

Prepared for:

PILANESBERG PLATINUM MINES (PTY) (LTD) (PPM)

SLR CONSULTING (AFRICA) (PTY) (LTD)

**A PHASE I HERITAGE IMPACT ASSESSMENT STUDY FOR A
COMBINED PLATINUM MINING OPERATION NEAR THE
PILANESBERG IN THE NORTH-WEST PROVINCE:
CHANGING THE LAYOUT OF MINE INFRASTRUCTURE FOR
THE APPROVED OPEN CAST AND UNDERGROUND MINING
OPERATION AT THE SEDIBELO PLATINUM MINE**

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EXECUTIVE SUMMARY

This Phase I Heritage Impact Assessment (HIA) study, as required in terms of Section 38 of the National Heritage Resources Act, Act 25 of 1999, was done as part of an EMP Amendment for Sedibelo Platinum Mine in the North-West Province of South Africa. The Phase I HIA study focused on changing the layout of mine surface infrastructure for the approved open cast and underground mining operation at the Sedibelo Platinum Mine. 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 Sedibelo 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 Sedibelo Project and, if so, to determine appropriate mitigation (management) measures for those heritage resources which may be affected by the project.

The Sedibelo Project Area was surveyed during two different occasions, namely when a survey for the Sedibelo Platinum Mine was conducted during 2007 and more recently in 2011 when this former project area (confined to the farm Wilgespruit 2JQ) was again surveyed in conjunction with portion 1 of Rooderand 46JQ, Legkraal 45JQ and Koedoesfontein 42JQ for the purposes of this study.

Types and ranges of heritage resources

The Phase I HIA for the Sedibelo Project Area revealed the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (Act No 25 of 1999):

- Scatters of stone tools and potsherds were recorded on two eroded spots.
- The foundations of a pioneer (historical) dwelling.
- Remains of settlements which date from the recent past occur across the Sedibelo Project Area.

These heritage resources as well as the remains from the recent past were geo-referenced and mapped. The significance of the heritage resources were determined by means of

various criteria and mitigation measures are proposed for those heritage resources that may be affected (altered, removed, demolished) by the Sedibelo Project (Figure 6; Tables 1-3).

The significance of the heritage resources

Only the scatters of stone tools and potsherds and the foundations of the historical (pioneer) dwelling qualify as heritage resources. The remains dating from the recent past have no historical or cultural significance and are therefore not further discussed.

The level of significance of the scatters of stone tools, potsherds and the remains of the historical house therefore have to be determined as these remains may be affected (altered, destroyed, removed) when the proposed Sedibelo Project is implemented.

The significance of the heritage resources can be rated as follows (Tables 1-3):

The scatters of stone tools

The scatters of stone tools can be rated as of low significance due to the following reasons:

- The stone tools occur 'out of context' which means that they do not occur *in situ* or in a stratigraphic layering any longer. Stone tools which have not been disturbed and which occur in a sealed archaeological context (setting) usually have high significance or research value.
- The number of stone tools in both occurrences is low and can not be used in any typological studies or as part of a representative museum collection when collected from the surface and donated to a museum.
- The types of stone tools that occur are common in Middle Stone Age and Late Stone Age collections.
- These remains are ephemeral and these sites tend to 'disappear' as time passes on as the stone tools are gradually spread out in an increasingly larger expanding surface area.

The scatters of potsherds

The scatters of potsherds can be rated as of low significance due to the following reasons:

- The potsherds occur 'out of context' and therefore have no research value.

- Most of the potsherds are not decorated while a limited number of the potsherds have diagnostic attributes.
- The potsherds from both occurrences are low in numbers.
- The limited number of decorated potsherds can not add any new knowledge about the Moloko pottery tradition as more extensive collections already exists.
- These remains are ephemeral and these sites tend to 'disappear' as time passes on as the potsherds are gradually spread out in an increasingly larger expanding surface area.

The historical house

The remains of the historical house low outstanding significance due to the fact that it has been affected to such an extent that it has no research or any other use any longer:

Mitigating the heritage resources

If the scattered stone tools and potsherds or the historical house are to be affected by the proposed Sedibelo Project the following mitigation measures have to be applied to the heritage resources.

The scattered stone tools and potsherds

Both the scattered stone tools and potsherds have little significance. These remains therefore can be affected (removed, altered, demolished) by the proposed Sedibelo Project.

The historical house

The remains of the historical house have little significance. These remains therefore can be affected (removed, altered, demolished) by the proposed Sedibelo Project.

General

It is possible that this Phase I HIA study may have missed heritage resources in the Sedibelo 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

As part of a joint venture agreement, the Itereleng Bakgatla Mineral Resources (Pty) Ltd (IBMR), Pilanesberg Platinum Mines (Pty) Ltd and Richtrau No 123 (Pty) Ltd (Richtrau) proposed to develop three separate projects that could function as a combined mining operation situated to the north of the Pilanesberg National Park in the Moses Kotane Local Municipality, of the Bojanala Platinum District Municipality in the North West Province. The mining operation will include three projects within three mining areas, namely:

- PPM Pit Extension Project which includes the extension of PPM's Tuchenkomst pit onto the farms Wilgespruit 2 JQ and portion 1 of Rooderand 46 JQ.
- Sedibelo EMP Amendment which includes the repositioning and redesign of approved infrastructure and additional surface infrastructure (waste rock dumps, extended pit, decline shafts, vent shafts, hazardous waste disposal facility) at Sedibelo Mine on the farms Wilgespruit 2 JQ, portion 1 of Rooderand 46 JQ, Legkraal 45 JQ and Koedoesfontein 42 JQ.
- Magazynskraal EIA which includes a hazardous waste disposal facility, underground mining, shafts, vent shafts, access roads and a tailings dam.

This report only focuses on the Phase I Heritage Impact Assessment (HIA) study which was done for the proposed changes to the layout of mine infrastructure for the approved open cast and underground mining operation at the Sedibelo Platinum Mine.

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 (the national estate) as outlined in Section 3 of the National Heritage Resources Act, 1999 (No 25 of 1999).

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

- (a) places, buildings structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and 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 by in terms of the Human Tissues Act, 1983 (Act No 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including -
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

The National Heritage Resources Act (Act No 25 of 1999, Art 3) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following:

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

2 AIMS OF THIS REPORT

Sedibelo Platinum Mine's proposed changes to the layout of mine infrastructure at this approved open cast and underground mining operation may have an effect 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 changes may occur.

Therefore, SLR Consulting (Africa) (Pty) Ltd, the environmental company responsible for compiling the EMP Amendment for the Sedibelo Project, commissioned the author to conduct a Phase I Heritage Impact Assessment (HIA) study for the Sedibelo Project with the following aims, 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 Sedibelo 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 Sedibelo Project and, if so, to determine appropriate mitigation (management) measures for those heritage resources which may be affected by the project.

3 METHODOLOGY

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

- Considering and evaluating data collected during earlier surveys for the PPM (previously Boynton Platinum) (see 'Select Bibliography', Part 8).
- Surveying literature relating to the pre-historical and historical context of the Pilanesberg region.
- Surveying with a vehicle and on foot the proposed Sedibelo Project Area.
- Synthesising the information obtained from the activities outlined above in this report.

3.1 Earlier data

Several Phase I HIA studies were done for the PPM during the last decade. The results of these studies were published in the following reports (see Part 9, 'Select Bibliography'):

- Pistorius, J.C.C. 2006a. *A Phase I Heritage Impact Assessment (HIA) study for Boynton Platinum's new proposed mining areas near the Pilanesberg in the North-West Province of South Africa*. Unpublished report prepared for Metago Environmental Engineers.
- Pistorius, J.C.C. 2006b. *An extended Phase I Heritage Impact Assessment (HIA) study for Pilanesberg Platinum Mines (PPM) new proposed mining areas near the Pilanesberg in the North-West Province of South Africa*. Unpublished report prepared for Metago Environmental Engineers.
- Pistorius, J.C.C. 2006c. *A Phase I Heritage Impact Assessment (HIA) study for Boynton Platinum's new proposed mining areas near the Pilanesberg in the North-West Province of South Africa*. Unpublished report prepared for Metago Environmental Engineers (combination of first two studies).
- Pistorius, J.C.C. 2007. *A Phase I Heritage Impact Assessment (HIA) study for the proposed new Sedibelo Platinum Mine near the Pilanesberg in the*

North-West Province of South Africa. Unpublished report prepared for Barrick Platinum.

- Pistorius, J.C.C. 2009. *A Phase I Heritage Impact Assessment (HIA) study for Pilanesberg Platinum Mine's (PPM) proposed rock waste dump extension near the Pilanesberg in the North-West Province of South Africa*. Unpublished report prepared for Pilanesberg Platinum Mine.
- Pistorius, J.C.C. 2010. *Brief report on heritage matters at Pilanesberg Platinum Mine*. Unpublished report prepared for Pilanesberg Platinum Mine.
- Pistorius, J.C.C. 2010. *A Phase I Heritage Impact Assessment for the farm Magazynskraal 2JQ near the Pilanesberg in the North-West Province*. Unpublished report prepared for Pilanesberg Platinum Mine.
- Pistorius, J.C.C. 2011. *A Phase I Heritage Impact Assessment (HIA) study for Pilanesberg Platinum Mine's (PPM) proposed amendment of the closure objectives of the Tuschenkomst Open Pit and community water supply scheme near the Pilanesberg in the North-West Province*. Unpublished report prepared for Pilanesberg Platinum Mine.
- Pistorius, J.C.C. 2012. *A Phase I Heritage Impact Assessment (HIA) study for a combined Platinum Mining operation near the Pilanesberg in the North-West Province: the extension of the Tuschenkomst open cast pit for Pilanesberg Platinum Mine*. Unpublished report prepared for Pilanesberg Platinum Mine.

3.2 Literature survey and maps

Literature relating to the pre-historical and the historical unfolding of the Pilanesberg area was reviewed. This review focused on local Tswana groups such as the Kgatla Kgafêla and the Tlhako who live along the northern perimeters of the Pilanesberg. (The history of the origins of the Tlôkwa who live slightly further to the west of the Pilanesberg was not reviewed). The presence and influence of Mzilikazi of the Ndebele in the Pilanesberg was also

emphasised, as some of the remains found in the PPM Sedibelo Project Area may be associated with the Ndebele).

It is important to contextualise the pre-historical and historical background of the Pilanesberg area in order to comprehend the identity and meaning of heritage sites which occur in and near the Sedibelo Project Area (see Parts 5 & 8).

In addition, the project and wider area were also studied by means of the 1:50 000 topographical maps on which the proposed development occur (2527AA Saulspoort, 1:50 000).

3.3 Fieldwork

The Sedibelo Project Area covers the farms Wilgespruit 2JQ, portion 1 of Rooderand 46JQ, Legkraal 45 JQ and Koedoesfontein 42JQ.to the north of the Pilanesberg. The Sedibelo Project Area was surveyed with a vehicle while sensitive spots were surveyed on foot.

3.4 Limitations of the study

It is possible that this Phase I HIA study may have missed heritage resources in the Sedibelo 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.

3.5 Some remarks on terminology

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

- **Conservation:** The act of maintaining all or part of a resource (whether renewable or non-renewable) in its present condition in order to provide for its continued or future use. Conservation includes sustainable use, protection, maintenance, rehabilitation, restoration and enhancement of the natural and cultural environment.
- **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 PPM Sedibelo 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. Various types of protected areas occur in South Africa.
- 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 200 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.
- PPM Sedibelo 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 PPM Sedibelo 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 SEDIBELO PROJECT AREA

4.1 Location

The Sedibelo Project Area stretches across the farms Wilgespruit 2 JQ, portion 1 of Rooderand 46JQ, Legkraal 45JQ and Koedoesfontein 42 JQ to the north of the Pilanesberg in the Moses Kotane local municipality of the Bojanala district municipality in the North-West Province (2527AA Saulspoort, 1:50 000) (Figure 1). This part of the North-West Province, from a heritage point of view, is amongst others characterised by large numbers of stone walled sites which can be associated with Late Iron Age and historical Tswana and Nguni speaking communities. Descendants of these extinct communities today still live in the Pilanesberg region.

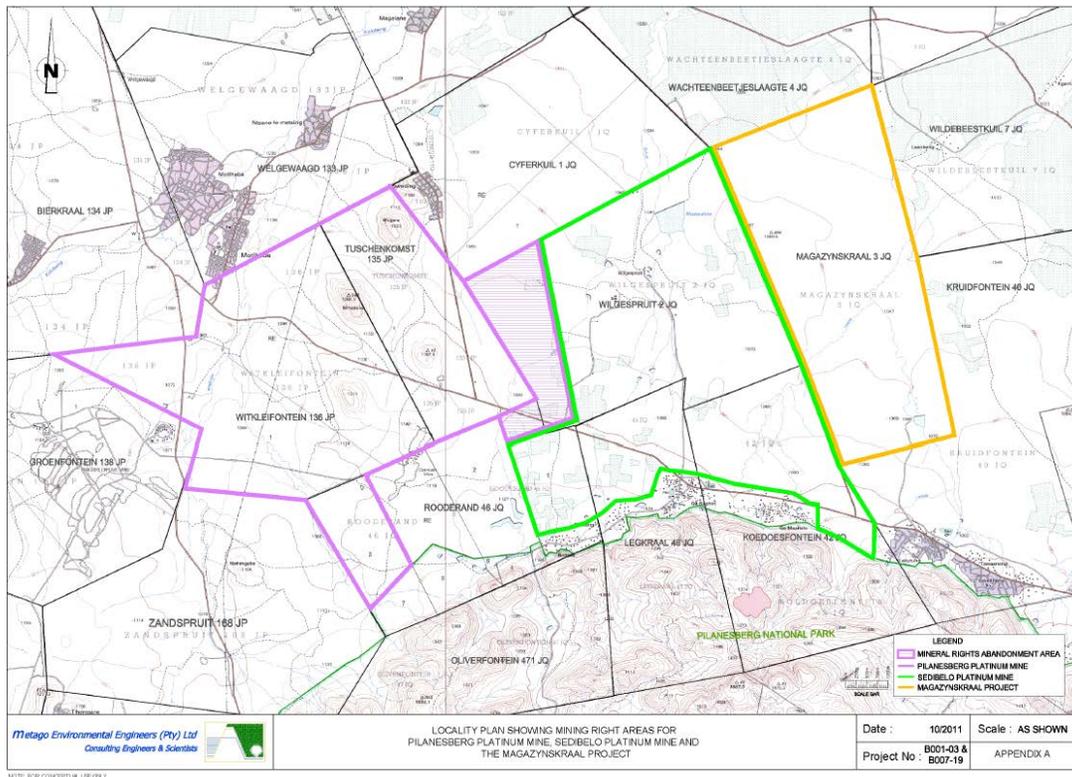


Figure 1- The Sedibelo Platinum Mine (green demarcation) covers several farms to the north of the Pilanesberg in the North-West Province (above).

4.2 The Pilanesberg as a natural heritage resource

The Pilanesberg near the proposed new Sedibelo Platinum Mine is a unique natural landmark and it forms part of South Africa's natural heritage. This complex of mountains consists of an eroded circular alkaline volcanic structure, 1 250 million years old, in the low-lying Bushveld Complex. This extinct volcano is 27km in diameter and it is surrounded by six rings of mountains. The result is a circular mountainous region which stands in stark contrast to the surrounding open plains, creating a unique enclave for human occupation and utilisation from the earliest times. During the Late Iron Age, access to the Pilanesberg was controlled by well-positioned and extensive settlements near the periphery of this circular mountain range, close to some of the entrances leading to the pathway-like valleys which criss-cross the central part of the Pilanesberg.

The Pilanesberg National Park was developed in and around this extinct volcano and covers a surface of 500km². The park was opened in 1979 and it now contains examples of most southern African mammals and some 300 bird species. The central feature of the park is a man-made lake known as Mankwe on the river by the same name.

Sun City, on the edge of the Pilanesberg, was the first of several casinos and holiday resorts to be established on the South African veldt soon after the Bophuthatswana homeland was granted independence in 1977. The complex incorporates the Superbowl, a huge concert area, four luxury hotels, including the Palace of the Lost City, as well as many sporting and gambling facilities and an artificial beach, the Valley of the Waves.



Figure 2- The Sedibelo Project Area consists of patches with indigenous bush (far background). However, large areas were utilized for agriculture in the past (above). Note the Pilanesberg, a natural heritage resource in the background.

4.3 How the Sedibelo Project Area has been affected

The Sedibelo Project Area is not a pristine piece of land any longer as the landscape has been affected by human settlement since an early period. Although Stone Age people were present in the area during the last hundreds of thousands of years they did not occupy the area in large numbers or in permanent villages as the presence of scattered stone tools indicate.

Large numbers of Late Iron Age communities established themselves in large village complexes near and on the slopes and spurs of mountains and kopjes such as Mogare, Mmatone, Patswane and Mukukunupu to the west of the Sedibelo

Project Area and at isolated hills such as Mabjaneng and Motsotsodi, also located to the west of the Sedibelo Project Area. These communities were all probably related to the pre-historical and historical Kgatla. The Ga Ramoga and Moruleng areas to the south-east of the Sedibelo Project Area were already occupied during historical times by a section of the Kgatla who practised crop planting and animal husbandry.

These pre-historical and historical Iron Age farmers were followed by the first colonists during the second half of the 19th century. The Voortrekkers continued a mixed farming existence in the Pilanesberg area until the land was expropriated in order to be incorporated in the former Bophuthatswana homeland.



Figure 3- View across the Mineral Rights Abandonment Area and the Sedibelo Project Area towards Magore, Mmatone and Patswane (far background) where a cultural landscape with numerous stone walled sites are located. Note old, abandoned agricultural field in the foreground (above).

The farm Wilgespruit 2JQ in the Sedibelo Project Area in particular has been occupied by a relative large number of families during the more recent past. These family groups constructed dwellings and other shelters. They also planted crops on patches of land and keep herds of cattle which, altogether, have contributed to the general degradation of the Sedibelo Project Area

During the early 20th century the western limb of the Merensky Reef was discovered and platinum mining commenced near Swartklip (Notham) and Rustenburg. In the Pilanesberg area chrome initially attracted the attention of mining houses. Chrome mining subsequently commenced on the chromite zone to the north and to the west of the Pilanesberg, where the impact of these mining activities, which now has attained heritage significance, can still be witnessed today.

4.4 The nature of the Sedibelo Project

Sedibelo Platinum Mine is an authorised platinum mining operation owned by IBMR that is in the process of being developed. The Sedibelo mining right covers the farms Wilgespruit 2JQ, Portion 1 of Rooderand 46JQ, Legkraal 45JQ and Koedoesfontein 42JQ. These areas collectively referred to as the Sedibelo Project Area.

The approved Sedibelo operation comprises opencast and underground mining, decline and ventilation shafts, a tailings storage facility (TSF), waste rock dump, topsoil stockpiles, run-of mine pads, explosives magazine, concentrator plant, contractors laydown area, solid and hazardous waste skips and transfer areas, workshops, fuel bays, salvage yard, raw water reservoir, administration buildings, change houses and an accommodation camp. The concentrator plant and shaft area will be repositioned to better suit the combined mining operation. In addition, the open pit will be made bigger to access the ore body. As a result of the combined mining operations, the TSF and waste rock dump will be redesigned to

cater for additional mineralised waste. All these activities which occur within the confines of the Sedibelo Project Area are referred to as the Sedibelo Project.

5 CONTEXTUALISING THE SEDIBELO PROJECT AREA

A brief overview of pre-historical and historical information is provided below in order to contextualise the Sedibelo Project Area and to help to determine the significance of any heritage resources that may occur in this area.

5.1 Stone Age sites

Stone Age sites are marked by stone artefacts that are found scattered on the surface of the earth or that are part of deposits in caves and rock shelters. The Stone Age is divided into the Early Stone Age (ESA, the period from 2.5 million years ago to 250 000 years ago), the Middle Stone Age (MSA, the period from 250 000 years ago to 22 000 years ago) and the Late Stone Age (LSA, the period from 22 000 years ago to about 2 000 years ago).

These three Stone Ages can be divided into different 'cultural' periods, each of which is characterised by specific hominids, artefact types and lifestyles. These cultural periods existed under different climatic conditions and did not necessarily cover the same periods in different regions of South Africa.

A few isolated, haphazardly scattered stone tools were observed and geo-referenced in the Sedibelo Project Area (Table 1). These tools date from the MSA and include Mousterian cores, a blade and an end scraper.

The LSA is associated with rock paintings and engravings done by the San, Khoi Khoi and, in more recent times, by Negroid (Iron Age) farmers. More than one spokesperson told the author that there are caves higher up Mmatone Mountain outside the Sedibelo Project Area. Such phenomena, if they do exist, may contain stone tools dating from the Stone Age, Late Iron Age remains and rock paintings. A few rock paintings have already been recorded in the Pilanesberg.

5.2 Late Iron Age remains

The Pilanesberg area is dominated by stone walled sites that date from the Late Iron Age (LIA), some of which were occupied into the historical period. These sites are associated with Tswana groups such as the Kgatla Kgafêla, the Tlhako, the Tlôkwa and Nguni-affiliated clans who were either living in the area from an early time, before the Sotho-Tswana arrived, or who were descended from Mzilikazi's Ndebele who temporarily occupied several settlement complexes in the area before they moved to the Zeerust-Marico area in AD1832. Descendants of these original Nguni-speaking people today live in Groenfontein, Rhenosterhoek and Kraalhoek, to the north-west of the Sedibelo Project Area.



Figure 4- Clusters of stone walled settlements at Mmatone, Mogare and Patswane were occupied by Tswana, Zulu (Ndebele) and mixed populations of Tswana and Zulu (Ndebele) people from the 17th century onwards (above). These heritage sites are demarcated in a cultural landscape which occurs outside the Sedibelo Project Area.

The following contextual evidence serves as background to the Sedibelo Project Area: the origins of the Kgatla group; the history of the Kgatla Kgafêla and the Tlhako; the arrival of the first colonists and early chrome mining in the area.

5.3 Origins of the Kgatla group

The ancestral Kgatla were composed of the Kgatla, the Tlôkwa, the Makgolokwe and probably the Bahlakwana and the Basia sections. (The latter three clans no longer exist). The Kgatla also maintained that there was an early relationship with the Hurutshe (under common chiefs such as Malekele-Masilo-Legabo) which may date back to AD1450 when the Hurutshe and Kwena separated. These earliest Kgatla groups initially lived in the central part of the former Transvaal province, somewhat to the south of what is today Thabazimbi, near the Rooiberg Tin Mines.

Phohoti, the son of Mokgatle, is usually regarded as the first Kgatla chief. His son and successor was Botlholo (Mashiasebara), whose sons Mogale, Pule and Modise split up. Pule initially ruled on behalf of Mogale's son Moseitlha, who died before he could succeed, and this encouraged Pule (whose son Masego died before his father) to leave the tribe and to form a separate tribe under his grandson Kgafele. The Bothlolo's third son, Modise, and his son Tabane were the forefathers of the sections of the Mmakau, the Motša and the Seabe.

Today there are numerous subsections of the Kgatla. In 1953, a leading anthropologist distinguished at least eleven tribes within this group.

The totem of the Kgatla is the blue monkey (*kgabo*), although they also had another totem, the 'kgabo ya mollo', or the 'tip of the flame', which they used when the Kgatla were on the warpath.

Mogale, the ancestor of the Mosetlha, lived at a place called Dirolong/Direleng in the Bela Bela area (some say in the Rustenburg area). Mogale (Mosetlha) or Mashego (Kgafela) moved to Momuseng (the old Makapans Location). Towards the end of the 17th century, the Kgafela section broke away under Mahego (the son of the regent, Pule). However, Kgafela and his son Tebele remained east of the Crocodile River and Kgafela's grandson Masellane moved to Molokwane ('Vlieggepoort') near the confluence of the Crocodile and Pienaars Rivers. (This split was the result of a dispute whether Mosetlha, a woman, should rule the tribe). This was also the time when Tabane (the Mmakau section) broke away and settled at Mogwete (Varkfontein, in the Premier Mining area).

While the Kgatla Mosetlha remained one section, Tabane's branch later broke up into several tribes. Modise or Moptsha had a young wife who left the tribe while she was pregnant, as she was accused of witchcraft, saying that her child was crying in her womb. It was called 'lelela teng' ('crying inside'). This child later became the great Pedi chief Thulare, who was also called 'Thulare a Mmakau'. Further divisions of the Kgatla were caused by internal strife during the time of Mzilikazi.

5.4 Brief history of the Kgatla Kgafêla and the Tlhako

After the Kgafêla broke away from the Mosetlha at Momusweng (Makapans Location, Hammanskraal), probably during the first half of the 17th century, they settled in various places on their way to the north-west and the Crocodile River. Known places of settlement were Ntuane (to the north-west of Makapans Location near the Pienaars River), Momoseu (near Ntwane), and Tshekane (Leeuwpoort, south of the Rooiberg Tin Mine). Tshekane proved to be unhealthy, so they dwelt at Matone (Tuschenkomst) for a while and then settled at Molokwane ('Vlieggepoort', at the confluence of the Crocodile and Pienaars Rivers) near Ramakokas Location.

At the start of the 18th century, they lived at Mabule, Kruidfontein (near Saulspoort). During the first half of the 18th century, Kgwefane lived at Saulspoort in the Dithubaruba section of Moruleng. Molefe lived at Maramapong at Saulspoort. Towards the end of the 18th century, Phetso lived at Sefikile (Spitskop, 8km to the west of Northam). Letsebe ruled at Mabule (Kruidfontein) at the confluence of the Modderkuil and Middelkuil. When Senwelo was invested as chief, he moved from Mabule to Tlokwane (Rhenosterkop). Motlotle ruled at Magakwe or Dithubarubu (Kruidfontein).

Pilane built his village at Monamaneng (Kafferskraal). Later he moved to Bogopana (Witfonteinrand), to the north-east of Witfontein, and from there to Mmamodimokwana (Schilpadsnest) near the Crocodile River.

After the Matabele invasion in 1827, Pilane went to live at Motsitle (Mabeskraal). After 1837, he settled at the Elands River at Mmasebudule (Rhenosterfontein).

During the Matabele invasion, the Kgatla were too weak to defend themselves. Consequently, they paid a tribute to the Ndebele. Nevertheless, their villages were destroyed and the young men were incorporated into the Ndebele army. After the Ndebele had left the Pilanesberg area in 1832, Ndebele raiders returned to the area and took three of Pilane's sons with them in 1842. Molefi, Pilane's uncle, negotiated their release. Molefi, who maintained good relations with the Ndebele, took charge of the tribe when Pilane fled to the Langa Ndebele.

The far northern part of Kgatla territory, incorporating the farms Holfontein, Cyferfontein and Rhenosterkraal, was a separate tribal section for some years under the authority of a sub-chief, Dikema Pilane. He played an important role in the times of Paul Kruger. It was also in this far northerly area that the descendants of one of Mzilikazi's sons lived.

Kgamanyana lived at Moruleng, the present tribal headquarters at Saulspoot. In 1869, Kgamanyana and many tribesmen left the country to settle at Mochudi, on the banks of the Nkgotwane River in Botswana, after camping one year at Tshwene-Tshwene (near Vleesfontein). The other part of the tribe remained at Saulspoot and acquired most of the farms to the north of the Pilanesberg.

Many of these Tswana clans were uprooted during the *difaqane* when Mzilikazi's Matabele (Ndebele) entered the North-West Province, crossing the Magaliesberg at Mpame (Kommandonek) in the middle of August 1832.

From this brief historical overview, it is clear that the mountain Mmatone was occupied by the Kgatla, while the Pilanesberg Platinum Mines Sedibelo Project Area to the north of the Pilanesberg covers much of the sphere of influence of one section of the Kgatla. This group probably intermarried with Mzilikazi's Ndebele, especially given that some of his sons remained in the area after the Ndebele moved westwards. Descendants of this mixed Ndebele/Tswana population still live in the area today. A similar situation occurred to the north of Rustenburg, south of Phokêng, where the Ndebele intermarried with their Tswana neighbours, the Fokeng.

The Tlhako is one of the numerous Nguni-related clans who lived in the central part of the former Transvaal province from early on. They branched off from the Ndzundza-Ndebele who lived near what is today the Premier Mine (Cullinan, Mangolwana) and Wonderboom (Pretoria). Thereafter they dwelt in the Boshhoek (Pharami) area for some time, before settling along the Thulani River near Pella towards the end of the 17th century.

Chief Seutlwane settled on the northern slope of Pilwe Mountain. His son, Mabe, who lived about the middle of the 18th century, moved six kilometres further to the north to Mothoutlung on the eastern part of Palmietfontein. Mabe's youngest son, Motsisi, went to live at Legatalle, to the north-east of Ruighoek 426, where he

became involved with a long struggle with the Kgatla Kgafêla. His son, Molotsi, also lived and died at Legatalle, probably around AD 1820 to 1830.

Mabe became chief in 1820 and settled at Motsite, today known as Mabieskraal. When Mzilikazi invaded the region, the Tlhako did not leave the area, but were subjugated by the Ndebele. Many of the Tlhako later accompanied the Ndebele and crossed the Marico River to settle with the Ndebele at Silkaatskop. However, when the Ndebele were defeated by the Voortrekkers in the far North-Western Transvaal, many returned to their old home at Motsite in 1837.

Maabe and the Voortrekkers' relationship deteriorated. After he was flogged by the Boers in c 1860, the tribe moved to Molepolole and settled at Magagarape, where Maabe died in 1869. His sons Moetle, Mokgatele, Leotwane and Setadi returned to Mabeskraal.

Moetle Mabe became chief in 1870. He raided the cattle of the local white farmers and also supplied labour to surrounding white farmers. He died on 15 May 1908.

5.5 Arrival of the first colonists

During the first half of the 19th century, the first colonial traders who operated between the far north-west and the central part of the Bankeveld used the gap between the northern tip of the Magaliesberg and the south-western edges of the Pilanesberg, as a corridor. Wagons passed through this corridor on their way to Rustenburg and further to the east. Several traders, missionaries, a scientific expedition and adventurers trekked between the Magaliesberg and the Pilanesberg and they observed numerous Late Iron Age communities living in this part of the north-west.

Rustenburg, to the far south of the PPM, was the first colonial town to be established by Europeans (Voortrekkers) during the first half of the 19th century. Boshhoek, south of the Pilanesberg was established along the railway line from Pretoria and the town initially served as a terminus.

5.5 Early chrome mining

It has long been known that there were chrome ores in the Bushveld Igneous Complex. They were indicated on Carl Mauch's geological map of the area close to the Hex River near Rustenburg, which he visited in 1865. Chromite is also mentioned in official reports that were compiled by a certain Molengraaf. The first exploration for chrome occurred in 1917, and general production of the metal began in 1924, when 4 570 tons were mined.

Chromite is present in the Bushveld Igneous Complex as layers in the piroxinite, norite and anorthosite units and to a certain extent also in the harzburgiet unit. The deposits in the Complex can be divided into a Western Zone and an Eastern Zone.

The deposits in the Western Zone stretch for approximately 200km from Brits to Rustenburg, further northwards to the west of the Pilanesberg, and from there, with some interruptions of seven to thirteen kilometres, to near the Crocodile River. The Eastern Complex starts near Draaikraal at the upper reaches of the Dwars River in the Lydenburg district. Further northwards the deposit crosses the Steelpoort River near the Steelpoort station and gradually turns north-westwards as far as Scheiding – a total distance of 120 kilometres.

The Western Zone can be divided into four sections, namely a sector to the north of Rustenburg, two sectors to the west and to the north of the Pilanesberg, and a sector in the Brits-Rustenburg area.

The sector to the west of the Pilanesberg seems to have been exploited the most. Here two distinct layers were distinguished, namely the Groenfontein layer and the Main Layer higher up in the sequence. These layers vary in thickness on farms such as Palmietfontein 208JP, Groenfontein 138JP and Ruighoek 169JP.

By the start of 1974, seventeen chrome mines were already operating: eight in the Western Zone, six in the Eastern Zone, two in Marico and one near Mokopane. Some historical chrome mining activities occur on Rooderand 46JQ to the west of the Sedibelo Project Area.



Figure 5- The dilapidated entrance to an incline shaft leading in to a historical chrome mine near the border of Witkleifontein 136JP and Rooderand 46JQ (above). These mining heritage remains have since been destroyed by chrome mining activities and do not exist any longer.

6 THE PHASE I HERITAGE IMPACT ASSESSMENT

The Sedibelo Project Area was surveyed during two different occasions, namely when a survey for the Sedibelo Platinum Mine was conducted during 2007 and more recently in 2011 when this former project area (confined to the farm Wilgespruit 2JQ) was again surveyed in conjunction with portion 1 of Rooderand 46JQ, Legkraal 45JQ and Koedoesfontein 42JQ for the purposes of this study.

6.1 Types and ranges of heritage resources

The Phase I HIA for the Sedibelo Project Area revealed the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (Act No 25 of 1999):

- Scatters of stone tools and potsherds were recorded on two eroded spots.
- The foundations of a pioneer (historical) dwelling.
- Remains of settlements which date from the recent past occur across the Sedibelo Project Area.

These heritage resources as well as the remains from the recent past were geo-referenced and mapped. The significance of the heritage resources were determined by means of various criteria and mitigation measures are proposed for those heritage resources that may be affected (altered, removed, demolished) by the Sedibelo Project (Figure 6; Tables 1-3).

The heritage resources and remains from the recent past are briefly described below and some are illustrated by means of photographs. The heritage resources and remains from the recent past have been assigned codes such as SA (Stone Age occurrences); IA (Iron Age occurrences); SAIA (Stone Age and Iron Age occurrences that occur together in one locality, or 'site') and RP (remains from the recent past) in order to simplify the identification and description of these resources.

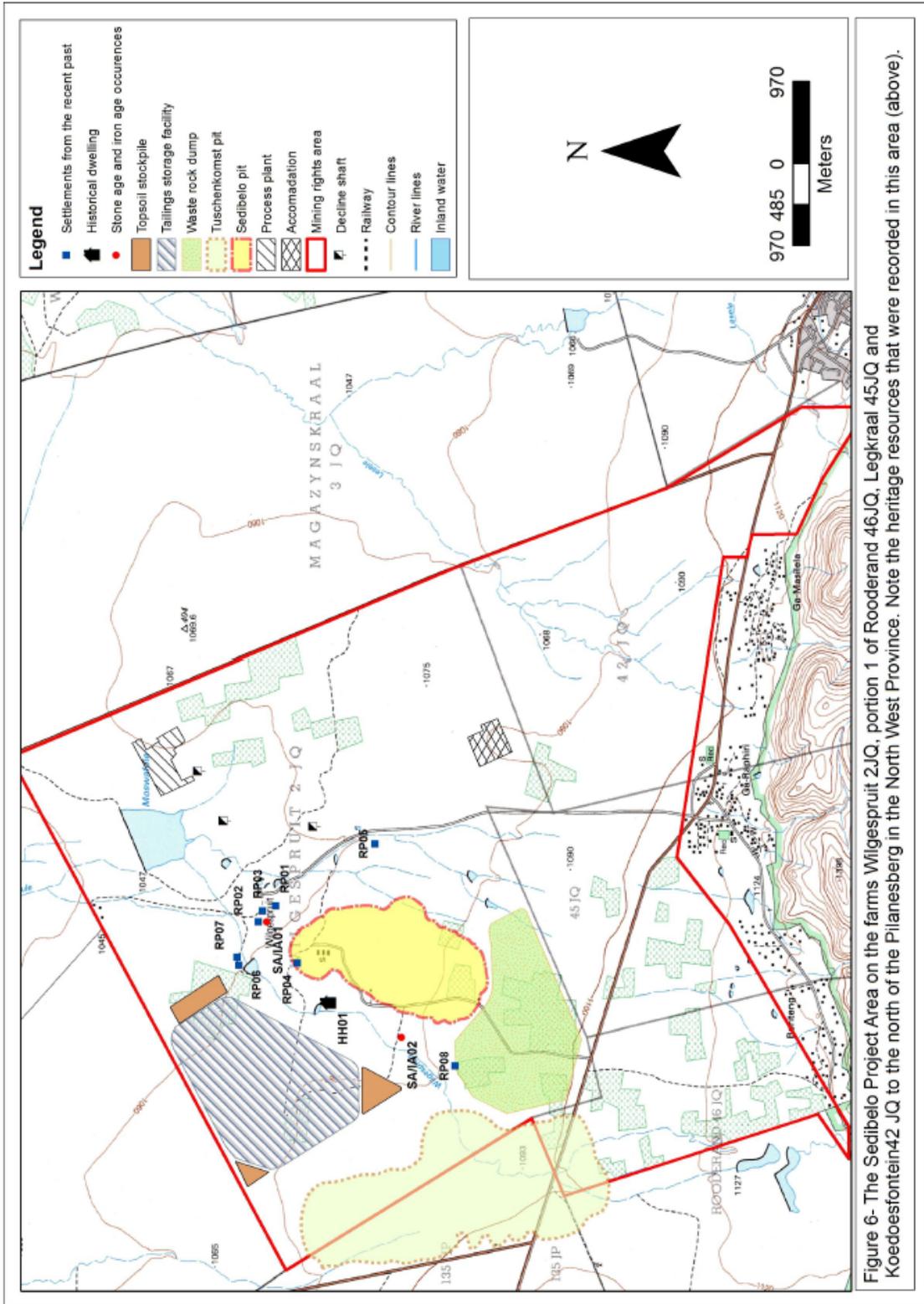


Figure 6- The Sedibelo Project Area on the farms Wlgespruit 2JQ, portion 1 of Rooderand 46JQ, Legkraal 45JQ and Koedoesfontein42 JQ to the north of the Plianesberg in the North West Province. Note the heritage resources that were recorded in this area (above).

6.1.1 Scatters of stone tools

Two eroded spots with a limited number of stone tools were geo-referenced. The stone tools were exposed due to erosion which suggests that more localities with stone tools may occur on Wilgespruit 2JQ. Both stone tool occurrences were associated with potsherds dating from the Late Iron Age (Moloko pottery tradition) (Table 1).

The Later Stone Age artefacts and the Iron Age pottery found at SA/IA02 may indicate contact between Stone Age and Iron Age people although such an assumption had to be tested with controlled archaeological excavations. The co-existence of Middle Stone Age artefacts and Late Iron Age pottery (SA/IA01) may be coincidental or the result of erosion.

The Middle Stone Age artefacts (SA/IA01) date from 250 000 years to 22 000 years ago and included cores, points, different types of scrapers, an *outil ecaile* (borer), etc. (Figures 6 & 7). The material used to manufacture the artefacts was hornfles (a metamorphosis formation which resulted from dolerite penetrating shales from the Transvaal system).

A few microlithic Late Stone Age artefacts were observed at SA/IA01. These tools include scrapers which were manufactured from volcanic (glass like) material which originates from the creation of the Pilanesberg.

6.1.2 Scatters of potsherds

Potsherds were observed in three eroded areas in the Sedibelo Project Area. Two of these occurrences also include the presence of stone tools (see 7.1.1, above) (Table 1).

The potsherds date from the Late Iron Age (Moloko pottery tradition) and it appears as if both Early and Later Moloko pottery can be distinguished although the numbers of potsherds were limited. No stone walls are associated with any of the potsherd collections.

Both pottery phases refer to the Late Iron Age with the Early Moloko phase which is characterised by the absence of prominent stone walls (AD1500-1600) slightly preceding the Later Moloko phase (AD1600-1890) which is marked by stone walled settlements.



Figure 7- Stone tools and potsherds from SA/IA01: The MSA artefacts have well prepared surface platforms. Many were manufactured by means of the blade technique. The two potsherds have incision decorations (above).

| No on map | Stone tool occurrences | Coordinates | Significance |
|-----------|---|-----------------------------|--------------|
| SA/IA01 | Scatter of stone tools and potsherds next to a furrow. Consists mostly of Middle Stone Age artefacts manufactured from hornfels. Limited number of potsherds which include Early Moloko ware. | 25° 05.067 'S; 27° 02.456'E | Low |
| SA/IA02 | Scatter of stone tools and potsherds on an eroded spot. Stone tools include microlithic types which may date from the Late Stone Age. Manufactures from volcanic material. Two potsherds may be associated with Early Moloko pottery. | 25° 05.925'S; 27° 01.719'E | Low |

Table 1- Coordinates for Stone Age and Iron Age occurrences on Wilgespruit 2JQ and the levels of significance of these remains (above).



Figure 8- MSA artefacts manufactured from hornfels. Note the side and end scraper (middle, below) and the borer (right, below).

6.1.3 A pioneer (historical) dwelling

The foundations of a pioneer dwelling occur near a dam which was constructed in the Wilgespruit approximately five years ago. The house is located in the midst of avenues with Blue Gum trees. The Blue Gum trees support the historical status of this structure (Table 2).

The dwelling is rectangular in its ground plan and measures approximately 12mx8m. Its foundation was constructed with dolerite (diabase) stone, some of which were dressed. The back-side of the house is confined within a 'werf' (back yard) which is demarcated by a row of flat, upright hornfels and dolerite stones. A foot path leading to the front door was also demarcated with the same material (Figure 9).

The front-side of the house faced towards the north-east (rising sun) and probably contained two bedrooms opposite each other. The back-side of the house contained a kitchen and sitting room. No outbuildings were observed. (However, rondavels that were used as bedrooms and storage facilities may have existed but may have been demolished).

The interior of the house is currently covered with a heap of soil. Red clay bricks were cemented onto the dolerite foundation. This suggests that a more recent dwelling was constructed on top of the foundation of the historical structure, probably by farm labourers or by squatters who used clay bricks and mud to construct a new dwelling on top of the historical structure's foundation. (It is possible that the pioneer dwelling's original walls were constructed with dolerite stone that were robbed and removed).

It is highly likely that this dwelling may represent one of the earliest Voortrekker (colonial) dwellings that were built during the middle of the 19th century in the Pilanesberg area.

The historical dwelling was further damaged and in fact demolished when one of the large number of family compounds which arose in the area during the last few years (after the first survey was done in 2007) was established on top of these remains.



Figure 9- The historical pioneer dwelling with dolerite foundations which was recorded in 2007 before it was demolished. This residence may have been one of the earliest that were constructed by the Voortrekkers (colonists) when they occupied the Pilanesberg area during the middle of the 19th century (above).

| No on map | Stone tool occurrences | Coordinates | Significance |
|-----------|---|-----------------------------|--------------|
| HH01 | Rectangular pioneer dwelling with dolerite foundations. Probably rebuild and re-used in more recent times by farm labourers or squatters. | 25° 05.453 'S; 27° 01.936'E | HIGH |

Table 2- Coordinates for the remains of a historical house (now demolished) on Wilgespruit 2JQ. Note the significance of these remains (above).

6.1.4 Remains from the recent past

Several settlements consisting of varying numbers of homesteads occur throughout the Sedibelo Project Area. These settlements date from the recent past and were probably occupied by Kgatla families who now live elsewhere in the larger area (Figure 10).

The majority of these homesteads have disintegrated. They can be recognised by eroded patches on the landscape or means of the foundations of these residences which in most cases consist of upright stones. Eroded spots with scatters of undecorated potsherds are sometimes found in association with these homesteads dating from the recent past (Table 3).



Figure 10- The remains of one of several homesteads which date from the recent past in the Sedibelo Project Area. These remains are characterised by upright stones outlining the foundations of these residences (above).

| No on map | Settlements from the recent past | Coordinates | Significance |
|------------------|---|-----------------------------|---------------------|
| RP01 | Rubble of several abandoned homesteads, part of an ox wagon on an eroded area | 25° 05.125 'S; 27° 02.556'E | LOW |
| RP02 | Settlement of the Senwoele family. Lived here in the 1970's. Open space in bush which is currently covered with tall grass. Used to incorporate a residential area, cattle kraal and goat enclosure | 25° 05.014 'S; 27° 02.455'E | LOW |
| RP03 | Settlement of Pheto family. Lived here in the 1970's. Includes a residential area as well as enclosures for domestic stock | 25° 05.041 'S; 27° 02.524'E | LOW |
| RP04 | Settlement of the Matshego family. Abandoned the settlement in 1993. Used to include a residential area and at least one enclosure for domestic stock | 25° 05.262 'S; 27° 02.194'E | LOW |
| RP05 | Settlement of the Malebey family. Located close to the Bofule River. Lived here during 1971 to 1984. Incorporates a residential area, an enclosure for livestock and an enclosure for goats located some distance from the settlement | 25° 05.756 'S; 27° 02.954'E | LOW |
| RP06 | Foundation of square one-roomed dwelling. Foundation marked by upright stones. Associated with glass bottles, plough shed, corrugated iron plate, etc. | 25° 04.891 'S; 27° 02.178'E | LOW |
| RP07 | Low foundation walls of two-roomed dwelling. Associated with glass bottles, plough shed, corrugated iron plate, etc. | 25° 04.878 'S; 27° 02.229'E | LOW |
| RP08 | Scatter of undecorated potsherds on a large bald area. Include remnants of mud dwellings from the recent past | 25° 06.268 'S; 27° 01.537'E | LOW |

Table 3- Coordinates and level of significance of remains dating from the recent past in the Sedibelo Sedibelo Project Area (above).

7 THE SIGNIFICANCE AND MITIGATION OF THE HERITAGE RESOURCES

The following range of heritage resources were recorded in the Sedibelo Project Area, namely:

- Scatters of stone tools and potsherds.
- The foundations of an early pioneer (colonial) dwelling.
- Remains of settlements which date from the recent past.

7.1 The significance of the heritage resources

Only the scatters of stone tools and potsherds and the foundations of the historical (pioneer) dwelling qualify as heritage resources. The remains dating from the recent past have no historical or cultural significance and are therefore not further discussed.

The level of significance of the scatters of stone tools, potsherds and the remains of the historical house therefore have to be determined as these remains may be affected (altered, destroyed, removed) when the proposed Sedibelo Project is implemented.

The significance of the heritage resources can be rated as follows (Tables 1-3):

7.1.1 Scatters of stone tools

The scatters of stone tools can be rated as of low significance due to the following reasons:

- The stone tools occur 'out of context' which means that they do not occur *in situ* or in a stratigraphic layering any longer. Stone tools which have not been disturbed and which occur in a sealed archaeological context (setting) usually have high significance or research value.

- The number of stone tools in both occurrences is low and can not be used in any typological studies or as part of a representative museum collection when collected from the surface and donated to a museum.
- The types of stone tools that occur are common in Middle Stone Age and Late Stone Age collections.
- These remains are ephemeral and these sites tend to 'disappear' as time passes on as the stone tools are gradually spread out in an increasingly larger expanding surface area.

7.1.2 Scatters of potsherds

The scatters of potsherds can be rated as of low significance due to the following reasons:

- The potsherds occur 'out of context' and therefore have no research value.
- Most of the potsherds are not decorated while a limited number of the potsherds have diagnostic attributes.
- The potsherds from both occurrences are low in numbers.
- The limited number of decorated potsherds can not add any new knowledge about the Moloko pottery tradition as more extensive collections already exists.
- These remains are ephemeral and these sites tend to 'disappear' as time passes on as the potsherds are gradually spread out in an increasingly larger expanding surface area.

7.1.3 The historical house

The remains of the historical house low outstanding significance due to the fact that it has been affected to such an extent that it has no research or any other use any longer:

7.2 Mitigating the heritage resources

If the scattered stone tools and potsherds or the historical house are to be affected by the proposed Sedibelo Project the following mitigation measures have to be applied to the heritage resources.

7.2.1 The scattered stone tools and potsherds

Both the scattered stone tools and potsherds have little significance. These remains therefore can be affected (removed, altered, demolished) by the proposed Sedibelo Project.

7.2.2 The historical house

The remains of the historical house have little significance. These remains therefore can be affected (removed, altered, demolished) by the proposed Sedibelo Project.

8 CONCLUSION AND RECOMMENDATIONS

The Sedibelo Project Area was surveyed during two different occasions, namely when a survey for the Sedibelo Platinum Mine was conducted during 2007 and more recently in 2011 when this former project area (confined to the farm Wilgespruit 2JQ) was again surveyed in conjunction with portion 1 of Rooderand 46JQ, Legkraal 45JQ and Koedoesfontein 42JQ for the purposes of this study.

Types and ranges of heritage resources

The Phase I HIA for the Sedibelo Project Area revealed the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (Act No 25 of 1999):

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- Remains of settlements which date from the recent past occur across the Sedibelo Project Area.

These heritage resources as well as the remains from the recent past were geo-referenced and mapped. The significance of the heritage resources were determined by means of various criteria and mitigation measures are proposed for those heritage resources that may be affected (altered, removed, demolished) by the Sedibelo Project (Figure 6; Tables 1-3).

The significance of the heritage resources

Only the scatters of stone tools and potsherds and the foundations of the historical (pioneer) dwelling qualify as heritage resources. The remains dating from the recent past have no historical or cultural significance and are therefore not further discussed.

The level of significance of the scatters of stone tools, potsherds and the remains of the historical house therefore have to be determined as these remains may be

affected (altered, destroyed, removed) when the proposed Sedibelo Project is implemented.

The significance of the heritage resources can be rated as follows (Tables 1-3):

The scatters of stone tools

The scatters of stone tools can be rated as of low significance due to the following reasons:

- The stone tools occur 'out of context' which means that they do not occur *in situ* or in a stratigraphic layering any longer. Stone tools which have not been disturbed and which occur in a sealed archaeological context (setting) usually have high significance or research value.
- The number of stone tools in both occurrences is low and can not be used in any typological studies or as part of a representative museum collection when collected from the surface and donated to a museum.
- The types of stone tools that occur are common in Middle Stone Age and Late Stone Age collections.
- These remains are ephemeral and these sites tend to 'disappear' as time passes on as the stone tools are gradually spread out in an increasingly larger expanding surface area.

The scatters of potsherds

The scatters of potsherds can be rated as of low significance due to the following reasons:

- The potsherds occur 'out of context' and therefore have no research value.
- Most of the potsherds are not decorated while a limited number of the potsherds have diagnostic attributes.
- The potsherds from both occurrences are low in numbers.
- The limited number of decorated potsherds can not add any new knowledge about the Moloko pottery tradition as more extensive collections already exists.

- These remains are ephemeral and these sites tend to 'disappear' as time passes on as the potsherds are gradually spread out in an increasingly larger expanding surface area.

The historical house

The remains of the historical house low outstanding significance due to the fact that it has been affected to such an extent that it has no research or any other use any longer:

Mitigating the heritage resources

If the scattered stone tools and potsherds or the historical house are to be affected by the proposed Sedibelo Project the following mitigation measures have to be applied to the heritage resources.

The scattered stone tools and potsherds

Both the scattered stone tools and potsherds have little significance. These remains therefore can be affected (removed, altered, demolished) by the proposed Sedibelo Project.

The historical house

The remains of the historical house have little significance. These remains therefore can be affected (removed, altered, demolished) by the proposed Sedibelo Project.



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10 SPOKESPERSONS CONSULTED

Alex Mason Epps. Resident geologist employed by Barrick.

Janus, resident geologist employed by Barrick.

Moses Malebye, one of several *badisa* (cattle herders) working in the Sedibelo Project Area.