

Prepared for:

LEEUEWKOP PLATINUM MINE

SLR CONSULTING (AFRICA) (LTD)

**A PHASE I HERITAGE IMPACT ASSESSMENT FOR AFPLATS'S
LEEUEWKOP PLATINUM MINE PROJECT ON LEEUEWKOP 408JQ
NEAR MADIBENG IN THE NORTH-WEST PROVINCE WITH AN
ADDENDUM CONTAINING KNOWN HERITAGE SITES ON
WOLWEKRAAL 408JQ AND KAREEPOORT 407JQ**

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June 2012

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EXECUTIVE SUMMARY

A Phase I Heritage Impact Assessment (HIA) study as required in terms of Section 38 of the National Heritage Resources Act (No 25 of 1999) was done for Leeuwkop Platinum Mine on the farms Leeuwkop 408JQ, Kareepoort 407JQ and Wolwekraal 408JQ near Madibeng in the North-West Province (also note addendum).

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

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (Box 1) do occur in the Leeuwkop Project Area and, if so, to determine the nature, the extent and the significance of these remains.
- To determine whether such remains will be affected by the proposed Leeuwkop Project and, if so, to determine appropriate mitigation (management) measures for those heritage resources which may be affected by the project.

The Phase I HIA study for the Leeuwkop Project Area revealed some of the heritage resources which are outlined in Section 3 of the National heritage Resources Act (No 25 of 1999). These heritage resources consist of stone walled sites and stone structures which date from the Late Iron Age as well as remains from the recent past.

The stone walled sites and structures as well as the remains from the recent past were geo-referenced and mapped (Figures 3, Tables 1 & 2). The significance of these heritage resources is indicated as well as mitigation measures should any of these remains be affected by the Leeuwkop Project.

The significance of the heritage resources

It is highly unlikely that the Leeuwkop Project will affect any of the stone walled sites, stone structures and remains from the recent past near the Leeuwkop Project Area. Never the less the significance of the heritage resources is indicated as well as mitigation measures should these remains be affected by the Leeuwkop Project.

The significance of the heritage resources is determined according to the following:

- Stipulations derived from the NHRA (No 25 of 1999).
- Generic rating criteria used in all impact assessment studies.
- Rating criteria specifically devised for heritage resources.

The Late Iron Age stone walled sites

Stipulations from the NHRA (No 25 of 1999)

Late Iron Age sites date from the Late Iron Age and/or the Historical Period and therefore qualify as archaeological remains. All remains older than sixty years are protected by Section 36 and Section 38 of the NHRA (No 25 of 1999).

Generic rating criteria

The significance of the stone walled sites can be described as medium to high.

Heritage rating criteria

The significance of the stone walled sites can be described as medium to high when considering the following heritage criteria:

- The sites represent a cultural landscape. Each and every site is unique as it contributes to the significance of the cultural landscape which served as a cultural and historical unit representing the life-ways, customs and cultures of the pre-historical and historical Tswana and other indigenous groups who lived the Bankeveld three to four hundred years ago.
- The investigation of the cultural landscape can contribute to a better understanding of the region's pre-history and history as the landscape fall within the sphere of the influence of the Bakwena Bamogale and the Bakwena Bamôgôpa clans who were subjugated by Mazilikazi's Ndebele during 1827 to 1832.

The remains from the recent past

Stipulations from the NHRA (No 25 of 1999)

The remains from the recent past do not qualify as archaeological or historical remains. These remains are not older than sixty years and are not protected by the NHRA (No 25 of 1999).

Generic rating criteria

The significance of the remains from the recent past can be described as low.

Heritage rating criteria

The remains from the recent past do not qualify as heritage remains.

Mitigating the heritage resources

Late Iron Age sites

The Late Iron Age and historical remains have to be investigated by an archaeologist who is accredited with the Association for Southern African Professional Archaeologists (ASAPA) before these remains can be destroyed. The archaeologist has to obtain a permit from the South African Heritage Resources Authority (SAHRA) in order to conduct a Phase II archaeological investigation of these sites. The Phase II investigation will entail the documentation and excavation of these remains the results of which must be published in a report to SAHRA. After the Phase II investigation has been completed the archaeologist or developer must obtain a demolition permit from SAHRA which would authorise the demolishing of these remains.

Remains from the recent past

The remains from the recent past have low significance and have been adequately recorded and documented in this report and needs no further mitigation measures. These remains can be destroyed without the necessary authorisation from the SAHRA.

General

It is possible that this Phase I HIA study may have missed heritage resources in the Leeuwkop Project Area as heritage sites may occur in clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

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

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1 INTRODUCTION

The Leeuwkop Platinum Mine (Afplats) intends to establish a waste rock dump in association with the Leeuwkop Platinum Mine Project near Segwaelane and Madibeng in the North-West Province. This report therefore contains the results of a Phase I Heritage Impact Assessment (HIA) study which was done for Afplats's proposed new waste rock dump and associated infrastructure.

The North-West Province of South Africa has a rich heritage comprised of remains dating from the pre-historic and from the historical (or colonial) periods of South Africa. Pre-historic and historical remains in the North-West Province present a record of the heritage of most groups living in South Africa today. Various types and ranges of heritage resources that qualify as part of South Africa's 'national estate' (outlined in Section 3 of the National Heritage Resources Act, Act No 25 of 1999) occur in this region (see Box 1).

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

The National Heritage Resources Act (Act 25 of 1999, Section 3) outlines the following types and ranges of heritage resources that qualify as part of the national estate:

- a. Places, buildings structures and equipment of cultural significance;
- b. Places to which oral traditions are attached or which are associated with living heritage;
- c. Historical settlements and townscapes;
- d. Landscapes and natural features of cultural significance;
- e. Geological sites of scientific or cultural importance;
- f. Archaeological and palaeontological sites;
- g. Graves and burial grounds including-
 - i. Ancestral graves;
 - ii. Royal graves and graves of traditional leaders;
 - iii. Graves of victims of conflict;
 - iv. Graves of individuals designated by the Minister by notice in the Gazette;
 - v. Historical graves and cemeteries; and
 - vi. Other human remains which are not covered in terms of the Human Tissue Act (Act 65 of 1983);
- h. Sites of significance relating to the history of slavery in South Africa;
- i. Moveable objects, including -
 - i. Objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, material, meteorites and rare geological specimens;
 - ii. Objects to which oral traditions are attached or which are associated with living heritage;
 - iii. Ethnographic art and objects;
 - iv. Military objects;
 - v. Objects of decorative or fine art;
 - vi. Objects of scientific or technological interest; and
 - vii. Books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act (Act 43 of 1996).

The National Heritage Resources Act (Act 25 of 1999, Sec 3) also distinguishes nine criteria for a place and/or object to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following:

- 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/or
- i. Its significance relating to the history of slavery in South Africa.

2 AIMS OF THIS REPORT

Afplats intends to develop a waste rock dump and associated infrastructure at the Leeuwkop Platinum Mine near Segwaelane and Madibeng in the North-West Province. This mining development project (referred to as the Leeuwkop Project) may have an influence on any of the types and ranges of heritage resources which are outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) as some of these resources may occur in the area where the proposed development activities will take place (referred to as the Leeuwkop Project Area).

Therefore, SLR Consulting (Africa) (Ltd) the environmental company responsible for compiling the Environmental Impact Assessment (EIA) for the Leeuwkop Project, commissioned the author to conduct a Phase I Heritage Impact Assessment (HIA) study for the Leeuwkop Project Area.

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

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (Box 1) do occur in the Leeuwkop Project Area and, if so, to determine the nature, the extent and the significance of these remains.
- To determine whether such remains will be affected by the proposed Leeuwkop Project and, if so, to determine appropriate mitigation (management) measures for those heritage resources which may be affected by the Impala Project.

3 METHODOLOGY

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

- Considering and evaluating data collected during earlier surveys in the Madibeng District (see 'Select Bibliography', Part 9).
- Surveying literature relating to the pre-historical and historical context of the Leeuwkop Project Area.
- Surveying with a vehicle and on foot the proposed Leeuwkop Project Area.
- Synthesising the information obtained from the activities outlined above in this report.

3.1 Earlier data

A number of Phase I HIA studies were done in the larger project area during the past two decades the results of which were published in several reports (see 'Select Bibliography', Part 9). Some of the data with regard to the presence of heritage sites in the larger region that were collected during these earlier surveys were utilized in this report.

3.2 Literature survey and desktop study

Literature relating to the pre-historical and the historical unfolding of the Leeuwkop Project Area was reviewed. This review focused primarily on the local Bakwena Bamôgôpa and Bakwena Bamogale (Bapô) who occupied the territory between the Magaliesberg and the series of norite hills close to Segwaelane and Madibeng from as early as AD1600. This area was also occupied by the Voortrekkers from AD1830 onwards whilst the origins and development of the platinum mining industry is briefly reviewed.

The literature research is important as it contextualises the pre-historical and historical background of the region which again contributes to a better understanding of the identity and meaning of heritage sites which occur in and near the Leeuwkop

Project Area (see Part 5, 'Contextualising the Leeuwkop Project Area' and Part 9, 'Select Bibliography').

In addition, the Leeuwkop Project Area was also studied by means of maps on which the proposed Leeuwkop Project will be developed (2527CA Bapong; 1: 50 000 topographical map & 2526 Pretoria; 1:250 000 map).

The desktop study also involved consulting heritage data banks. Databases kept and maintained at institutions such as the North-West Provincial Heritage Resources Agency (NW PHRA) in Mafikeng and the Archaeological Data Recording Centre at the National Flagship Institute (Museum Africa) in Pretoria were consulted to determine whether any heritage resources had been identified during earlier archaeological surveys in the Leeuwkop Project Area.

3.3 Fieldwork

The Leeuwkop Project Area was surveyed with a vehicle whilst the area where the rock waste dump will be established was also surveyed by means of a pedestrian survey. The aim with the fieldwork was to geo-reference, describe and photograph heritage resources in these critical areas.

3.4 Mapping heritage resources

Late Iron Age stone walled sites that were identified were geo-referenced using a GPS instrument and the sites were thereafter mapped in Arch View (Figure 3, Tables 1 & 2).

3.5 Significance rating of heritage resources

The desktop and field information were critically examined in order to assess the potential direct and indirect impacts of the project on identified heritage resources. This analysis was undertaken using the generic significance rating criteria which are common to all studies being done for environmental impact assessment studies as well as more specific criteria for determining site significance of heritage resources.

3.5.1 Generic significance rating criteria

Extent (Spatial Scale) of the Impact

The extent of the impact refers to its spatial scale (not its magnitude)

Rating	Descriptor
Site	Limited to within Leeuwkop Project Area or local surrounds
Local	Madibeng Local Municipality
District	Bojanala Platinum District
Provincial	North-West
National	South Africa
International	Global outside of South Africa

Duration and Reversibility

Duration refer to the period of time over which the impact occurs

Rating	Descriptor
Temporary	Can be reversed
Short term	0 – 5 years
Medium term	5 – 15 years
Long term	> 15 years, where the impact will cease after the operational life of the shafts, either because of natural processes or human intervention
Permanent	Irreversible

Intensity (or Magnitude)

Intensity refers to whether the impact is destructive or benign.

Rating	Descriptor
Low	Where the impact affects the environment in such a way that the natural, social and cultural functions are not affected
Medium	Where the environment is altered but the natural, social and cultural functions and processes continue, albeit in a modified way
High	Where the natural, social or cultural functions are altered to the extent that they will temporarily or permanently cease

Probability

Probability refers to the likelihood of the impact occurring.

Rating	Descriptor
Low	Where the likelihood of the impact occurring is very low, either because of design or because of historical experience of such impacts
Medium	Where there is a moderate likelihood of the impact occurring
High	Where it is very likely that the impact will occur
Definite	Where the impact will occur, without question

Significance

The significance of impacts is determined through a synthesis of the previous ratings, including spatial scale, duration, intensity and probability.

Rating	Descriptor
Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Social, cultural and economic activities of communities can continue unchanged. In the case of beneficial impacts, alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time-consuming. Impacts with low significance ratings will not influence the decision about the project
Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly easily possible. Social, cultural and economic activities of communities are changed, but can be continued (albeit in a different form). Modification of the project design or alternative action may be required. In the case of beneficial impacts, other means of achieving this benefit are about equal in time, cost and effort. Impacts with medium significance ratings will have an influence on the decision unless mitigated.
High	Impact is of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time-consuming or some combination of these. Social, cultural and economic activities of communities are disrupted to such an extent

	that these come to a halt. In the case of beneficial impacts, the impact is of a substantial order within the bounds of impacts that could occur. Impact with high significance ratings will have an influence on the decision regardless of any mitigation.
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3.5.2 Heritage significance rating criteria

The significance of an impact upon heritage resources is determined by means of the same ratings as those outlined above, namely: Extent (Spatial Scale), Duration and Reversibility, Intensity (Magnitude) and Probability (Certainty). These ratings are not repeated as they are very similar to those outlined above. The significance of the impact is also determined by means of the interrelationship between these ratings.

The fact that heritage resources are graded in three levels in the National Heritage Resources Act (No 25 of 1999) (NHRA, No 25 of 1999) also has a bearing on the significance of heritage resources. Therefore, the significance rating for heritage resources [as endorsed by the South African Heritage Resources Agency (SAHRA) and approved by the Association for Southern African Professional Archaeologists (ASAPA)] for the Southern African Development Community (SADC) region is outlined in Table 1 (below).

	GRADE (according to the) NHRA	Significance (based on) Spatial extent Duration Intensity Probability	Recommended mitigation
National	Grade 1		Conservation/ National site nomination
Provincial	Grade 2		Conservation/ Provincial site nomination
Local	Grade 3A	HIGH	Conservation,

			mitigation not advised
Local	Grade 3B	HIGH	Mitigation (Preserve part of site)
General Protected A	Grade 4A	High/Medium	Mitigation before destruction
General Protected A	Grade 4B	Medium	Recording before destruction
General Protected A	Grade 4C	Low	Destruction

Table 1: Grading of heritage resources according to the NHRA (No 25 of 1999) and significance rating for heritage resources.

The significance rating for heritage resources outlined in Table 1 also makes provision for recommendations for mitigation measures.

3.6 Limitations of the study

It is possible that this Phase I HIA study may have missed heritage resources in the Leeuwkop Project Area as heritage sites may occur in clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

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

3.7 Some remarks on terminology

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

- **Conservation:** The act of maintaining all or part of a resource (whether renewable or non-renewable) in its present condition in order to provide for its continued or future use. Conservation includes sustainable use, protection, maintenance, rehabilitation, restoration and enhancement of the natural and cultural environment.
- **Cultural resource management:** A process that consists of a range of interventions and provides a framework for informed and value-based decision-making. It integrates professional, technical and administrative functions and interventions that impact on cultural resources. Activities include planning, policy development, monitoring and assessment, auditing, implementation, maintenance, communication, and many others. All these activities are (or will be) based on sound research.
- **Cultural resources:** A broad, generic term covering any physical, natural and spiritual properties and features adapted, used and created by humans in the past and present. Cultural resources are the result of continuing human cultural activity and embody a range of community values and meanings. These resources are non-renewable and finite. Cultural resources include traditional systems of cultural practice, belief or social interaction. They can be, but are not necessarily identified with defined locations.
- **Heritage resources:** The various natural and cultural assets that collectively form the heritage. These assets are also known as cultural and natural resources. Heritage resources (cultural resources) include all human-made phenomena and intangible products that are the result of the human mind. Natural, technological or industrial features may also be part of heritage resources, as places that have made an outstanding contribution to the cultures, traditions and lifestyles of the people or groups of people of South Africa.

- In-Situ Conservation: The conservation and maintenance of ecosystems, natural habitats and cultural resources in their natural and original surroundings.
- Iron Age: Refers to the last two millennia and 'Early Iron Age' to the first thousand years AD. 'Late Iron Age' refers to the period between the 16th century and the 19th century and can therefore include the Historical Period.
- Maintenance: Keeping something in good health or repair.
- Pre-historical: Refers to the time before any historical documents were written or any written language developed in a particular area or region of the world. The historical period and historical remains refer, for the Leeuwkop Project Area, to the first appearance or use of 'modern' Western writing brought to the Eastern Highveld by the first Colonists who settled here from the 1840's onwards.
- Preservation: Conservation activities that consolidate and maintain the existing form, material and integrity of a cultural resource.
- Recent past: Refers to the 20th century. Remains from this period are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains. Some of these remains, however, may be close to sixty years of age and may, in the near future, qualify as heritage resources.
- Protected area: A geographically defined area designated and managed to achieve specific conservation objectives. Protected areas are dedicated primarily to the protection and enjoyment of natural or cultural heritage, to the maintenance of biodiversity, and to the maintenance of life-support systems.
- Reconstruction: Re-erecting a structure on its original site using original components.

- Replication: The act or process of reproducing by new construction the exact form and detail of a vanished building, structure, object, or a part thereof, as it appeared at a specific period.
- Restoration: Returning the existing fabric of a place to a known earlier state by removing additions or by reassembling existing components.
- Stone Age: Refers to the prehistoric past, although Late Stone Age peoples lived in South Africa well into the Historical Period. The Stone Age is divided into an Earlier Stone Age (3 million years to 150 000 thousand years ago) the Middle Stone Age (150 000 years to 40 000 years ago) and the Late Stone Age (40 000 years to 300 years ago).
- Sustainability: The ability of an activity to continue indefinitely, at current and projected levels, without depleting social, financial, physical and other resources required to produce the expected benefits.
- Translocation: Dismantling a structure and re-erecting it on a new site using original components.
- Leeuwkop Project Area: refers to the area (footprint) where the developer wants to focus its development activities (refer to plan).
- Phase I studies refer to surveys using various sources of data in order to establish the presence of all possible types and ranges of heritage resources in any given Leeuwkop Project Area (excluding paleontological remains as these studies are done by registered and accredited palaeontologists).
- Phase II studies include in-depth cultural heritage studies such as archaeological mapping, excavating and sometimes laboratory work. Phase II work may include the documenting of rock art, engraving or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavations of archaeological sites; the exhumation of human remains and the

relocation of graveyards, etc. Phase II work involve permitting processes, require the input of different specialists and the co-operation and approval of SAHRA.

4 THE LEEUWKOP PROJECT AREA

4.1 Location

The Leeuwkop Platinum Mine is located on the farm Leeuwkraal 408JQ (also known as Mmamogaleskraal) west of the Tshopya mountains and north of Segwaelane near the national road that runs to Sun City. The Leeuwkop Project Area comprises of a piece of land which is situated to the north of the Leeuwkop Platinum Mine Shaft Complex where the mine intends to establish a waste rock dump. The proposed new waste rock dump which is horse–shoe shaped is located on a relatively flat stretch of land directly to the west of the Gata-La-Tshwene mountain range which extends to the north and north-west in order to incorporate the Manyawenyawe and Ga Pitswe mountains. The Leeuwkop Project Area falls within the jurisdiction of the Madibeng Local Municipality in the Bojanala Platinum District in the North-West Province (2527CA Bapong; 1: 50 000 topographical map & 2526 Pretoria; 1:250 000 map) (Figures 1-3).



Figure 1- The Leeuwkop Project Area on Leeuwkraal 408JQ near Segwalane is located in the Bankeveld which is characterised by series of norite kopjes with outstretched grass veld in-between. Stone walled settlements dating from the Late Iron Age which are associated with Tswana and Ndebele clans occur near the base lines of most of these kopjes (above).

4.2 Within a cultural landscape

The Leeuwkop Project Area is part of a cultural landscape which is associated with historical Tswana communities such as the Bakwena Bamogale (Bapô) and the Bakwena Bamôgôpa and therefore warrants a brief description to demonstrate its place in South Africa's cultural history (see Part 5, 'Contextualising the Leeuwkop Project Area').



Figure 2- The Leeuwkop Project Area on Leeuwkraal 408JQ where the Leeuwkop Platinum Mine intends to establish a waste rock dump on flat grass veld to the west of the Gata-La-Tshwene mountain range (above).

5 CONTEXTUALISING THE LEEUWKOP PROJECT AREA

The Leeuwkop Project Area is located in the Central Bankeveld in close proximity of the Magaliesberg. This area has high heritage significance in the North-West Province. A broad cultural-historical context of the region is provided in order to gain a better understanding of the heritage character of the Leeuwkop Project Area itself.

5.1 The Central Bankeveld

The Leeuwkop Project Area falls within the Central Bankeveld which is a narrow strip of land which is situated between the northern bushveldt savannah and the centrally situated Highveld. The Central Bankeveld has its own unique heritage character which is dominated by numerous Tswana spheres of influence which are centuries-old and which is characterised by the remains of extensive stone walled settlements in all of the domains that were controlled by various Tswana chiefs whose origins date back to the seventeenth century.

The older grabbo of the Central Bankeveld was penetrated by younger volcanic magma which formed the series and chains of pyramid-shaped norite hills which run from the Pilanesberg in the north-west to Brits in the east. These hills in the Magaliesberg Valley presented a unique eco-zone in which humans and communities flourished from an early period. This area is known for its rich and diverse range of heritage resources.

Stone Age sites are scattered along the Magaliesberg and are also found in caves and in rock shelters in the mountain. Rock engravings are located further towards Maanhaarrand and Rustenburg in the west. The most abundant heritage, however, are those that date from the Late Iron Age and which are associated with the numerous Tswana chiefdoms who occupied this region during the last four centuries. The settlements of these early Tswana chiefdoms are characterised by an impressive and elaborate stone-built tradition. Thousands of stone walled sites were built along the bases of the norite hills between the Pilanesberg and Brits (Madibeng). The most formidable of these chiefdoms were the Kwena Mōgōpa, Kwena Mōgale (Bapō), Bakgatla and Fokeng. Further to the west, closer to Rustenburg was the Fōkeng

chiefdom while several Kgatla spheres of influence emerged at the Pilanesberg in the north and further towards Brits in the east.

The Bapô, a people whose earliest ancestors were descended from the Amambô Nguni from Kwa Zulu/Natal, arrived in the Magaliesberg during the 16th or 17th centuries. One of their capitals was Tlhôgôkgôlô at Wolhuterskop. Several of the chiefs of this clan were known by the name of Môgale, from who the Magaliesberg has taken its name.

Numerous *difaqane* wars were fought during the last quarter of the 18th century and during the first quarter of the 19th century in the Central Bankeveld. These wars led to the displacement of large numbers of Tswana in the Bankeveld. The *difaqane* wars were caused by the Ndebele (Matabele) of Mzilikazi who arrived from the Vaal River region to occupy the Bankeveld in August 1827. The Ndebele destroyed the Kwena Môgôpa, the Kgatla and what had remained of the Bapô after an earlier defeat by the Pedi of Thulare. These wars exacerbated the havoc started earlier in the Bankeveld and gradually became a characteristic feature of historical events in this region during the early 19th century.

The Ndebele established several settlement complexes in the Central Bankeveld from whence they maintained their grip on the indigenous population. Four of these Zulu/Nguni residences (*imisi*) and military kraals (*amakhanda*) have been discovered during the course of archaeological surveys.

Internal strife between the various Tswana chiefdoms also seems to have been on the increase from the latter half of the 18th century onwards. Paternal relatives fought against each other to attain the chieftaincy of the various Tswana chiefdoms. Succession disputes also led to the splintering of the existing chiefdoms into a growing number of independent spheres of influence in the Bankeveld.

Complex causes led to the unfolding of the numerous Tswana chiefdoms and their spheres of influence throughout the Bankeveld during the last decades of the 18th century and during the first decades of the 19th century. These causes were multidimensional and included the ecological potential of the region, the social and

political formation and expansion of different spheres of influence, the establishment of short and long distance trade relations and local and regional wars. These causes and historical events were complex and are not fully recorded in oral traditions or in historical records while archaeological research has only yet begun.

5.2 Brief history of the Bakwena Bamôgôpa

The earliest known place where the Bakwena Bamôgôpa lived around AD1600 was Rathateng, a site located near the junction of the Crocodile River and the Marico River. The first chief of this branch of the Môngôpa was Setlhare who was succeeded by Môngôpa Tskokelele Dimolema who in turn was followed by Modise wa Môngôpa who lived during the middle of the 17th century.

Modise moved from Rathateng to Lokwadi (Zandrivierspoort 747) and from here to the foot of the Phalane mountain during the middle of the 17th century. This mountain was also known as Modise wa Môngôpa. Modise was succeeded by Radiphiri who possibly acted as regent. Sefikile followed Modise but did not live long for his younger brother Ramorola ruled after him as regent for Sefikele's son, Ditswe.

Ditswe Tlowodi succeeded in the first half of the 18th century when the clan lived in the Mabjanamatshwana hills between the Kgowe River (?) and the Legapane (?) River. Ditswe and members of the tribe were killed by the Bakgatla whilst hunting buffalo. His son More inherited his wives.

Ditswe's younger brother Mooketsi succeeded him as regent and handed the chieftainship to More because the rightful successor, Tskoku was still too young to rule. During More's reign which stretched over a long period there was continual fighting with the Bapô and the Bakgatla. More raised Tsoku with his own son, Segwati and provided both with wives.

When Tskoku became old enough to rule More handed him the chief's spear, axe and horn with the chief's ointment at a *pitso*. Tskoku became chief of the Kwena Môngôpa that remained with his uncle Mooketsi. More and his followers settled at Lengwatladi or

Mangwatladi, west of the Pienaars River. Tskoku became known as an arrogant, ruthless and cruel ruler. Many of his followers left him to join the Môngôpa of More.

Due to a dwindling in the number of his followers and for greater safety Tsoku went to live with a Kgatla chief known as Mmusi a Tagane. However, this clan eventually burnt his kraal and made him fled with his regiment, Matshetshela ('the old men') to sought refuge with More's section of the Môngôpa. Here, he was eventually killed by More and Segwati as a result of all his misdeeds.

During the last quarter of the 18th century More returned as chief to Mabjanamatswhana. He fought several wars and was feared by many tribes. He was initially on friendly terms with the Kgatla chief Mmusi but later settled at Kwate (Mmamogaleskraal) at the foot of the hill Thaba ya Morena in order to avoid conflict with Mmusi. During his old age he ruled with his son Segwati.

Around AD1820 a horde consisting of Bakgatla, Bawaduba, Bamoletlane, Bathlako and Baseabe came from the east and inflicted heavy losses on the Môngôpa Hereafter Mzilikazi's Ndebele invaded the country during 1829 to 1837. More fought the Ndebele at Kutata (Silkaatsnek) but suffered heavy losses and eventually succumbed to the Ndebele's attack together with his son Segwati. The Môngôpa now acknowledged Mzilikazi as chief.

Segwati's two sons Motsile and Tedie Mmamogale were now in charge of the remnants of the Môngôpa. Motsile resided at Ramotlotlwe near Soutpan and some Môngôpa went to Makapanstad. The Môngôpa that remained under Mzilikazi were under the leadership of Mogajana.

Motsiele died around AD1834-36. Mmamogale was 60 years old and was recognised as supreme chief of the Mogopa. They lived in peace with the Ndebele until Shaka's (Zulu) *impi* arrived in the Brits area. In the ensuing battle the Zulu defeated the Ndebele and the Môngôpa.

When the Voortrekkers arrived Mmamogale and his followers left for Bechuanaland in 1840/1845. Shortly afterwards in 1868 they returned to Matlhare and soon afterwards

to Makolokwe and Mantabole (Bethanie). Mmamogale probably reached an age of 110 years and died in 1884.

5.3 Brief history of the Bakwena Bamogale (Bapô)

The following is a brief outline of the Bapô's history describing their origins, some of their rulers and division of the Bapô into two tribes. The brief history follows the reigns of some of the most important rulers of the Bapô from AD1760 to AD1900.

The Sotho name Bapô is derived from the Nguni equivalent abaMbô. The tribe originated four generations after the first Ndebele chief, Musi, as a junior branch of the Ndebele of Valtyn. There is uncertainty about the identity of the first chief. He may have been Môgale Monyane. Other spokespersons say it was his son, Lotsane who, however, did not rule but Majaka who acted on his behalf.

The Bapô is derived from regiments of the Ndebele (of Mankopane/Makopane) who participated in a war between two Tswana tribes during c. 1670 to 1720. They were sent to assist the Bakwêna Bamôgôpa and after the war refused to return as they have married Tswana women.

At least five chiefs and regents initially lived at Makolokwe (Wolwekraal) where Moerane rose to prominence. He led the group to Thlôgôkgôlô (Wolhuterskop). During the reign of Moerane (c. 1795 to 1815) the Bapô fought various battles such as the following, namely:

- Against the Bakwena Bamôgôpa over the possession of Bethanië (Mantabole) at Zandfontein east of the Bapô's villages. (The Magôpa was defeated and Sekane More was slain).
- Against the Bafokeng and killed four of chief Sekete's sons. (Hostilities between the Môgôpa and the Bafokeng continued during Moerane's reign).
- During 1817 to 1823 the Pedi under Malekutu (the eldest brother of Sekwati) raided the Bapô. At the time Moerane hide in the cave known as Phato in the Magaliesberg. Although the Bapô withstood the attack Malekutu's Pedi routed the women and children at the Bapô's villages on their return journey while

Masite and most of Moerane's sons at his head wife were killed. His grandson Mogalemogale (born, c. 1810) returned with him. Moerane died in 1821/1822.

Semetsa Botloko acted as regent for the minor Mogalemogale. He fought the Bathlakwana (probably Bataung) of Ramabutsetsa in 1823/1824 at Leeuwkop (Lokwane). After the Bathlakwana events, Botloko formed allies with Sebitwane's Bafokeng (who arrived from Basotholand) and with Ratsebe (who came from Kroonstad [Mokolamu]) as Mzilikazi was on his way to the Magaliesberg area. However, Botloko deserted his allies when he saw Mzilikazi advanced through Mpame Neck. Botloko fled to Trantsekwane where he was killed by his own people (who believed that he killed his brothers to open the way to the chieftaincy).

Moruri, who had brought up Mogalamogale became regent. During this period the Bapô was disorganized and dispersed and the Matabele seized the opportunity to kidnap Mzilikazi. They pierced his ears according to Zulu custom. The Bapô, however, succeeded in freeing Mogalemogale from the Matabele.

In about 1837/38 Mogalamogale became the 12th Bapô chief. He resided on the Mogale River, near the Ngakotse, a tributary of the Crocodile River. Mogale had twelve wives, three of whom he had married before he escaped from the Matabele.

After 1841 some Matabele lead by Gozane appeared again on their way to Zululand. However, they were slain with the aid of the Voortrekkers who maintained relationships with Mogalamogale.

A man called Rautiegabo Moerane told the Boers that Mogalemogale was hiding rifles in a cave. Before the Voortrekkers could take possession of the fire arms they were sent to chief Makapan/Mankopane in Mokopane. Soon afterwards a farmer was shot in Makapan's country and Mogalemogale summoned to appear before Veldkormet Gert Kruger and Hans van Aswegen. He did not obey the summons but fled to the mountains with his sons. His son Moruatona sided with the Voortrekkers against Makopane.

Mogalemogale fled to Basutoland (Lesotho) with many of his followers who went to work on farms in Kroonstad, Heidelberg and Potchefstroom. He was later joined by his wives and successor (son), Moruatona.

After the Senekal and Seqiti wars in Basotuland Mogale returned and bought the farm Boschfontein from a Mr. Orsmond 'because the kraals of his ancestors were situated there'. From 1862 Mogale lived at Boschfontein where he died at the age of 70 or 80 in 1869.

Mogalemogale was succeeded by Frederik Maruatona Mogale (born c. 1840/44). During his rule the Hermansburgse Lutheran Mission Station, Ebenezer, was established in 1874. The Bapô regiments Matlakana and Matsie participated with the ZAR in the Sekhukhune War of 1876. Frederik died about 1880.

George Rangane Mogale now acted on behalf of Darius Mogale until 1893. Darius Mogale became chief in 1893 but soon got into trouble with his people and behaved in such a way that the government deposed of him in 1908. He went to live in Heidelberg with his family and was allowed to return to the tribe in 1940.

The Bapô divided into two tribes as a dispute between Darius and his uncle Diederik Mogale in 1896 led to the departure of a part of the Bapô who went to live at Phorotlane (Bultfontein) near the Pilanesberg.

5.4 Historical Period

The Historical Period is associated with the arrival of the Voortrekkers in the mine rights area and beyond its borders. During the early 19th century travellers, traders and missionaries visited the Rustenburg area where they encountered the numerous devastated Tswana chiefdoms. These visitors moved from the Cape Colony to the far north-west and used the gap between the Magaliesberg and the Pilanesberg as a corridor to enter the Bankeveld. Wagons passed through this corridor on their way to Rustenburg and further to the east. These early visitors left descriptions of the devastation that was caused by Mzilikazi's Ndebele and mentioned that numerous Tswana tribes were displaced from the area.

These early travellers included the traders Robert Schoon and William McLuckie in August 1829. They were soon followed by the missionary Robert Moffat who visited Mzilikazi in an *umuzi* (village) near what is today Pretoria. In June 1835 Charles Bell and other members of Andrew Smith's expedition visited a Ndebele village near Rustenburg which Bell subsequently painted. One year later, in December 1836, Cornwallis Harris also visited the Central Bankeveld where he painted emHlalandlela near Brits. Both these Ndebele village complexes have been identified by means of archaeological research.

The Bankeveld was rich in fauna which attracted the Griqua and the first white hunters to the region. Ivory was plentiful, with herds of elephants roaming the area. Ivory and the skins of the wide variety of fauna were sought after as precious trade commodities. Although the Tswana hunted the fauna of the Bankeveld, they were more renowned as agriculturists and cattle herders than as hunters.

During the first half of the 19th century, Rustenburg, was one of the first colonial towns to be established by Voortrekkers during the first half of the 19th century. Other farms that were settled by the Voortrekkers were Schaapkraal near Marikana. Since the second half of the 19th century, farmers and workers occupied the Rustenburg District (including the Mooinooi, Marikana, Hartebeespoort and Brits areas). Tobacco and citrus farming, together with cattle herding, became a subsistence pattern that has lasted to some extent to this day. Old farm homesteads, agricultural implements and other infrastructure such as tobacco drying sheds still exist on farms in the wider area.

During the Second/Anglo Transvaal Boer War (1899-1902) British blockhouses were built along the ridge of the Magaliesburg, from Pretoria in the east to Rustenburg in the west. Several of these structures are located in Kommandonek, Pampoennek and in Olifantsnek in the Magaliesberg.

5.5 Early platinum mining

The Merensky Reef is part of the crescent-shaped Bushveld Complex that stretches across the central part of South Africa. This Reef is known for its wealth of mineral

resources, generally referred to as the platinum-group metals (PGM's). These two limbs of the Complex are confined to the North-West Province and to the Northern and the Mpumalanga Provinces of South Africa. The eastern limb of the Reef is geologically less well known than the western limb, because mining activities in this part of the Reef have been limited.

The discovery of platinum in South Africa dates back to the late 19th century. In 1892, William Bettel identified osmium-iridium alloy particles in concentrate from the Witwatersrand gold mines. Bettel (1902) and Hall and Humphrey (1908) also recorded the presence of platinum in the chromitite layers of the Bushveld Complex. Wagner (1924) reported the presence of sperrylite in the ore bodies at Vlakfontein near the Pilanesberg. However, none of these discoveries were considered to be of any economic significance. The first deposits that were economically viable, called the Waterberg Platinum, were found by Adolf Erasmus in the Rooiberg fellsites between Nylstroom and Potgietersrust. These deposits did not prove to be significant. Andries Lombaard's discovery of platinum nuggets in the Moopetsi River on the farm Maandagshoek in the Steelpoort area in 1924 can be considered the initial discovery of the Merensky Reef.

During the great platinum boom of 1925 over fifty companies were started in the Union of South Africa to exploit the mineral resources of the Bushveld Complex and the Waterberg district. Oxidized ores were initially taken from the Merensky Reef. When these ores had been exhausted, they were replaced by sulphide ores.

The world's consumption of platinum and its price became extremely depressed by 1930. This led to the collapse of all the mining companies in the 1930's. Many of the companies faded from memory. More prosperous companies absorbed others, while some companies transferred their activities from the Lydenburg District to the more favourably circumstanced Rustenburg district, while retaining their Lydenburg properties. Some companies went bankrupt and suspended their operations which they never resumed.

6 THE PHASE I HERITAGE IMPACT ASSESSMENT

6.1 Types and ranges of heritage resources

The Phase I HIA study for the Leeuwkop Project Area revealed some of the heritage resources which are outlined in Section 3 of the National heritage Resources Act (No 25 of 1999). These heritage resources consist of stone walled sites and stone structures which date from the Late Iron Age as well as remains from the recent past.

The stone walled sites and structures as well as the remains from the recent past were geo-referenced and mapped (Figures 3, Tables 1 & 2). The significance of these heritage resources is indicated as well as mitigation measures should any of these remains be affected by the Leeuwkop Project.

The Phase I heritage survey is briefly discussed whilst the heritage resources are illuminated with photographs.

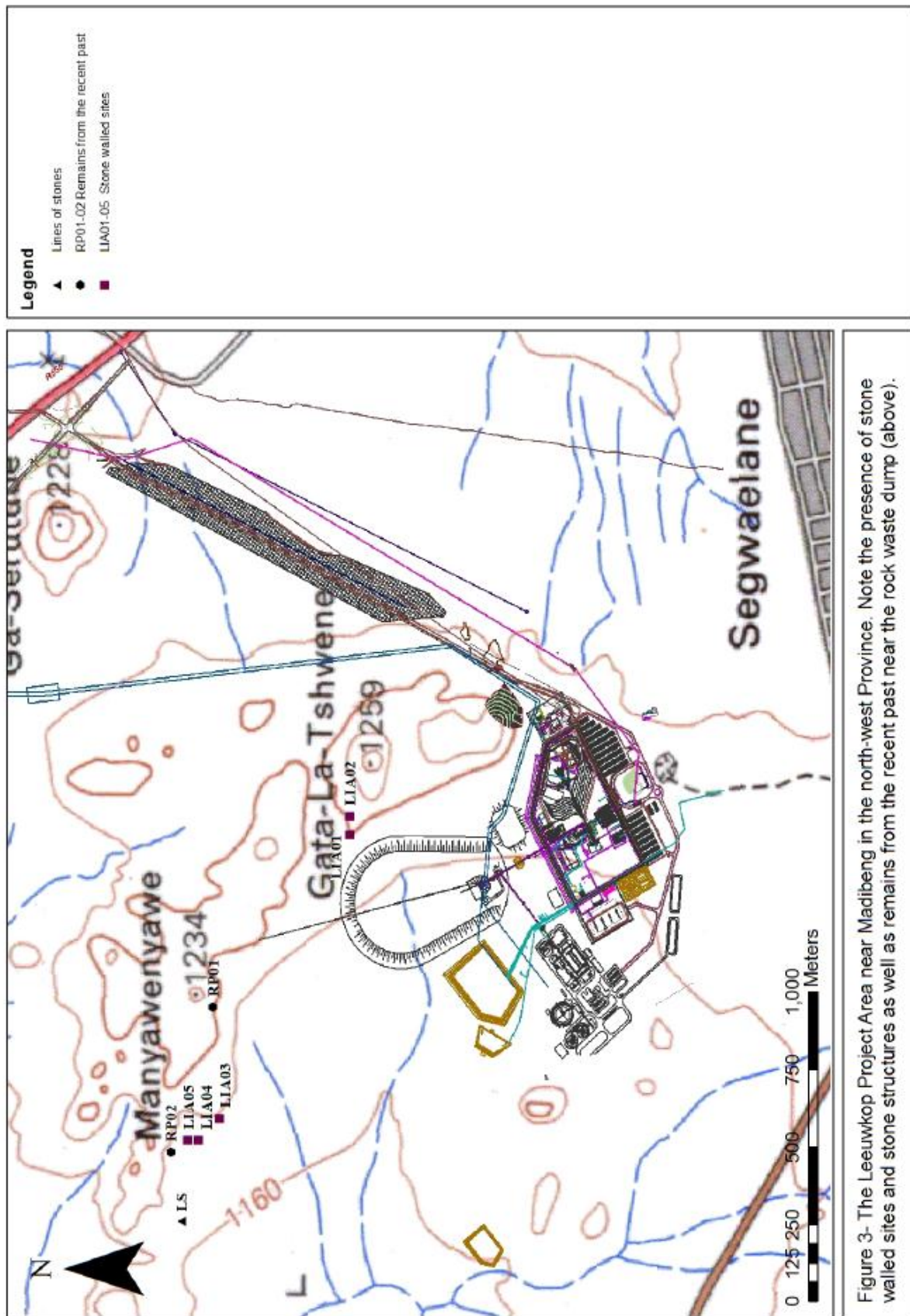


Figure 3- The Leeuwkop Project Area near Madibeng in the north-west Province. Note the presence of stone walled sites and stone structures as well as remains from the recent past near the rock waste dump (above).

6.2 Stone walled sites

Several stone walled sites and isolated stone walls occur along the western base of the Gata-La-Tshwene mountain range. The single walls are part of stone walled sites but usually occur at some distance from the sites and are therefore not directly linked with the stone walled sites (Figure 3, Table 1).

The stone walled sites date from the Late Iron Age (AD1600 to AD1840) and probably was occupied by Bakwena Bamôgôpa and/or Bakwena Bamogale communities.



Figure 4- The outer wall of a stone walled site along the western foot of the Gata-La-Tshwene mountain range near the Leeuwkop Project Area (above).

The settlement style that can be associated with the stone walled sites seems to consist of an outer wall which encloses centrally located enclosures. The outer wall is arched, without any scallops and encloses a number of enclosures against the foot of the mountain range. This style is not directly comparable to the typical Tswana

village (*kgôrô*) and has been investigated by the author on the farm Boschpoort 284JQ near the Boschpoortdam.

The number of settlements is low and merely represents a single cluster whilst the other stone structures that were recorded were also confined to a single line of stones on the exposed surface of a rock.

The western foot of the Gata-La-Tshwene mountain range in the vicinity of the proposed new waster rock dump therefore holds a limited number of stone walled sites along its western foot. This is an anomaly as stone walled sites in this part of the Bankeveld usually occur in high numbers whenever they are found along the base lines of the hills that run across the Bankeveld.



Figure 5- The outer wall and a central enclosure in one of the stone walled sites along the western foot of the Gata-La-Tshwene mountain range (above).



Figure 6- A single line of stones along the surface of a rock near a cluster of stone walled sites along the western foot of the Gata-La-Tshwene mountain range (above).

6.3 Remains from the recent past

At least two occurrences of remains which are associated with the recent past were recorded near the proposed new waste rock dump (Figure 3, Table 2).

These remains mainly comprise of bald spots in the veld which occur near the foot of the Gata-La-Tshwene mountain range. These spots are associated with evidence of slightly raised soil dumps which used to be part of dwellings, scattered stones and a depletion of vegetation.

The remains represent the dwellings that were used by squatters but which now have disintegrated due to the temporary nature of the building material that was used and due to the poor construction of the structures.



Figure 7- Remains from the recent past near one of the foothill in the Gata-La-Tshwene mountain range near the Leeuwkop Project Area (above).

6.4 Heritage resources outside the current mining area

Large numbers of stone walled sites occur outside the current mining area, mainly to the west and to the east of the Gata-La-Tshwene mountain range. These sites and clusters of sites occur along the base lines of most of the kopjes in this region. These stone walled sites are part of a cultural landscape of high significance which will not be directly (physically) affected by the proposed Leeuwkop Project.

Heritage resources known to exist on Wolwekraal 408JQ and Kareepoort 407JQ directly to the east of Leeuwkop 402JQ are briefly described, geo-referenced and mapped in an addendum to this report.

6.5 Tables

Tables outlining the types and ranges of heritage resources recorded in the Leeuwkop Project Area with their coordinates and level of significance are the following:

Stone walled sites	Coordinates	Significance
LIA01	25° 38.761' 27° 35.894' (25 38 45.69s 27 35 53.65e)	Medium-high
LIA02	25° 38.377' 27° 35.880' (25 38 43.94s 27 35 52.60e)	Medium-high
LIA03	25° 38.524' 27° 35.409'	Medium-high
LIA04	25° 38.499' 27° 35.373'	Medium-high
LIA05	25° 38.480' 27° 35.371'	Medium-high
LS. Line of stones	25° 38.474' 27° 35.227'	Medium-high

Table 1- Coordinates for Late Iron Age stone walled sites and stone structures along the western foot of the Gata-La-Tshwene mountain range and their level of significance (above).

Remains from the recent past	Coordinates	Significance
RP01	25° 38.523' 27° 35.592'	Low
RP02	25° 38.470' 27° 35.354'	Low

Table 2- Coordinates for remains from the recent past along the western foot of the Gata-La-Tshwene mountain range and their level of significance (above).

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

7.1 The significance of the heritage resources

It is highly unlikely that the Leeuwkop Project will affect any of the stone walled sites, stone structures and remains from the recent past near the Leeuwkop Project Area. Never the less the significance of the heritage resources is indicated as well as mitigation measures should these remains be affected by the Leeuwkop Project.

The significance of the heritage resources is determined according to the following:

- Stipulations derived from the NHRA (No 25 of 1999).
- Generic rating criteria used in all impact assessment studies.
- Rating criteria specifically devised for heritage resources.

7.1.1 The Late Iron Age sites

Stipulations from the NHRA (No 25 of 1999)

Late Iron Age sites date from the Late Iron Age and/or the Historical Period and therefore qualify as archaeological remains. All remains older than sixty years are protected by Section 36 and Section 38 of the NHRA (No 25 of 1999).

Generic rating criteria

The significance of the stone walled sites can be described as medium to high.

Heritage rating criteria

The significance of the stone walled sites can be described as medium to high when considering the following heritage criteria:

- The sites represent a cultural landscape. Each and every site is unique as it contributes to the significance of the cultural landscape which served as a cultural and historical unit representing the life-ways, customs and cultures of

the pre-historical and historical Tswana and other indigenous groups who lived in the Bankeveld three to four hundred years ago.

- The investigation of the cultural landscape can contribute to a better understanding of the region's pre-history and history as the landscape fall within the sphere of the influence of the Bakwena Bamogale and the Bakwena Bamôgôpa clans who were subjugated by Mazilikazi's Ndebele during 1827 to 1832.

7.1.2 Remains from the recent past

Stipulations from the NHRA (No 25 of 1999)

The remains from the recent past do not qualify as archaeological or historical remains. These remains are not older than sixty years and are not protected by the NHRA (No 25 of 1999).

Generic rating criteria

The significance of the remains from the recent past can be described as low.

Heritage rating criteria

The remains from the recent past do not qualify as heritage remains.

7.2 Mitigating the heritage resources

7.2.1 Late Iron Age sites

The Late Iron Age and historical remains have to be investigated by an archaeologist who is accredited with the Association for Southern African Professional Archaeologists (ASAPA) before these remains can be destroyed. The archaeologist has to obtain a permit from the South African Heritage Resources Authority (SAHRA) in order to conduct a Phase II archaeological investigation of these sites. The Phase II investigation will entail the documentation and excavation of these remains the results of which must be published in a report to SAHRA. After the Phase II investigation has been completed the archaeologist or developer must obtain a

demolition permit from SAHRA which would authorise the demolishing of these remains.

7.2.2 Remains from the recent past

The remains from the recent past have low significance and have been adequately recorded and documented in this report and needs no further mitigation measures. These remains can be destroyed without the necessary authorisation from the SAHRA.

8 CONCLUSION AND RECOMMENDATION

The Phase I HIA study for the Leeuwkop Project Area revealed some of the heritage resources which are outlined in Section 3 of the National heritage Resources Act (No 25 of 1999). These heritage resources consist of stone walled sites and stone structures which date from the Late Iron Age as well as remains from the recent past.

The stone walled sites and structures as well as the remains from the recent past were geo-referenced and mapped (Figures 3, Tables 1 & 2). The significance of these heritage resources is indicated as well as mitigation measures should any of these remains be affected by the Leeuwkop Project.

The significance of the heritage resources

It is highly unlikely that the Leeuwkop Project will affect any of the stone walled sites, stone structures and remains from the recent past near the Leeuwkop Project Area. Never the less the significance of the heritage resources is indicated as well as mitigation measures should these remains be affected by the Leeuwkop Project.

The significance of the heritage resources is determined according to the following:

- Stipulations derived from the NHRA (No 25 of 1999).
- Generic rating criteria used in all impact assessment studies.
- Rating criteria specifically devised for heritage resources.

Late Iron Age sites

Stipulations from the NHRA (No 25 of 1999)

Late Iron Age sites date from the Late Iron Age and/or the Historical Period and therefore qualify as archaeological remains. All remains older than sixty years are protected by Section 36 and Section 38 of the NHRA (No 25 of 1999).

Generic rating criteria

The significance of the stone walled sites can be described as medium to high.

Heritage rating criteria

The significance of the stone walled sites can be described as medium to high when considering the following heritage criteria:

- The sites represent a cultural landscape. Each and every site is unique as it contributes to the significance of the cultural landscape which served as a cultural and historical unit representing the life-ways, customs and cultures of the pre-historical and historical Tswana and other indigenous groups who lived in the Bankeveld three to four hundred years ago.
- The investigation of the cultural landscape can contribute to a better understanding of the region's pre-history and history as the landscape fall within the sphere of the influence of the Bakwena Bamogale and the Bakwena Bamôgôpa clans who were subjugated by Mazilikazi's Ndebele during 1827 to 1832.

Remains from the recent past

Stipulations from the NHRA (No 25 of 1999)

The remains from the recent past do not qualify as archaeological or historical remains. These remains are not older than sixty years and are not protected by the NHRA (No 25 of 1999).

Generic rating criteria

The significance of the remains from the recent past can be described as low.

Heritage rating criteria

The remains from the recent past do not qualify as heritage remains.

Mitigating the heritage resources

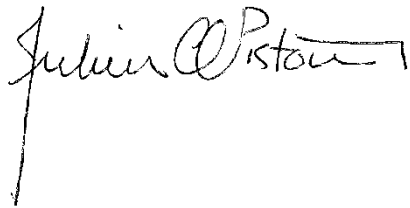
Late Iron Age sites

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Remains from the recent past

The remains from the recent past have low significance and have been adequately recorded and documented in this report and needs no further mitigation measures. These remains can be destroyed without the necessary authorisation from the SAHRA.

A handwritten signature in black ink, reading "Julius CC Pistorius". The signature is written in a cursive style with a long vertical line extending downwards from the end of the name.

Dr Julius CC Pistorius
Archaeologist & Heritage Consultant

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ADDENDUM: HERITAGE SITES ON WOLWEKRAAL 408JQ AND KAREEPOORT 407JQ

Heritage resources known to exist on Wolwekraal 408JQ and Kareepoort 407JQ directly to the east of Leeuwkop402JQ are briefly described, geo-referenced and mapped in this addendum to this Phase I HIA report for the Leeuwkop Platinum Mine Project.

Site LIA06

This possible pre-historical and historical settlement is located along the southern foot of the Ga-Ramadingwana mountain range on Wolwekraal 408JQ. The settlement (Site LIA06) was occupied by Mmamogale one of the most important chiefs of the Bakwena Bamôgôpa, probably from the last quarter of the 18th century to the first half of the 19th century.



Figure 8- The remains of a house constructed with clay bricks within the confines of a *lapa* along the southern base of the Ga-Ramadingwana mountain

range on Wolwekraal 408JQ where *kgosi* Mmamogale of the Bakwena Bamôgôpa's last *motse* (capital) was located.

Mmamogale's village is marked by stone walls with square ground plans as well as possible older stone walled enclosures. The square ground plans indicate that these structures were constructed after AD1850. Many of the dwellings in the site were constructed with clay bricks and date from the early 19th century.

One of the mountains in the Ga-Ramadingwana range is known as Mamfaladi amongst the people living in Makolokwe.



Figure 9- A structure in Mmamogola's village which was constructed with stones and which probably represent some of the earlier remains which can be associated with this settlement at the foot of the Ga-Ramadingwana mountain range (above).

Site LIA07 and Site LIA08

The remains from Site LIA07 together with Site LIA08 are part of remains that date from the historical past and which are located along the southern foot of the Ga-Ramatua mountain range on Wolwekraal 408JQ.

It is highly likely that these remains together, with those that occur along the base of the Ga-Ramadingwana mountain range were part of the *motse* (village) of *kgosi* Mmamogale of the Bakwena Bamôgôpa.

Grave 01

This grave is located within the perimeters of Site LIA. According to spokespersons from the Bakwena Bamôgôpa this grave belong to *kgosi* Mmamogale.

The 'grave' comprises several large upright standing stones that are located close to each other. The group of stones are associated with what seem to be the remains of a large cattle kraal and a smaller enclosure.



Figure 10- According to spokespersons from the Bakwena Bamôgôpa these stones represent the grave of *kgosi* Mmamogale at the Ga-Ramadingwana mountain range on Wolwekraal 408JQ (above).

Graveyard 01

This graveyard is a large formal graveyard which is located on the eastern outskirts of the village of Makolokwe.

GY01 holds the remains of hundreds of individuals.

A cave

According to spokespersons a cave is located in the kopje next to the dirt road that runs between Segwalaene and Sonop on Kareepoort 407JQ. The kopje bears no name and is located in the turn of the road directly to the south of the kopje Mmantadile. The significance of the cave relates to the fact that several people were buried in the cave.



Figure 4- A large formal graveyard on Kareepoort 407JQ on the eastern outskirts of Makolokwe holds the remains of hundreds of individuals (above).



Figure 5- A cave is located in the top of this kopje on Kareepoort 407JQ next to the dirt road that runs between Segwalaene and Sonop (above).

6.5 Tables

Tables outlining the types and ranges of heritage resources recorded on Wolwekraal 408JQ and Kareepoort 407JQ with their coordinates and level of significance are the following:

Stone walled sites	Coordinates	Significance
LIA06	25° 36.961's 27° 38.117'e	HIGH
LIA07	25° 36.833's 27° 37.450'e	HIGH

LIA08	25° 36.795's 27° 37.515'e	Medium-high
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Table 1- Coordinates for Late Iron Age stone walled sites on Wolwekraal 408JQ and their level of significance (above).

Graves and graveyards	Coordinates	Significance
G01. Mmamogale's grave	25° 36.942' 27° 38.085'	HIGH
GY01. Makolokwe cemetery	25° 37.264' 27° 37.921'	HIGH
Cave		
C. Possible burial site	25° 38.214' 27° 38.484' <u>(25 39 08.81s 27 38 25.92)</u>	HIGH

Table 2- Coordinates for graveyards including a cave on Wolwekraal 408JQ and their level of significance (above).

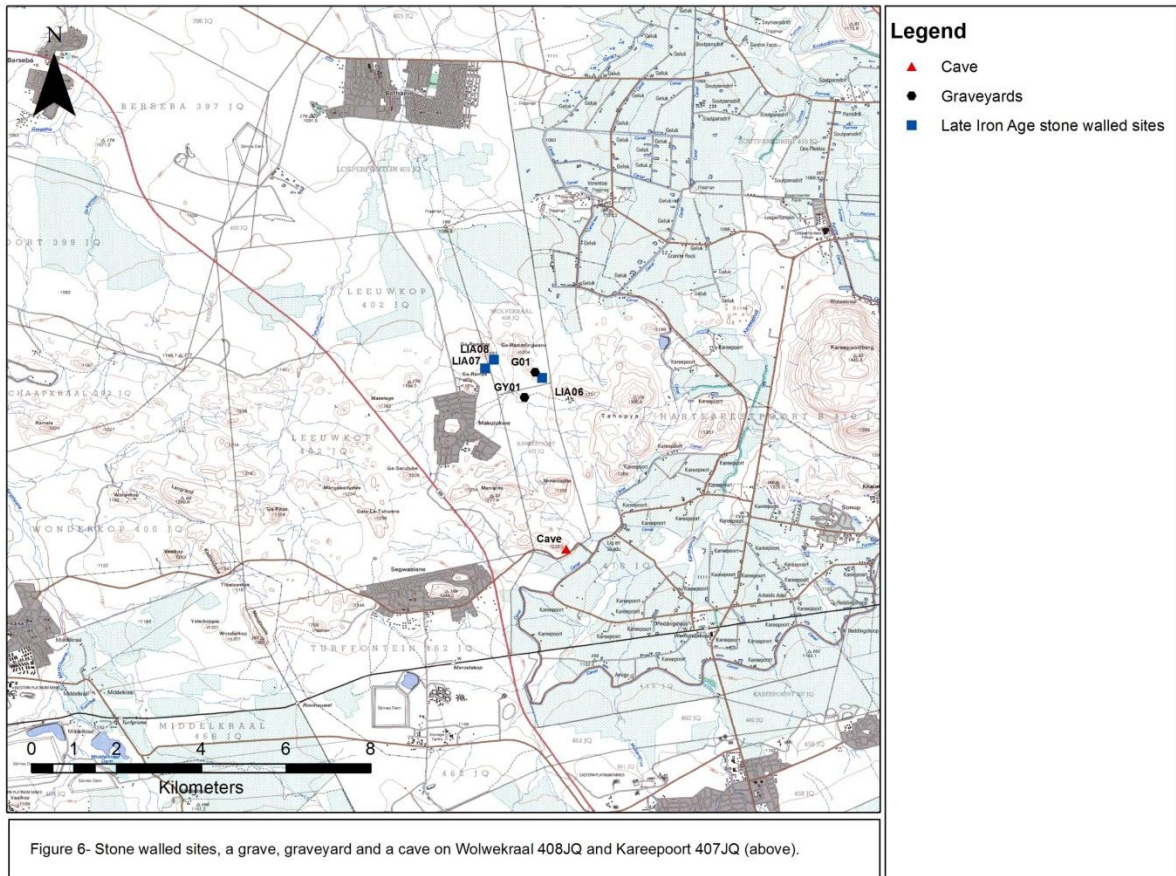


Figure 6- Stone walled sites, a grave, graveyard and a cave on Wolwekraal 408JQ and Kareepoort 407JQ (above).