

Phase I Heritage Impact Assessment (including a Palaeontological Desktop Assessment) for a Mining Right Application for Bishop Mine on Portion 1 and the Remainder of the Farm Bishop No 671 near Glosam in the Tsantsabane Local Municipality, Northern Cape Province

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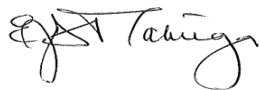
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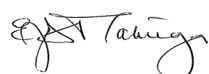
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AHSA (Pty) Ltd is an independent consultancy: I hereby declare that I have no interest, be it business, financial, personal or other vested interest in the undertaking of the proposed activity, other than remuneration for work performed in terms the National Heritage Resources Act (No 25 of 1999).

DISCLAIMER

All possible care was taken to identify and document heritage resources during the survey in accordance with best practices in archaeology and heritage management. However, it is always possible that some hidden or subterranean sites are overlooked during a survey. AHSA will not be held liable for such oversights and additional costs thereof.



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EXECUTIVE SUMMARY

1. This report contains the results of a Heritage Impact Assessment (HIA) study conducted in support of mining right application at Bishop Mine on the farm Bishop No 671 near Glosam in the Tsantsabane Local Municipality, Northern Cape Province.
2. Mine dumps, discard stockpile and other waste represent an evolving mining landscape occupying a large portion of the property. In archaeological terms this area is considered as disturbed and no old relics can be expected to be found in their original context. Nevertheless it is a cultural landscape of old and new discard stockpiles and mining waste in which the different patinas of the waste heaps captures the timeline of mining in the area. But in terms of parameters used at the present time to denote cultural significance, there is no outstanding heritage significance in the mine dumps.
3. *Stone Age*
No Stone Age artefacts were found in patches of undisturbed ground examined.
4. *The Iron Age*
No sites or relics dating to the Iron Age were recorded.
5. *Burial grounds*
There is burial ground on Bishop Mine holding c. 24 graves. A rectangular steel palisade has been erected around the graves, which provides adequate insurance from possible inadvertent encroachment. No historical information was provided about the graves.
6. Interestingly at Kitso Mine, 6 km north of Bishop Mine on the same manganese ridge, there is a large burial ground holding more than 400 graves. In a book published in 1983, A. Hocking writes that South African Manganese (Ltd) operated a mine on the ridge from the mid-1930s until it was closed in the 1950s. The mine employed a labour force of which according to records 600 succumbed to a mystery fever in the 1930s, which was later diagnosed as relapsing fever. It is tempting to speculate that those buried Bishop were possibly victims of the mysterious ailment.

7. Ranking of Findings¹

3. GRADE	RANKING	SIGNIFICANCE	NO OF SITES
1a	National	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources	0
1b		Burial grounds and graves. Public concern about the sanctity of graves	1 (burial ground)
2	Provincial	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 2 heritage resources	0
3A	Local	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 3A heritage resources	0
3B	Local	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources	0
3C	Local	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources	0
		TOTAL	1

8. Recommendations and conclusions

The proposed mining activities can go ahead in light of the low probability of occurrence of heritage resources above and below the surface due to a long history of surface mining. The burial ground is sufficiently protected. Steel fencing around the graves is clearly visible and it is not likely that machinery will inadvertently encroach into the burial ground. As a standard precaution in the event of other heritage resources being discovered in future phases of the project, the Provincial Heritage Resources Authority or SAHRA must be alerted immediately and an archaeologist or heritage expert called to attend.

¹ Winter S and & N. Baumann. 2005. Guidelines for involving Heritage Specialists in EIA processes. Western Cape Government, p19.

ABBREVIATIONS

EIA	Environmental Impact Assessment
HIA	Heritage Impact Assessment
LSA	Late Stone Age
LIA	Later Iron Age
PHRA	Provincial Heritage Resources Authority
MSA	Middle Stone Age
NHRA	National Heritage Resources Act
SAHRA	South African Heritage Resources Agency

DEFINITIONS

Archaeological material: remains older than 100 years, resulting from human activities left as evidence of their presence, which are in the form of structure, artefacts, food remains and other traces such as rock paintings or engravings, burials, fireplaces etc.

Artefact: Any movable object that has been used modified or manufactured by humans.

Catalogue: An inventory or register of artefacts and / or sites.

Conservation: All the processes of looking after a site or place including maintenance, preservation, restoration, reconstruction and adaptation.

Cultural Heritage Resources: refers to physical cultural properties such as archaeological sites, palaeontological sites, historic and prehistoric places, buildings, structures and material remains, cultural sites such as places of rituals, burial sites or graves and their associated materials, geological or natural features of cultural importance or scientific significance. These include intangible resources such as religious practices, ritual ceremonies, oral histories, memories, indigenous knowledge.

Cultural landscape: a stretch of land that reflects “the combined works of nature and man” and demonstrates “the evolution of human society and settlement over time, under the influence of the physical constraints and / or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external”.²

Cultural Resources Management (CRM): the conservation of cultural heritage resources, management and sustainable utilization for present and future generations.

Cultural Significance: is the aesthetic, historical, scientific and social value for past, present and future generations.

² This definition is taken from current terminology as listed on the World Heritage Convention website, URL: <http://whc.unesco.org/en/culturallandscape/#1> accessed 17 March 2016.

Early Iron Age: refers to cultural remains dating to the first millennium AD associated with the introduction of metallurgy and agriculture.

Early Stone Age: a long and broad period of stone tool cultures with chronology ranging from around 3 million years ago up to the transition to the Middle Stone Age around 250 000 years ago.

Excavation: a method in which archaeological materials are extracted from the ground, which involves systematic recovery of archaeological remains and their context by removing soil and any other material covering them.

Historic material: means remains resulting from human activities, which are younger than 100 years and no longer in use; that include artefacts, human remains and artificial features and structures.

Historical: means belonging to the past, but often specifically the more recent past, and often used to refer to the period beginning with the appearance of written texts.

Intangible heritage: something of cultural value that is not primarily expressed in material form e.g. rituals, knowledge systems, oral traditions or memories, transmitted between people and within communities.

In situ material: means material culture and surrounding deposits in their original location and context, for instance archaeological remains that have not been disturbed.

Later Iron Age: The period from the beginning of the 2nd millennium AD marked by the emergence of complex state society and long-distance trade contacts.

Late Stone Age: The period from \pm 30 000 years ago up until the introduction of metals and farming technology around 2000 years ago, but overlapping with the Iron Age in many areas up until the historical period.

Middle Stone Age: a period of stone tool cultures with complex chronologies marked by a shift towards lighter, more mobile toolkit, following the Early Stone Age and preceding the Late Stone Age; the transition from the Early Stone Age was a long process rather than a specific event, and the Middle Stone Age is considered to have begun around 250 000 years ago, seeing the emergence of anatomically modern humans from about 150 000 years ago, and lasting until around 30 000 years ago.

Monuments: architectural works, buildings, sites, sculpture, elements, structures, inscriptions or cave dwellings of an archaeological nature, which are outstanding from the point of view of history, art and science.

Place: means site, area, building or other work, group of buildings or other works, together with pertinent contents, surroundings and historical and archaeological deposits.

Preservation: means the protecting and maintaining of the fabric of a place in its existing state and retarding deterioration or change, and may include stabilization where necessary.

Rock Art: various patterned practices of placing markings on rock surfaces, ranging in Southern Africa from engravings to finger paintings to brush-painted imagery.

Sherds: ceramic fragments.

Significance grading: Grading of sites or artefacts according to their historical, cultural or scientific value.

Site: a spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

Site Recording Template: a standard document format for site recording.

1. INTRODUCTION

PMG Mining requested a Heritage Impact Assessment (HIA) study for a mining right application for Bishop Mine located near Glosam on the west side of the R325 Rd from Postmasburg to Kathu in the Tsantsabane Local Municipality, Northern Cape Province.

1.1. Nature of Proposed Development

Shallow manganese ore deposits located primarily on the hills and ridges on the property will be mined using conventional opencast methods (drilling-blasting-load-haul) will be used, which requires heavy earth-moving equipment. Vegetation cover will be cleared where it is necessary and top soil stripped. Excavation will proceed with solid rocks blasted using explosives. The mine will primarily make use of an existing road network created by previous mining activities, but where necessary additional roads will be created. A crushing and screening plant will be erected on site.

1.2. Location and Physical setting

Bishop Mine is located on the farm Bishop 671 on the west side of the R325 from Postmasburg to Kathu in the Tsantsabane Local Municipality, Northern Cape Province (Figure 1). A north-south ridge trending north from Kathu through Glosam to Postmasburg hosts the manganese ore body which has been extracted with some breaks for nearly a century. This has created a modern mining landscape of old and new discard stockpiles and mining waste. The different patina of the waste heaps captures the timeline of mining in the area spanning nearly 100 years. Nothing of the evolving mining landscape has been identified as heritage worthy of protection, while at the same time no old archaeological stratigraphy can be expected to have survived the large scale surface excavations. There are unspoilt patches of vegetation in the central and northern areas of the mine. These areas are occupied by impenetrable black thorn bushes (Swarthaak) (*Acacia mellifera subsp. Detinens*) which constrained walking surveys (Figures 2-6).

This region forms the wetter margin of the Kalahari Desert and as one moves west from the manganese ridges vegetation changes from dense black thorn to a subtropical savanna biome of grass and trees thriving on Kalahari sands. On a large scale, this area is on the western margin of the Ghaap Plateau, a vast elevated plain rising the Vaal-Orange River valleys in the southeast to an altitude of c. 1300m AMSL and straddling the Northwest and Northern Cape Provinces.

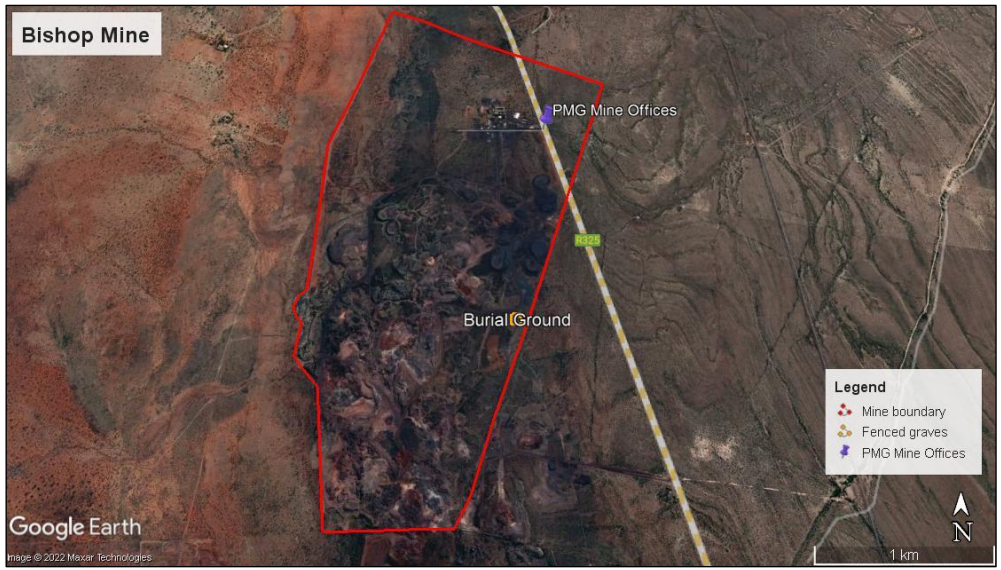


Figure 1: Google Earth map shows the location of Bishop Mine and the extent of the footprint of the mining activities



Figure 2: In a central part of the property, a mine discard heap in the background and a patch of undisturbed vegetation with black thorn cover, which render foot surveys difficult



Figure 3: Thick thorn bush cover in the background; in the foreground manganese ore clasts can be seen while the hard patches are exposures of dolomite



Figure 4: Old mine discard stockpile on which now grows; in the foreground secondary vegetation growing on areas which were mined in the past



Figure 5: More evidence of mining activity in the past can be seen in the north-western part of the property



Figure 6: An area in the northern part of the property which appears to be unspoilt. Here this is a fairly dense cover of black thorn which constrains walking surveys

2. LEGAL FRAMEWORK

The principal law on the management of heritage resources is the National Heritage Resources Act (No 25 / 1999) (MHRA). The following sections are of important reference with regard to Heritage Impact Assessments:

2.1. Protection of buildings and structures

Section 34 of NHRA is a precautionary statutory provision to protect all buildings at least 60 years old in case it is found that they are worth retaining as landmarks of cultural heritage significance. It reads as follows:

(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.

2.2. Prescription of heritage impact assessments

Heritage Impact Assessments are prescribed when the scale of a development proposal crosses thresholds as set out in Section 38 of the National Heritage Resources Act (No 25 of 1999) as follows:

38. (1) any person who intends to undertake a development categorised as—

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site—

(i) exceeding 5 000m² in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m² in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

2.2. Graves and burial grounds

Section 36 of the NHRA provides for the protection of certain graves and burial grounds. Graves are generally classified under the following categories:

- Graves younger than 60 years;
- Graves older than 60 years, but younger than 100 years;
- Graves older than 100 years; and
- Graves of victims of conflict
- Graves of individuals of royal descent

- Graves that have been specified as important by the Ministers of Arts and Culture.

This study is mindful of public sensibilities about the sanctity of graves and burial grounds whether they are protected by the law or not.

2.3. The National Environmental Management Act (No 107 of 1998)

This act states that a survey and evaluation of cultural resources must be done in areas where development projects that will affect the environment will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made. Environmental management is a much broader undertaking to cater for cultural and social needs of people. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

2.4. The Burra Charter on Conservation of Places of Cultural Significance

Generic principles and standards for the protection of heritage resources in South Africa are drawn from international charters and conventions. In particular South Africa has adopted the **ICOMOS Australia Charter for the Conservation of Places of Cultural Significance (the Burra Charter 1999)** as a benchmark for best practice in heritage management.

3. APPROACH AND METHODOLOGY

3.1. Literature Survey

A literature survey was undertaken to provide background information on the area of study as it relates to its geography, archaeological and heritage sensitivity. Much has been written about the archaeology of the region of Glosam and Kathu available in academic articles and on SAHRIS. Archaeological findings around Kathu Pan and investigations ongoing at Kathu Townlands have been given spotlight.³

³ Walker, S J H., M. Chazan & D. Morris 2013. Kathu Pan: Location and Significance: A report requested by SAHRA for the purpose of nomination Found at: https://www.academia.edu/7773969/Kathu_Pan_Location_and_Significance_A_report_requested_by_SAHRA_for_the_purpose_of_nomination

Much has been written about the burial ground at Kitso Mine holding which holds more than 400 graves (Beaumont 2008, Pelsler & Van Vollenhoven 2009, Kruger 2017) (Lat: 28° 2'21.74"S; Long: 23° 1'53.45"E). Some graves were accidentally disturbed by an excavator in 2017).

Van Vollenhoven A.C. 2018. *A Report on a Cultural Heritage Impact Assessment for the Bishop Mine, close to Kathu, Northern Cape Province*. Vollenhoven reported a large burial ground containing at least 24 individual graves (page 3). He also observed to a large extent the modern mining landscape in which little of the precolonial archaeological footprint can be expected to have survived.

Kruger, N. 2017. 2017. *Heritage Memo and Site Management Procedures for an Exposed Burial site on the Farm Lohattha 673, Siyanda District Municipality, Northern Cape Province*. This report was prepared in mitigation of the inadvertent disturbance of some graves at Kitso Mine 6 km north of Bishop Mine.

3.2. Ground Survey

On 19 May 2021 a ground survey was undertaken combined with windscreen observations. See below a map of the track log (Figure 7).



Figure 7: Map of the track log

3.3. Limitations

Grass cover limited ground visibility in patches of land that appear to be unspoilt including those where it had regenerated after mining activities. The presence of black thorn is a major constraint to foot surveys.

4. ARCHAEOLOGICAL AND HISTORICAL CONTEXT

An outline of the cultural sequence in South Africa provides context for identification of heritage resources in the area of study. The sequence spans nearly 4.4 million years beginning with the appearance of Hominids. The major epochs are presented in the following Table

4.1. Cultural Sequence Summary

PERIOD	EPOCH	ASSOCIATED CULTURAL GROUPS	TYPICAL MATERIAL EXPRESSIONS
Early Stone Age 2.5m – 250 000 YCE	Pleistocene	Early Hominids: <i>Australopithecines</i> <i>Homo habilis</i> <i>Homo erectus</i>	Typically large stone tools such as hand axes, choppers and cleavers.
Middle Stone Age 250 000 – 25 000 YCE	Pleistocene	First <i>Homo sapiens</i> species	Typically smaller stone tools such as scrapers, blades and points.
Late Stone Age 20 000 BC – present	Pleistocene / Holocene	<i>Homo sapiens</i> including San people	Typically small to minute stone tools such as arrow heads, points and bladelets.
Early Iron Age / Early Farmer Period c300 – 900 AD (or earlier)	Holocene	Iron Age Farmers	Typically distinct ceramics, bead ware, iron objects, grinding stones.
Later Iron Age 900ADff	Holocene	Iron Age Farmers, emergence of complex state systems	Typically distinct ceramics, evidence of long distance trade and contacts
(ii) Mapungubwe (K2)	1350AD		Metals including gold, long distance exchanges
(ii) Historical period	Nguni / Sotho/Venda people	Iron Age Farmers	Mfecance / Difaqane
(iii) Colonial period	19 th Century	European settlers / farmers / missionaries/ industrialisation	Buildings, Missions, Mines, metals, glass, ceramics

4.2. Appearance of Hominids

Hominid or proto-humans appeared in South Africa more than 3 million years ago. These were primate species which are the immediate ancestors of man. Hominid sites and their fossil remains are largely confined to dolomite caves on the highveld in Gauteng, Limpopo and Northwest Provinces.⁴

To my knowledge the nearest hominid fossil site is at Taung near Vryburg (180 km to the east). This site is inscribed on the UNESCO World Heritage Site in a serial nomination with the Sterkfontein (Krugersdorp) and Makapans Valley (Mokopane). The preservation of hominid may be a function of geology and in the South African context these are almost always found in association with limestone deposits.

4.3. The Stone Age

The Stone Age dates back more than 1 million years, and is seen as the beginning of more definitive features of the cultural sequence divided into three epochs, the Early, Middle and Late Stone Ages. Stone and bone implements manifest the technology of the time and fall into distinct typologies indicating chronological development. Material evidence of human activities has been found in caves, rock-shelters and riverside sites, and very rarely seen in open country. The Late Stone Age is also associated with the execution of paintings mostly in rock shelters and caves.

4.3.1. *The Early Stone Age [1.4 million – 100 000 yrs BP]*

The Early Stone Age marks the earliest appearance of stone artefacts about 1.4 million years ago. The pear-shaped hand-axe, cleavers and cores are archetypal artefacts (Deacon & Deacon, 1999). These tools, which have been called Acheulean after a site in France, were probably used to cut up large animals such as elephants, rhinoceros and hippopotamus. Acheulean artefacts are usually found near sites where they were manufactured and thus in close proximity to the raw material or at butchering sites. The early hunters are classified as hominids or proto-humans, meaning that they had not evolved to the present human form. Significant occurrences of ESA artefacts have been observed in around Kathu Pan north of the town and Olifanshoek.

4.3.2. *Middle Stone Age (MSA) [200 000 yrs – 30 000 yrs BP]*

The Middle Stone Age (MSA) appeared c. 200 000 years ago, and is marked by the introduction of a new tool kit which included prepared cores, parallel-sided blades and triangular points hafted to make

⁴ Deacon, J. and N. Lancaster. 1986. *Later Quaternary Palaeo-environments of Southern Africa*. Oxford: Oxford University Press.

spears. By then humans had become skilful hunters, especially of large grazers such as wildebeest, hartebeest and eland. It is also believed that by then, humans had evolved significantly to become anatomically modern. Caves were used for shelter suggesting permanent or semi-permanent settlement. Furthermore there is archaeological evidence from some of the caves indicating that people had mastered the art of making fire. These were two remarkable steps in human cultural advancement.⁵ The occupation stratigraphy at the Kathu Pan Sites and Kathu Townlands continued into the Middle Stone Age.

4.3.3. *Later Stone Age (LSA)[40 000 yrs to ca 2000 yrs BP]*

By the beginning of the LSA, humans had evolved to *Homo sapiens*, which refer to the modern physical form and thinking capabilities. Several behavioural traits are exhibited, such as rock art and purposeful burials with ornaments, became a regular practice. The practitioners of rock art are definitely the ancestors of the San and sites abound in the whole of Southern Africa. LSA technology is characterised by microlithic scrapers and segments made from very fine-grained rock. Spear hunting continued, but LSA people also hunted small game with bows and poisoned arrows. Because of poor preservation, open sites become of less value compared to rock shelters.

Stone Age tools of the Middle to Late Stone Age continuum are prevalent in the broader region stretching from the banks of the Vaal and Orange in the south to Kuruman and Hotazel in the north. Rock paintings have been documented at Inglesby Farm near Olifantshoek.⁶ A picture is gradually crystalizing of the extent of rock engravings on dolomite rocks and in some cases glaciated surfaces along the Vaal and Orange River Valleys. There is evidence of ancient mining of specularite around Postmasburg worked by the Khoisan and Tswana from the Middle Stone Age through to the Iron Age.⁷

4.4. **The Iron Age Culture [ca. 2000 years BP]**

The Iron Age culture superseded the Stone Age at around 2000 years ago. The introduction of farming, metal technology and pottery appears to happen at the same time. A sudden synchronized appearance in South Africa and in the whole region of Eastern and Southern Africa has been thought to represent a rapid movement of people which has been associated with speakers of Bantu

⁵ Deacon, J & H. Deacon. 1999. *Human Beginnings in South Africa*. Cape Town: David Philip.

⁶ Dreyer, Corbus. 2014. Ibid: 11

⁷ <http://www.southafrica.org.za/south-africa-travel-postmasburg.html>.

Beaumont, Peter. 2007. Phase 1 Heritage Impact Assessment Report on the Farm Portions Potentially Affected by a Proposed Direct Rail Link between the Sishen South Mine near Postmasburg and the Sishen - Saldanha line, Siyanda District Municipality, Northern Cape Province.

languages.⁸ The migration theory is a subject of ongoing debate. A gradual “expansion” model is an alternative more plausible hypothesis. In the southern part of the farmers associated with the Iron Age may have coexisted and intermingled with Khoisan communities for a long time, the cultural encounters producing the hybrid communities and languages found in the region today.

Two migration streams converge in South Africa, one originating in eastern Africa which has been called the *Urewe-Kwale Tradition* (or the eastern stream) and another from the west, spreading through Zambia and Angola, which he termed the *Kalundu Tradition* (or western stream). Although no sites in the western parts of country have been explicitly linked with the Early Iron Age, one cannot rule out possible transhumant pastoralism / seasonal hunting camps in the western regions from early in the Iron Age.

Metal working was a new technology not possessed by the Stone Age hunters. As mixed farmers, iron-using peoples practiced agriculture and kept domestic animals such as cattle, sheep, goat and chicken amongst others. However, there is increasing evidence that sheep and cattle might have been in the area with the Khoikhoi much earlier than the introduction of metals.

4.4.1. *The Later Iron Age*

The Later Iron Age is marked by the presence of extensive stonewalled settlements found in a large swathe of territory across Limpopo, Mpumalanga, Northwest, Northern Cape and Free State Provinces. The stone wall remnants of the Tlhaping capital at Dithakong northeast of Kuruman and c. 100 km from Kathu are significant.⁹

4.5. **Precolonial historical context**

Kathu falls within the historical land of the Tswana, specifically the Tlhaping (east of Kuruman stretching to Vaal and Orange River valleys) and the Tlaro in the region of Kuruman, Kathu and Olifantshoek. The interface between the Later Iron Age with the Tswana is a grey area in terms of the existing state of research. For now we can postulate that they are descendants of LIA farming communities.

⁸ Phillipson, D. W. 2005. *African Archaeology*. Cambridge: University of Cambridge Press: 249.

⁹ De Jong, R.C. 2010. Heritage impact assessment report: proposed manganese and iron ore mining right application in respect of the remainder of the farm Paling 434, Hay Registration Division, Northern Cape. Unpublished report prepared for Kai Batla Minerals Industry Consultants. Pretoria: Cultmatrix, p

4.6. The Mfecane/Difaqane Upheavals

In the 1820s Tshaka's unification wars on the eastern seaboard, what became Zululand, set in motion a series of migrations, north, south and west onto the South African highveld. The Ngwane under Matiwane wreaked havoc with several groups on the southern highveld. The Ndebele of Mzilikazi penetrated the central highveld causing displacement of Sotho and Tswana groups living there. As the security situation deteriorated, Sotho segments under Sebitoane and Mantatisi drifted out of the Plateau settling on the upper Zambezi flood plains, while Mzilikazi was also dislodged after bloody fights with the Afrikaners in 1837, taking with him assimilated elements of the Sotho and Tswana.¹⁰

The Battle of Dithakong in 1823 was one of the manifestations of this period of strife in this part of South Africa called Difaqane. It was fought between Manthatisi's Sotho migrants and the Batlhaping with the help of the Griqua. The battle on 23 June 1823 was documented by the Missionary, Robert Moffat. At the behest of Rev Moffat the Griqua sent a relief force of 200 horsemen led by Rev Waterboer in Griquatown, and the Griqua leaders (Barend Barends from Danielskuil and Adam Kok II from Campbell).

4.7. The European Contact Period

4.7.1. Missionaries and explorers

At the beginning of the 19th century the German explorer Martin Henrich Carl Lichtenstein travelled through the general vicinity of the study area. Crossing the Orange River near present-day Prieska, Lichtenstein's party visited present-day Daniëlskuil, and by June 1805 they were at Blinkklip (Postmasburg), famous for its specularite mines. The party trekked further north and reached the Kuruman River in the middle of Tswana communities.

The explorer William John Burchell travelled through the area in 1811 followed by John Campbell in 1813. During 1813 John Campbell of the London Missionary Society also visited the general vicinity of the study area. He passed through Postmasburg on the way to Kuruman (Fourie 2018: 28).

The London Missionary Society established at Kuruman in 1817 under the tutelage of Robert Moffat. The spot was chosen for its abundant water supply issuing from a spring. The remains of the old mission are treasured heritage, the bicentenary of which was marked on 2017 (Figure 9). Moffat

¹⁰ Muller, C. F. J. 1986. *Five Hundred Years: A History of South Africa*. 5th Edition. Pretoria: Rasmussen, R. K. 1977. *Mzilikazi of the Ndebele. African Historical Biographies*. London: Heinemann

struck a cordial relationship with Mzilikazi in spite of the notorious reputation the Matabele had earned as marauders. The culmination of this friendship was the establishment years later of a mission station at Inyathi (near present day Bulawayo, Zimbabwe) in Mzilikazi's new territory north of the Limpopo River. Moffat's Mission at Kuruman was also the passage of the famous Scottish Doctor and explorer, David Livingstone, credited with the discovery of the Victoria Falls in 1855. The missionary episode is seen as a prelude to expansion of the colonial frontier from the Cape.

4.7.2. *Colonial occupation and African resistance*

One of the important triggers of European interest in the area was the discovery of diamonds at Kimberley in 1867. With increasing mining activity at Kimberley, the British annexed Griqualand West in 1871, its northern boundary set 30 km south of present day Olifantshoek.

In 1878 there was a revolt against the British in Griqualand West which spread beyond into the Olifantshoek area. The British sent a force under Sir Charles Warren to put down the revolt. Dithakong was subjected to bombardment by Charles Warren.¹¹

Between 1881 and 1883 the Tlalo and Tlhaping mounted resistance against Boer encroachment. In the ensuing fights the Boers prevailed leading to the establishment of the Republics of Stellaland and Goosen. These state systems were however short-lived as the British annexed the two Republics two years later and declared Bechuanaland (land of the Tswana) as a crown land. In 1895 Bechuanaland was incorporated into the Cape Colony.

4.7.3. *The Langberg Rebellion 1896-7*

Mounting anger among the Tlhaping and Tlalo over the confiscation of land, confinement to reserves and continued demands for land at the expense of the reserves led to rebellion. The outbreak of the bovine disease, rinderpest in many parts of southern Africa provided the ignition. Demand by the British that the Tlalo put down their horses to contain the epidemic was interpreted as sabotage in preparation for war.¹² Chief Toto Makgolokwe of the Tlalo led his people into war and made a good account by defeating British Forces in one of the encounters which lasted 8 months.¹³ (Figure 8). British war graves on a farm west of Olifantshoek are a tourist attraction. The farms

¹¹ Dithakong. Found at: <https://en.wikipedia.org/wiki/Dithakong>

¹² Information provided by Mr Rean Van De Luytgaarden, Owner of Elephant Rock Inn, Olifantshoek.

¹³ http://en.wikipedia.org/wiki/Toto_Makgolokwe

Langkloof, Inglesby, Lukin, Gamayana, Pudahush, Toto, Luka and Hopkins west of Olifantshoek are named after major role players in the Langberg Rebellion.

The British forces eventually captured Toto Makgolokwe and his son Phemelo together with King (kgosi) Galeshewe who had sheltered in the area. Toto and his son were taken prisoners to Robben Island; Toto died there.

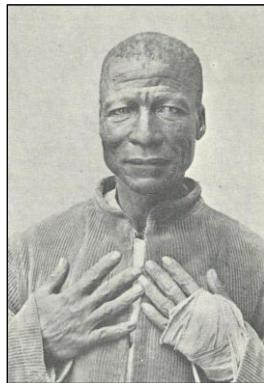


Figure 8: Toto, leader of the Tlalo (from Fourie, 2018: 34).

4.8. Modern towns

Kathu is a modern town was founded in the early 1970s following the establishment of the Sishen Iron Ore mine which has become the largest open cast iron mining in the world. The Camel Thorn tree (*Acacia erioloba*) has become the symbol of Kathu from which the name of the town is said to have been derived, which means, town under trees. The Kathu camel thorn forest is c. 4000 ha is a habitat for the gregarious weaver birds which mount their nests on the trees.

Postmasburg was originally named Blinkklip by the Griquas and started off with a Church for communion of the Boer farmers in the 19th century. A town was proclaimed in 1892 and renamed Postmasburg in honour of Dirk Postma, the first minister of the church. It was stopover for traffic from Namibia via Upington to Kimberley. Diamonds were discovered in 1918 followed by manganese which has become the economic lifeblood of the region.¹⁴

The above is the framework for identifying heritage resources in the area.

4.9. History of mining in the area between Postmasburg and Kathu

¹⁴ History of Postmasburg. Found at: <https://tsantsabane.gov.za/about-us/history/#:~:text=Postmasburg%20was%20originally%20named%20Blinkklip,first%20minister%20of%20the%20church.>

Manganese was discovered in the ridges between Postmasburg and Kathu in 1886, interestingly at the same times that gold rush started on the Witwatersrand. Prospecting for manganese on the ridges between Kathu and Postmasburg started in 1922, although mining only commenced in the mid-1930s in response to rising demand for the mineral used in the strengthening of steel. The Gloucester Manganese Mines (Postmasburg) Limited was the first company to operate in the area from the mid 1920s. In the same decade the South African Manganese Limited was also established. In 1927 the South African Geological Survey commissioned an extensive geological survey for manganese undertaken by Dr. Louis Nel. This was intended to boost interest in the metal and to attract investment. Subsequently a number of corporate entities were formed with an object to exploit the ores. The Great Depression which set in in 1929 triggered a slump in demand. A book published by Hocking in 1983 has been referenced in respect of the large burial ground at Kitso Mine on the farm Lohatlha 673 6 km north of Bishop Mine. The manganese ore deposits on Lohatlha were mined by South African Manganese, until it was closed in the 1950s. It is more than likely that the mining activities of SA Manganese extended to the farm Bishop The mine employed a labour force of which according to records 600 succumbed to a and the epidemic and the many graves (Hoking 1983, Vollenhoven 2018, De Jong 2010).

5. FINDINGS OF THE SURVEY

Mine dumps, discard stockpile and other mine waste are considered as disturbed and no old archaeological provenances can be expected to be found in a large portion of the farm affected by old and current mining activities. What we see is a modern evolving mining landscape of old and new discard stockpiles and mining waste. The different patina of the waste heaps captures the timeline of mining in the area. However in terms of parameters used at the present time to denote significance, this landscape has no outstanding heritage significance.

5.1. Stone Age

No Stone Age artefacts were found in patches of undisturbed ground examined.

5.2. The Iron Age

No sites or relics dating to the Iron Age were recorded.

5.3. Burial grounds

There is a burial ground on Bishop Mine holding c. 24 graves. A rectangular steel palisade has been erected around the graves which provides adequate insurance from possible inadvertent encroachment. No historical information was provided about the graves. Interestingly at Kitso Mine 6 km north of Bishop Mine on the same manganese ridge, there is large burial ground with more than 400 graves. In a book published in 1983, A. Hocking writes that South African Manganese (Ltd) operated a mine on the ridge from the mid-1930s until it was closed in the 1950s. The mine employed a labour force of which according to records 600 succumbed to a mystery fever in the 1930s, which was later diagnosed as relapsing fever. There is a possible connection between the epidemic and the many graves at Bishop Mine (Figures 9-10).



Figure 9: The burial ground is enclosed in a steel palisade



Figure 10: Google Earth Map shows the location of the burial ground at Bishop Mine

5.4. Ranking of Findings¹⁵

6. GRADE	RANKING	SIGNIFICANCE	NO OF SITES
1a	National	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources	0
1b		Burial grounds and graves. Public concern about the sanctity of graves	1 (burial ground)
2	Provincial	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 2 heritage resources	0
3A	Local	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 3A heritage resources	0
3B	Local	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources	0
3C	Local	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources	0
		TOTAL	1

5.5. Assessment of Impacts using the Statutory Framework

Section 38 of the NHRA

Section 38 (Subsection 3) of the National Heritage Resources Act also provides a schedule of tasks to be undertaken in an HIA process:

Section 38(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected

A burial ground containing 24 graves is known. It is fenced and protected.

¹⁵ Winter S and & N. Baumann. 2005. Guidelines for involving Heritage Specialists in EIA processes. Western Cape Government, p19.

(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7

Public sensibilities about the sanctity of graves is resected. They are protected under Section 36 of the NHRA.

(c) An assessment of the impact of the development on such heritage resources

The graves are enclosed by a steel palisade. They are therefore sufficiently protected from accidental encroachment. The proposed mining activities will not affect the graves.

(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development

Manganese an alloying agent used in the strengthening of steel. It is in high demand in South Africa and China and other developed countries. The proposed expansion of extraction of the ore will provide employment, one of the critical national development goals, as the country grapples with high unemployment rate (>35%).

(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources

Consultation of local communities was undertaken within the ambit of the broader Environmental Impact Assessment process.

(f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives

N/A

(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.

In the event of the discovery of other heritage resources during site preparation, the Provincial Heritage Resources Authority or SAHRA will be informed immediately and an archaeologist or heritage expert called to attend.

5.6. Risk Assessment of the findings

EVALUATION CRITERIA	RISK ASSESSMENT
Description of potential impact	Negative impacts range from partial to total destruction of surface and under-surface movable/immovable relics.
Nature of Impact	Negative impacts can both be direct or indirect.
Legal Requirements	Sections 34, 35, 36, 38 of National Heritage Resources Act No. 25 (1999)
Stage/Phase	Site preparation
Extent of Impact	Ground clearing, mechanical extraction of the ore, movement of equipment, opening of roads may result in damage and destruction of archaeological resources above and below the surface not seen during the survey.
Duration of Impact	Any accidental destruction of surface or subsurface relics is not reversible, but can be mitigated.
Intensity	Uncertain.
Probability of occurrence	Medium.
Confidence of assessment	High.
Level of significance of impacts before mitigation	High.
Mitigation measures	No further action is required. If archaeological or other heritage relics are found during the construction phase, heritage authorities will be advised immediately and a heritage specialist will be called to attend.
Level of significance of impacts after mitigation	Low.
Cumulative Impacts	None.
Comments or Discussion	None.

6. RECOMMENDATIONS AND CONCLUSIONS

The proposed mining activities can go ahead in light of the low probability of occurrence of heritage resource above and below the surface. The burial ground is sufficiently protected. The steel fencing is clearly visible and it is not likely that machinery will inadvertently encroach in the burial ground. As a standard precaution in the event of other heritage resources being discovered in future phases

of the project, the Provincial Heritage Resources Authority or SAHRA must be alerted immediately and an archaeologist or heritage expert called to attend.

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