensitive to disturbance.

Medium - sensitivity areas: Areas with a high probability of containing localised heritage resources or sites sensitive to disturbance.

Low sensitivity areas: Areas with low to no sensitivity. Although no archaeological deposits or heritage resources were observed here during the surveys the possibility exist that resources can be uncovered during the construction and operational phase of the development.

12 General Heritage Management

12.1 General awareness

Heritage awareness must be included in the required site **induction** for all employees, contractors and visitors to the subject properties. This will ensure that the general level of heritage awareness is raised and that there is compliance with the Act.

The following sections of the South African Heritage Resources Act, 1999 (Act 25 of 1999) must be highlighted to each visitor, contractor and employee or any other person acting on the sites or immediate surrounds:

In term of the South African Heritage Resources Act,1999(Act 25 of 1999) the following applies:

Structures

34. (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Archaeology, palaeontology and meteorites

35.(4) No person may, without a permit issued by the responsible heritage resources authority—

- (e) *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (f) *destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (g) *trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*
- (h) *bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

Burial grounds and graves

36.(3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

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

12.2 General Heritage Management pointers:

- All actions on the property will be subject to the provisions of the South African Heritage Resources Act (Act 25 of 1999) and any transgressions of the Act will make the transgressor liable in terms of the Act.
- Archaeological deposits can occur below ground level. Should any archaeological artefacts or skeletal material be revealed in the area during construction activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* National Heritage Resources Act (NHRA) (Act No. 25 of 1999, Section 36(6)).
- Prior to the commencement of any work or action that will impact or affect a heritage resource the relevant authorization must be obtained from the South African Heritage Resources Agency.
- Where there is uncertainty with regard to the status of a heritage resource, object, place or artefact, or any legislative or other policy issue, the South African Heritage Resources Agency can be contacted for clarity:

South African Heritage Resources Agency
P.O. Box 2771
CAPE TOWN
8000
Tel: **(021) 465 2198**
Fax: **(021) 465 5789**
Email: **info@sahra.org.za**

13 Specific Actions

Each heritage site and associated resources will require specific management and maintenance actions. Ultimately these will depend on the final or end use of the specific site in future. The purpose of the specific management actions in this section is to define the broad framework for the development, management and maintenance of the resources. This section of the Heritage Management Plan is dynamic and needs to be updated from time to time as the management of each site is refined.

13.1 Stone Age deposits:

The following Heritage Management Actions are required:

- To protect the integrity of the heritage resources it is recommended that access and disturbance of these localities be limited.
- Where mining or any other activity will impact on one of these sites a Phase 2 Assessment must be commissioned and a destruction permit obtained from the relevant heritage agency
- Once authorization for the proposed interventions has been obtained the project can enter into the detail design and construction phase.
- Based on the Master Plan and end use, detailed management and maintenance guidelines can be developed as a refinement of this Heritage Management Plan.

13.2 Wolhaarkop Later Stone Age site and rubbing stones

The following Heritage Management Actions are required:

- To protect the integrity of the heritage resources it is recommended that access and disturbance to the 2km buffer around the site be restricted.
- No infrastructural encroachment will be allowed into the buffer zone.
- The site and associated buffer must be clearly demarcated.
- The site must be inspected and monitored from time to time.

13.3 Pre-historic mine

The following Heritage Management Actions are required:

- To protect the integrity of the heritage resources it is recommended that access and disturbance to the 400m buffer around the site be restricted.
- A phase 2 assessment of the site is recommended
- No infrastructural encroachment will be allowed into the buffer zone.
- The site and associated buffer must be clearly demarcated.
- The site must be inspected and monitored from time to time.

13.4 Farmsteads and other reusable buildings (Leeuwfontein, Kapstevl, Welgevonden, Kapjes Kareeboom, Herders dwelling)

The following Heritage Management Actions are required:

- The Mining Company in consultation with the heritage professional must take a decision on the future use of each of the sites.
- A detailed restoration plan for the building and surrounding landscape must be developed by a suitably qualified team of professionals (minimum a professional archaeologist specialising in restoration of historic buildings and a registered professional architect specialising in restoration).
- The guidelines and principles of the Burra Charter shall inform the restoration plan.
- The proposed restoration plan together with supporting documentation and permit applications must be submitted to the relevant heritage authority for authorization.
- Once authorization for the proposed interventions has been obtained the project can enter into a detail design and construction phase.

- Based on the restoration plan and end use, detailed management and maintenance guidelines must be developed as a refinement of this Heritage Management Plan.

13.5 Other historical structures.

The following Heritage Management Actions are required:

- All other historical features must be demarcated and conserved as is.

13.6 Graves and cemeteries.

The following Heritage Management Actions are required:

- In light of the fact that none of the cemeteries or graveyards are directly impacted upon by the proposed developments it is suggested that these be retained and conserved as is.
- All cemeteries must be demarcated, cleaned and fenced

14 Heritage Management Structure

The heritage resources associated with the Farms Wolhaarkop 485, Welgevonden 476, Welgevonden 486, Portions 1-3 and the remainder of the farm Kapsteviel 541, Ploegfontein 487, the remainder of the farm Leeuwfontein 489, Strydfontein 514, the remainder of the farm Klipbankfontein (collectively referred to as the Kolomela property) must be managed, restored, developed and maintained as part of the proposed mining development.

Within the operational structure of the mining company the responsibility for the management and maintenance of heritage resources must be allocated to a suitably qualified person. Usually the Environmental Management Office of the mine takes responsibility for the on-going management and monitoring of the heritage resources or appoints a suitably qualified person to do so.

All management and maintenance that impact upon or may result in an impact on the identified heritage resources must be in line with the Act (Act No. 25 of 1999) and this Heritage Management Plan (or any further extension and refinement thereof).

This Heritage Management Plan must be used as a framework or be used as a basis for all actions and decisions related to heritage management. The office tasked with heritage must:

- Establish a working group or committee to deal with heritage management, known as the Heritage Committee (HC).
- The HC must meet at least once every 6 months but preferably 3 monthly to discuss matters related to heritage.
- Keep minutes of all meetings and decisions related to heritage management.

- Keep records of all impacts, maintenance, operational or any other actions related to the heritage resources.
- Consult with a heritage specialist or the South African Heritage Resource Agency on matters that fall outside the scope of this management plan or any matter that requires clarification and/or amendment.
- Submit an annual report related to heritage actions with the Provincial Heritage Authority.
- Ensure that all administration and actions of the Committee are in line with the stipulations of the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000).
- Be the primary supervisory body and decision making authority to ensure the day to day upkeep and maintenance of the resources.
- Ensure that the day to day maintenance and management of the sites by employees, contractors or any other agents is in accordance with the Act.

15 Heritage Management Framework

All maintenance and management actions on the Kolomela property will be subject to the relevant legislation applicable to the specific action.

Without limiting the generality of this statement above special attention needs to be paid to the following legislation:

- National Heritage Resources Act, 1999 (Act No. 25 of 1999)
- National Environmental Management Act, 1998 (Act No. 107 of 1998)

Potentially any of the normal day to day farming and mining activities can have a negative impact on the heritage resources associated with the specific land parcels. To facilitate a practical yet risk-cautious management guideline the land parcel has been divided into the following sensitivity areas (see Figure 6):

15.1 S Site Management Matrix

Area / zone	Primary function	Management actions and restrictions	Monitoring
High sensitivity	- Protection of sensitive features / deposits susceptible to damage - Also functions as buffer zones to protect areas of very high sensitivity	- Access to these areas must be restricted - Existing infrastructure must be maintained in a sustainable and sensitive manner - No future infrastructural development will be allowed on these areas - Any future development in this zone will be subject to a development plan approved by SAHRA - Any other action such as maintenance and rehabilitation must be done in consultation with the relevant specialists	- These areas must be inspected annually by a suitably qualified specialist who must report on and make recommendations with regard to the management of the individual sites
Medium – High Sensitivity	- Areas that have confirmed localised heritage resources and the potential to contain heritage resources - Also functions as buffer zones to protect areas of very high sensitivity	- Access to these areas must be limited - Existing infrastructure must be maintained in a sustainable and sensitive manner - No future infrastructural development will be allowed on these areas - Any future tourism development in this zone will be subject to a development plan approved by SAHRA - Any other action such as rehabilitation must be done in consultation with the relevant specialists - Ecological veld management will be encouraged	- These areas must be inspected annually by a suitably qualified specialist who must report on and make recommendations with regard to the management of the individual sites
Medium sensitivity	- Areas with a high probability of having sensitive deposits or features	- Access to these areas are not limited - Existing infrastructure must be maintained in a sustainable and sensitive manner - Future infrastructural development will not be allowed on these areas.	- Mine Environmental Management Office Discretion
Low sensitivity	- Areas with no or very little probability of containing archaeological material	- Should any archaeological deposits be located in these areas the normal process as prescribed in the act must be followed	- Mine Environmental Management Office Discretion

This site management matrix is intended to provide a broad list of the required management actions that will be required for the management of the site and is not intended to be all encompassing. The HMC will amend this list from time to time as is deemed necessary.

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