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M2 PRECIOUS AND BASE METALS (PTY) LTD

PHASE I DESKTOP CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED PROSPECTING RIGHT APPLICATIONS (NW12075PR, NW12241PR, NW12242PR, NW12285PR, NW12343PR, NW12357PR AND NW12360PR) OF CHROME AND PGM ON VARIOUS PORTIONS ON BOKFONTEIN 448JQ WITHIN MADIBENG LOCAL MUNICIPALITY OF BOJANALA PLATINUM DISTRICT IN THE NORTH WEST PROVINCE.

May, 2018

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DECLARATION

ABILITY TO CONDUCT THE PROJECT

Munyadziwa Magoma is a professional archaeologist, having obtained his BA degree in Archaeology and Anthropology at University of South Africa (UNISA), an Honours degree at the University of Venda (UNIVEN), and a Master's degree at the University of Pretoria (UP). He is an accredited Cultural Resource Management (CRM) member of the Association for southern African Professional Archaeologists (ASAPA) and Amafa aKwaZulu-Natali. Munyadziwa is further affiliated to the South African Archaeological Society (SAAS), the Society of Africanist Archaeologists (SAfA), and the International Council of Archaeozoology (ICAZ). He has more than ten years' experience in heritage management, having worked for different CRM organisations and government heritage authorities. As a CRM specialist, Munyadziwa has completed well over five hundred Archaeological Impact Assessments (AIA) for developmental projects situated in all provinces of the Republic of South Africa. The AIAs projects he has been involved with are diverse, and include the establishment of major substation, upgrade and establishment of roads, establishment and extension of mines. In addition, he has also conducted Heritage Impact Assessments (HIAs) for the alteration to heritage buildings and the relocation of graves. His detailed CV is available on request.

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EXECUTIVE SUMMARY

Vhubvo Archaeo-Heritage Consultant Cc has been requested by M2 Precious and Base Metals to conduct an Archaeological Desktop Study of the proposed prospecting in the Magisterial area of Madibeng – North West Province. The aim of the desktop study was to investigate the potential of archaeological sites, and cultural resources in the region proposed for prospecting of chrome and PGM.

Previous prospecting methods for minerals involved traversing, panning, sifting and outcrop investigation, looking for signs of minerals. These methods entailed combing through the countryside, mostly through creek beds and along ridgelines and hilltops, often on hands and knees looking for signs of mineral (source). However, prospecting for minerals has been significantly transformed through various innovations and now involves mapping, non-invasive and invasive prospecting activities. As a direct result, the new prospecting methods have drastically reduced the impact of prospecting on the environment. Therefore for the purpose of this study latest method of prospecting will be used, these will entails a work programme which will be divided into two phases, invasive and non-invasive prospecting. Invasive prospecting do not disturb the land where prospecting will take place e.g., aerial photography, desktop studies, aeromagnetic surveys, etc. Conversely, invasive activities result in land disturbances eg sampling, drilling, bulk sampling, etc. Although this kind of project has a potential to impact on archaeological material and cultural resources, by virtue of the nature of activities associated with prospecting, the impact is very minimal. The area to be disturbed per drilled hole will be approximately 112.5m2.

This report provides a desktop review of cultural heritage resources within the study area, based on published and unpublished literature. The findings of this study have been informed by desktop study. The desktop study, through SAHRIS, publication avenues, the University of Pretoria's Library, and the National Archives (Pretoria), entailed reviewing archaeological and heritage impact assessments conducted around the proposed area. These investigations (desktop study) were conducted to determine if there are any known sites of archaeological or historical significance within the proposed site of interest.

The proposed activity involves prospecting for minerals in the Madibeng area of the North West. Analysis of the archaeological, cultural heritage, environmental and historic contexts of the study area predicted that archaeological sites, cultural heritage sites, historic structures, (isolated) artefacts, and burial grounds (especially dating to the historical era) were likely to be present on the affected landscape, these will be further discussed in this report. The following terminologies are pertinent to the prehistory of the area proposed for development:

Stone Age: Stone Age began with the appearance of early humans who were hunter-gatherers. These people made use of stone as tools, hence the name Stone Age. They also embark in rock art. It can be divided into three phases, Early Stone Age (ESA) (2 000 000 – 150 000 Before Present), Middle Stone Age (MSA) (150 000 – 30 000 BP) and Late Stone Age (LSA) (30 000 until ca. AD 200).

Iron Age: This period is associated with Bantu speaking group, also called farming communities. These people practised agriculture and had domestic animals, they also introduced metal and mining to southern Africa. This era dates from the last 2000 years.

Historical period: This period is associated with the arrival of white settlers in the southern Africa.

The archaeology of the area around the proposed site is rich and varied, and it covers a long span of human history. From the Archaeological Impact Assessment (AIA), Heritage Impact Assessment (HIA), Heritage Management Plan (HMP) and excavation conducted in the region, it is clear that some areas are richer than others, and not all sites are of equally significant. However, the area around the proposed development is rich in archaeological material dating to the Stone Age, and historical building. Archaeological Impact Assessment conducted by Hutten and Hutten (2013) on nearby farm to the proposed area identified lithic artefacts associated with the MSA/or LSA as well as remains of dilapidated farmhouses. Other archaeological assessment conducted in the wider region also recorded small scatters of worked stone flakes (Dreyer 2010, 2011, Morris 2010, 2012, 2013; Morris and Seliane 2006).

The report makes the following recommendations:

- The development wont impact the whole farm, only the few areas will be impacted. The developer should commission an archaeological walk-down survey of the particular sampling points, before any prospecting is conducted, but after the decision of were to be prospected have been taken. This will ensure that no chance archaeological materials are compromised/ disturbed.
- It should be noted that the NW12360PR is located next to the river (Orton and Halkett 2010), As such, these areas should be extra cautioned whenever prospecting is happening around them.
- The developer should induct field worker about archaeology, and steps that should be taken in the case of exposing archaeological materials. Although the area appears to be disturbed to some extent, it should be noted that archaeological material may still be encountered during subsurface construction work.
- If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified, in the meantime activity should not resume until appropriate management provisions are in place.

Conclusions:

The proposed development and planning of prospecting can proceed on condition that an archaeological walk down of the sampling points will be conducted before any prospecting is assigned, but after the decision of were to prospect have been taken. Thus, I recommend that the developer be allowed to proceed with the planning of the project. This will ensure the choosing of the particular sampling points.

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ACRONYMS AND ABBREVIATIONS

AIA	Archaeological Impact Assessment
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
MIA	Middle Iron Age
EIA	Early Iron Age
HMP	Heritage Management Plan
LSA	Late Stone Age
MSA	Middle Stone Age
ESA	Early Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency
NWRA	North West Heritage Resource Authority

GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter *(Burra Charter)*:

Archaeological Material: remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

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

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

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

Cultural landscape: "the combined works of nature and man" and demonstrate "the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external".

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

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

Chance Finds: means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

Compatible use: means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Expansion: means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

Grave: A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

Heritage impact assessment (HIA): Refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

Historic Material: remains resulting from human activities, which are younger than 100 years, but no longer in use, including artifacts, human remains and artificial features and structures.

Impact: the positive or negative effects on human well-being and / or on the environment.

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

Interested and affected parties Individuals: communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

Interpretation: means all the ways of presenting the cultural significance of a place.

Late Iron Age: this period is associated with the development of complex societies and state systems in southern Africa.

Material culture means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Mitigate: The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

Place: means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Protected area: means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers.

Public participation process: A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters.

Setting: means the area around a place, which may include the visual catchment.

Significance: can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

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

1. Introduction

At the request of M2 Precious and Base Metals (Pty) Ltd, Vhubvo Archaeo-Heritage Consultant Cc conducted the desktop study for the proposed prospecting in the Madibeng Local Municipality in Bojanala Platinum District Municipality Province. The aim of the desktop study was to investigate the potential of archaeological sites, and cultural resources in the region proposed for prospecting. The desktop study was conducted in accordance with the SAHRA Minimum Standards for the Archaeology and Palaeontology. The Minimum Standards clearly specify the required content of a desktop report.

Prospecting is the first stage of the geological analysis for minerals and is also known as fossicking. This stage is followed by the exploration stage, providence that prospected minerals are economical viable. Although this kind of project has a potential to impact on archaeological material and cultural resources, by virtue of the nature of activities associated with prospecting, the impact will be very minimal. This report discusses the results of the survey, and eventually several recommendations are given.

M2 Precious and Base Metals submitted maps and all relevant materials related to the locality and extent of the area proposed for prospecting right, and this was assumed to be true.

2. Sites location and description

The projects area is located in Madibeng Local Municipality in Bojanala Platinum District Municipality Province which if for 7 various PR applications within Bokfontein Farm. The area's topography is varied and characterised by lower adulating slopes, to flat section throughout the proposed area. Summary of Project Location Details:

Province:	North Wset
Local Municipalities:	Madibeng
District Municipality:	Bojanala Platinum
Description of proposed development:	Prospecting

Map: 1:50 000 / Google Earth

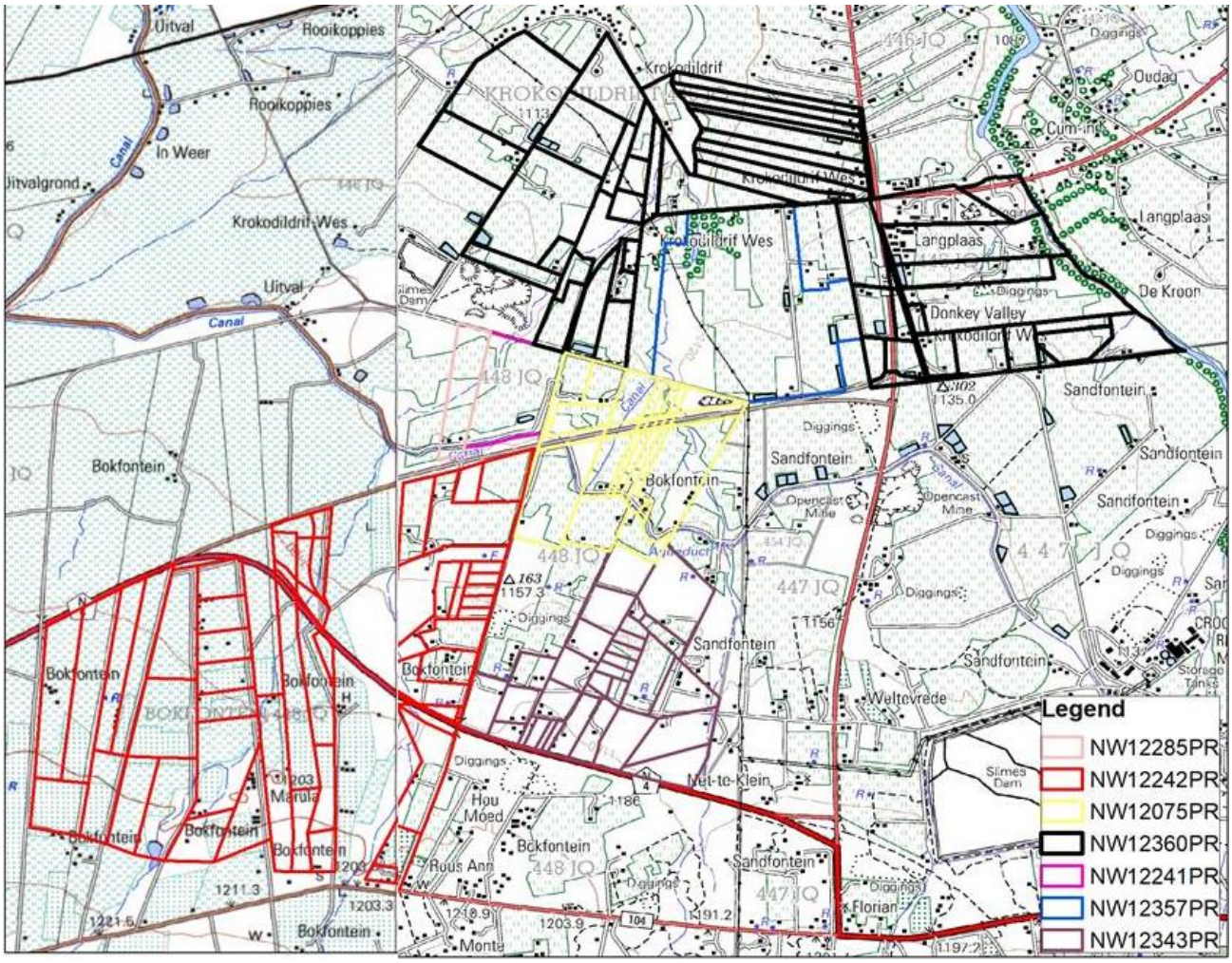

Figure 1: View of the map about the proposed Projects

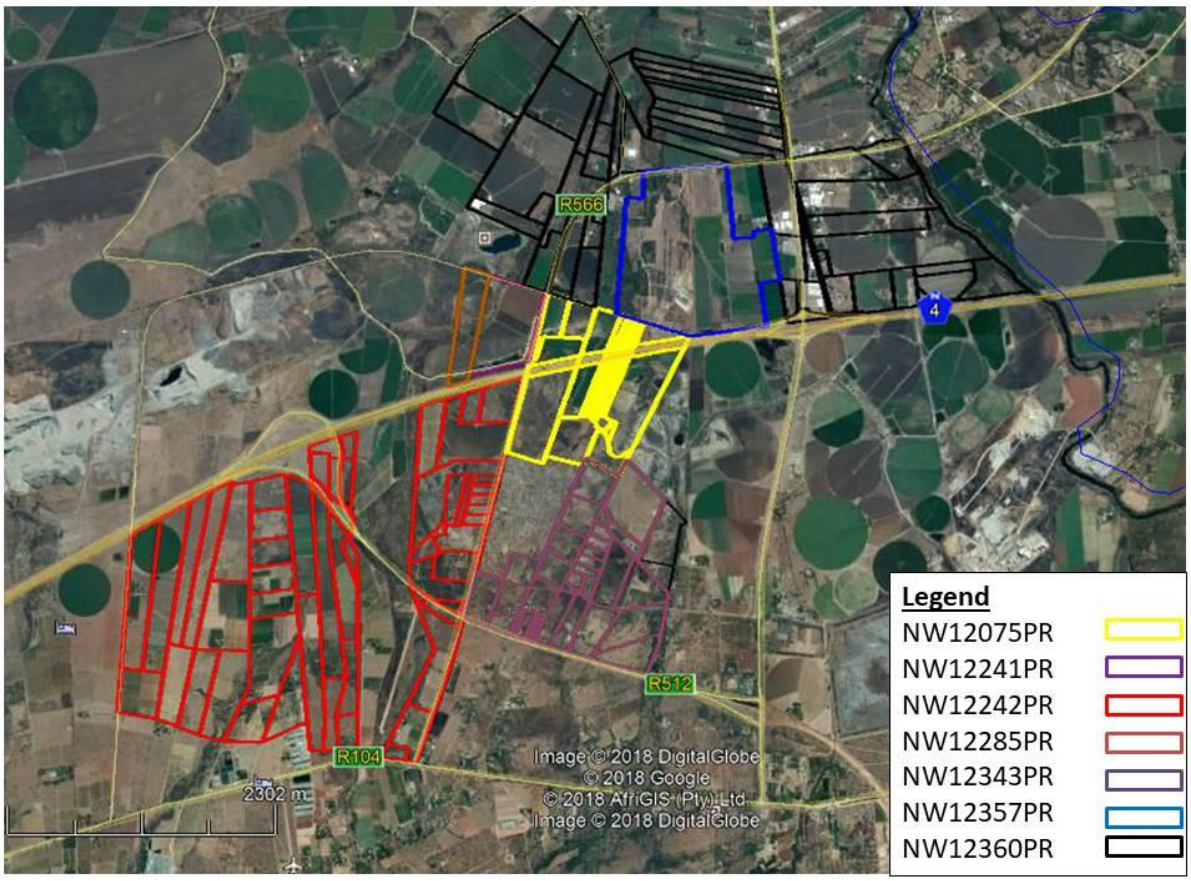

Figure 2: View of the map about the proposed development (Courtesy Google Earth, 2018).

3. Nature of the proposed project

The prospecting work programme will be divided into 2 phases, invasive and non- invasive prospecting:

Non Invasive

These activities do not disturb the land where prospecting will take place e.g. aerial photography, desktop studies, aeromagnetic surveys, etc.

- Desktop analysis (Satellite imagery, available mapping, literature review, etc). The phase has already been initiated through a literature review of geological articles and previous prospecting which took place on site. The synthesis of this information and the use of the information gained from this prospecting cycle will provide the full picture of the deposit as required by the applicants.
- Magnetic Method

Although magnetic methods detect conductive bodies, they will not necessarily find mineralization. Magnetic methods often locate metal sulphides, but may also find non target minerals. In magnetic surveying, the geophysicist measures the strength of the earth's magnetic field. The higher the rock's magnetic susceptibility, the stronger the local magnetic field will be. This method will detect deposits with magnetic minerals, such as iron and nickel ore, but it can also be used for geological mapping. Magnetic surveys can be done on the ground and from the air. An aerial magnetometer is an ultra-sensitive instrument either trailed below an airplane or helicopter or fastened onto the aircraft. By combining these magnetic readings with steady aerial photography, prospectors can outline a magnetic map of a large area.

Invasive:

These activities result in land disturbances e.g. sampling, drilling, bulk sampling, etc

- Reverse Circulation Drilling

The reverse circulation (RC) drilling technique has been in use in exploration since the mid-seventies and can be used in unconsolidated sediments such as alluvial deposits or for drilling rock. Both air and water can be used as the drill flushing medium and both cuttings and core can be recovered. The technique employs a double-walled string of drill rods with either a compressed air driven percussion hammer or a rotating tungsten carbide coring bit at the cutting end of the string. The medium is supplied to the cutting bit between the twin-walled drill rods and returned to the surface up the center of the rods. In the case of percussion drilling the rock chippings are also transported to the surface up the center of the rods and from there, via a flexible pipe, to a cyclone where they are deposited in a sample collection contained.

The advantages of using this method to collect rock chippings, rather than auger, rotary or percussion drilling, are that the entire sample is collected, the method is extremely quick (up to 40 m per hour can be drilled) and there is very little contamination. The specialized rods, the need for a compressor and additional equipment make this a more expensive drilling technique than auger or percussion drilling, but the additional costs are outweighed by the higher quality of sample collection. The dual nature of some RC rigs (chips and core) means that high quality core can be taken through the zone of interest without the need to mobilize a second (core) rig, thus reducing the overall drilling costs.

The planned prospecting work is summarised in the Table below:

Type of prospecting activities planned	**Dimensions**
Drilling	An average depth is 370 m. Drill rigs producing core of NQ diameter will be utilized. The drill hole will have a diameter of between 76.7mm.
Access roads	Decision not yet made. Plan is to make use of existing access roads, however this is subject to approval by the landowner/s and other affected parties and if access roads have to be constructed they will be similar to existing roads in width (generally less than 4 m). Length will be determined by condition of existing access roads.
Ablution facilities	Chemical toilet facilities will be utilised if use of existing facilities is not possible (number of toilets will be controlled by the project phase and number of employees and contractors on-site).
Soil Stockpiling	Stockpiles will not exceed 2.5 metres in height

Existing roads will be used but should there be a need to construct new roads, this will be done with the consultation of the land owner or legal occupier.

Operational Phase

Soil stockpiles will be maintained to a height not exceeding 2.5m.

Decommissioning Phase

Concurrent rehabilitation will be practiced. This will ensure that there is no abundant overburden and topsoil which have to be removed at the closure phase. Nevertheless, the iron prospecting activities do not involve in generation of stockpiles of overburden and topsoil. As temporary structures will be utilised for this prospecting activities, minor or no decommissioning will be required as well as minor rehabilitation will be required

4. Purpose of the Cultural Heritage Study

The purpose of this desktop study was to investigate the archaeology of the area, and is required as a preliminary exercise to identify potential heritage resources which may be impacted during construction and decommissioning phases of the proposed project. The conclusions reached are based on the available literature, an investigation of aerial photographs of the study-area and the consultation of accessible heritage databases and registers. The appointee seeks to assess the value and significance of the known heritage resources found within the study area, as well as to ensure that no known heritage and archaeological sites are compromised during prospecting.

5. Methodology and Approach

Background study introduction

The methodological approach is informed by the 2012 SAHRA Policy Guidelines for impact assessment. As part of this study, the following tasks were conducted: 1) literature review, 2), consultations with the developer and appointed consultants, 3), analysis of the acquired data, leading to the production of this report.

Restrictions and Assumptions

As with any study, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. As a result, should any archaeological/ or grave site be observed during construction, a heritage specialist must immediately be notified. In addition, activities related to the conduction of geo-technical service as noted on site have significantly disturbed the area, such that certain sites could have been disturbed.

6. Applicable Heritage Legislation

Several legislations provide the legal basis for the protection and preservation of both cultural and natural resources. These include the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act (No 103 of 1993); Tourism Act (No. 72 of 1993); Cultural Institution Act (No. 119 of 1998), and the National Heritage Resources Act (Act 25 of 1999).

Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50 m in length; and
(c) any development or other activity which will change the character of an area of land, or water -
- *(i) exceeding 5 000 m² in extent;*
- *(ii) involving three or more existing erven or subdivisions thereof; or*
- *(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
- *(iv) the costs of which will exceed a sum set in terms of regulations by SAHRAor a Provincial Heritage Resources Authority;*

(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a Provincial Heritage Resources Authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of theproposed development.

Section 3 of the National Heritage Resources Act (25 of 1999) lists a wide range of national resources protected under the act as they are deemed to be national estate. When conducting a Heritage Impact Assessment (HIA) the following heritage resources have to be identified:

(a) Places, buildings structures and equipment of cultural significance
(b) Places to which oral traditions are attached or which are associated with livingheritage
(c) Historical settlements and townscapes
(d) Landscapes and natural features of cultural significance
(e) Geological sites of scientific or cultural importance
(f) Archaeological and paleontological 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 Tissue Act,1983 (Act No. 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 paleontological objects and material, meteorites andrare geological specimens*
- *(ii) objects to which oral traditions are attached or which are associated withliving 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, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

Section 3 of the National Heritage Resources Act (No. 25 of 1999) 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
(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 classof South Africa's natural or cultural places or objects
(e) Its importance in exhibiting particular aesthetic characteristics valued by acommunity or cultural group
(f) Its importance in demonstrating a high degree of creative or technicalachievement at particular period
(g) Its strong or special association with a particular community or cultural group forsocial, cultural or spiritual reasons
(h) Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
(i) Sites of significance relating to the history of slavery in South Africa.

Other sections of the Act with a direct relevance to the AIA are the following:
Section 34(1) *No person may alter or demolish any structure or part of a structure, which isolder than 60 years without a permit issued by the relevant provincial heritage resources authority.*

Section 35(4) *No person may, without a permit issued by the responsible heritage resources authority:*

- *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite*

Section 36 (3) *No person may, without a permit issued by SAHRA or a provincial heritage resources authority:*

- *destroy, damage, alter, exhume, remove from its original position orotherwise disturb any grave or burial ground older than 60 yearswhich is situated outside formal cemetery administered by a localauthority; or*
- *bring onto or use at a burial ground or grave any excavationequipment, or any equipment which assists in detection or recovery ofmetals.*

7. Degree of Significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. Large sites, for example, may not be very important, but a small site, on the other hand, may have great significance as it is unique for the region.

Significance rating of sites

(i) High (ii) Medium (iii) Low

This category relates to the actual artefact or site in terms of its actual value as it is found today, and refers more specifically to the condition that the item is in. For example, an archaeological site may be the only one of its kind in the region, thus its regional significance is high, but there is heavy erosion of the greater part of the site, therefore its significance rating would be medium to low. Generally speaking, the following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

High

- This is a 'do not touch' situation, alternative must be sought for the project, examples would be natural and cultural landscapes like the Mapungubwe Cultural Landscape World Heritage Site, or the house in which John Langalibalele resided.
- Certain sites, or features may be exceptionally important, but do not warrant leaving entirely alone. In such cases, detailed mapping of the site and all its features is imperative, as is the collection of diagnostic artefactual material on the surface of the site. Extensive excavations must be done to retrieve as much information as possible before destruction. Such excavations might cover more than half the site and would be mandatory; it would also be advisable to negotiate with the client to see what mutual agreement in writing could be reached, whereby part of the site is left for future research.

Medium

- Sites of medium significance require detailed mapping of all the features and the collection of diagnostic artefactual material from the surface of the site. A series of test trenches and test pits should be excavated to retrieve basic information before destruction.

Low

- These sites require minimum or no mitigation. Minimum mitigation recommended could be a collection of all surface materials and/ or detailed site mapping and documentation. No excavations would be considered to be necessary.

In all the above scenarios, permits will be required from the South African Heritage Resources Agency (SAHRA) or the appropriate PHRA as per the legislation (the National Heritage Resources Act, no. 25 of 1999). Destruction of any heritage site may only take place when a permit has been issued by the appropriate heritage authority. The following table is used to grade heritage resources.

Table 2: Grading systems for identified heritage resources in terms of National Heritage Resources Act (Act 25 of 1999).

Level	Significance	Possible action
National (Grade I)	Site of National Value	Nominated to be declared by SAHRA
Provincial (Grade II)	Site of Provincial Value	Nominated to be declared by PHRA
Local Grade (IIIA)	Site of High Value Locally	Retained as heritage
Local Grade (IIIB)	Site of High Value Locally	Mitigated and part retained as heritage
General Protected Area A	Site of High to Medium	Mitigation necessary before destruction
General Protected Area B	Medium Value	Recording before destruction
General Protected Area C	Low Value	No action required before destruction

8. History of the Area

The North West Province was part of the old Transvaal, and includes most of the parts of the old homeland, Bophuthatswana. The Province is rich with platinum hence it's often called Platinum Province. During the Anglo-Boer War, a Boer force besieged the town of Mafikeng. The British soldiers in the town were trapped for 7 months before they were rescued. In this time, Sol Plaatje worked for the British as an interpreter in Mafikeng. After the war he was one of the founders of the SANNC, a political party that later became the ANC.

North Wests Archaeology/historical classification areas are more controversial but the broad outline is well established, historical sequence of Rustenburg area has been recognized, it follows from the distribution of archaeological sites supported by overwhelming recorded evidence provided by the existence of cultural material finger prints (remains) in which human occupation is made up of pre-colonial elements (Stone Age and Iron Age) as well as the colonial farmers component.

Early humans lived here, discontinuously, for thousands of years, from the Early Stone Age, through what is known as the Middle Stone Age, and well into the Late Stone Age. That Stone Age people occupied the study area is confirmed by the occurrence of stone tools dating to the Early, Middle and Late Stone Age. The majorities of finds are classified as isolated surface occurrences, and mostly date to the Middle Stone Age. Consequently, such finds are judged to have a low significance and they require no mitigation measures. Agro pastoralist, most Iron Age people chose specific habitant in which to live, namely, broken country with alluvial and colluvial soil that could be cultivated In addition to natural features, local climate seemed to be favorable for their survival. Iron Age people moved into southern Africa by c. AD 200, entering the area either by moving down the coastal plains, or by using a more central route with distinctive pottery.

Pottery is the material culture that expresses group identity because it forms a repeated code of cultural symbols, as the design form a repeated code (Huffman 2007). It seems more likely that the first option was what brought people into the study area. From the coast they followed the various rivers inland being cultivators. Iron Age occupation of the region seems to have taken place on a significant scale were they introduce metallurgy and worked with copper and iron. Linguistic and archaeological evidence indicates that these Iron Age inhabitants are most likely the ancestors of the BaTswana and BaSotho, as well as the BaFokeng. Indeed it was only after around 1500AD that the people became distinguishable as BaTswana and BaSotho. The BaKwena were one of the people that arose out of this group (Huffman 2007). Van Schalkwyk (2011) sites dating to the Early Iron Age are known to occur to the south at Broederstroom and Late Iron Age occurs in the region, especially to the north. A typical stone walled sites that can be linked with Tswana- speaker dates to the period after 1600.

The 18th century period was marked by the arrival of the Korana raiders in the area, which were followed by the 19th century traders, explorer and missionaries. By the middle of the 19th century, farms were taken up and later towns were developed-Rustenburg was founded in 1850. David Livingstone, the famous English explorer, came into conflict with Voortrekker in the area in 1840. As part of the London Missionary Society, he reported that the Boers had been welcomed by the Bechuana and Mzilikazi, who had settled in the region after being expelled by Dingaan.

This was followed by a period when farmsteads were developed, as well as infrastructure (e.g. roads). Many of these farms have been in the ownership of families for generations. As a result, they possess a large corpus of information with regarding to the area and its history. A significant number of battles and skirmishes took place in the region, mostly to the north and west of the study area. The remains of blockhouses can be found on many ridges and at river crossings (Van Schalkwyk (2011).

9. Survey Findings

A number of sources were consulted for the desktop study, including the Archaeological Data Recording Centre database of SAHRA and the National Archive of South Africa. From this it is evident that there may be archaeological and grave sites in the area. It is also envisaged that a number of previously unknown sites might exist in the area.

10. Recommendations and Discussions

The proposed project is likely to affect any discernible archaeological sites. The following assumptions are worthy emphasising in the discussion prior to making final recommendations:

- The prospecting area is situated within a developed and partially degraded area, these might have reduced sensitivity for the discovery of new highly significant physical cultural sites remains. However, since archaeological, historical or burial sites can only be validated by a survey, the developer should commission an archaeological walk-down survey of the particular sampling points, before any prospecting is

conducted, but after the decision of were to prospect have been taken. This to ensure that no chance archaeological materials are compromised/ disturbed.

- It should be noted that one of the sites in the area are located in close proximity to the river (Orton and Halkett 2010). As such, this areas should be extra cautioned whenever prospecting is happening around them and a buffer zone of 100m should be.
- The developer should induct field worker about archaeology, and steps that should be taken in the case of exposing archaeological materials. Although the area is vehemently disturbed, it should be noted that archaeological material may still be encountered during subsurface construction work.
- If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified, in the mean time activity should not resume until appropriate management provisions are in place.

Pre-construction education and awareness training

Prior to construction, contractors should be given training on how to identify and protect archaeological remains that may be discovered during the project. The pre-construction training should include some limited site recognition training for the types of archaeological sites that may occur in the construction areas. Below are some of the indicators of archaeological site that may be found during construction:

- Flaked stone tools, bone tools and loose pieces of flaked stone;
- Ash and charcoal;
- Bones and shell fragments;
- Artefacts (e.g., beads or hearths);
- Packed stones which might be uncounted underground, and might indicate a grave or collapse stone walling.

In the event that any of the above are unearthed, all construction within a radius of at least 10m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist or SAHRA officer should be contacted immediately. In the meantime, it is the responsibility of the contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and

punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by SAHRA.

11. Conclusions

A thorough background study of the proposed area for prospecting was conducted and findings were discussed in line with SAHRA guidelines. The study revealed that the study area is located within a cultural landscape dotted with settlements and infrastructure development with a long history. Thus, noting the recommendation mentioned above, it is recommended that the developer is allowed to continue with the planning of the proposed project of prospecting.

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APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site *significance* were developed by SAHRA in 2003. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

(a) Historic value

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

(b) Aesthetic value

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

(c) Scientific value

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

(d) Social value

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

(e) Rarity

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

(f) Representivity

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as

being characteristic of its class?

- Is it important in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality?