

Archaeological and Heritage Resources Impact Assessment

(REQUIRED UNDER SECTION 38(8) OF THE NHRA (No. 25 OF 1999))

OF LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT

ACTIVITIES AT NORTHAM PLATINUM LIMITED

Report Compiled by:



Heritage Contracts and Archaeological Consulting (HCAC)

37 Olienhout Street
Modimolle
0510

Tel: 0823738491
Fax: 086 691 6461
E-Mail: Jaco.heritage@gmail.com

Prism EMS

P.O. Box 1401
Wilgeheuwel
Johannesburg
1736

Tel: 011 475 0210
Fax: 086 601 4800
E-Mail: prism@prismems.co.za

Report Authors:

Mr. J. van der Walt (*MA Archaeology*)

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Report Outline

Appendix 6 of the GNR 326 EIA Regulations published on 7 April 2017 provides the requirements for specialist reports undertaken as part of the environmental authorisation process. In line with this, Table 1 provides an overview of Appendix 6 together with information on how these requirements have been met.

Table 1: Specialist Report Requirements.

Requirement from Appendix 6 of GN 326 EIA Regulation 2017	Chapter
Details of - (i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a curriculum vitae	Section 1 Section 12
Declaration that the specialist is independent on a form as may be specified by the competent authority	<i>Declaration of Independence</i>
Indication of the scope of, and the purpose for which, the report was prepared	Section 1
An indication of the quality and age of base data used for the specialist report	Section 3.4 and 7.1
A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	Section 9
Duration, Date and season of the site investigation and the relevance of the season to the outcome of the assessment	Section 3.4
Description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used	Section 3
Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives	Section 8 and 9
Identification of any areas to be avoided, including buffers	Section 9
Map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	Section 8
Description of any assumptions made and any uncertainties or gaps in knowledge	Section 3.7
A description of the findings and potential implications of such findings on the impact of the proposed activity including identified alternatives on the environment or activities	Section 9
Mitigation measures for inclusion in the EMPr	Section 9 and 10
Conditions for inclusion in the environmental authorisation	Section 9 and 10
Monitoring requirements for inclusion in the EMPr or environmental authorisation	Section 9 and 10
Reasoned opinion - (i) as to whether the proposed activity, activities or portions thereof should be authorised; (iA) regarding the acceptability of the proposed activity or activities; and (ii) if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Section 10.2
Description of any consultation process that was undertaken during the course of preparing the specialist report	Section 6
A summary and copies of any comments received during any consultation process and where applicable all responses thereto	To be included after the public comment period
Any other information requested by the competent authority	Section 10

Executive Summary

Prism EMS were appointed to conduct an Environmental Impact Assessment for the proposed Extended Mining Right Area at Northam Platinum Limited. The study area is located 18km northwest of Northam and 35km south of Thabazimbi in the Thabazimbi Municipality. HCAC was appointed to conduct an Archaeological and Heritage Resources Impact Assessment of the proposed project to determine the presence of cultural heritage sites and the impact of the proposed activities on these non-renewable resources. The study area was assessed both on desktop level and by a high-level site visit.

The study area is known to contain several stone walled sites conforming to the CCP along the base and between the saddles of the hills. These sites consist of central kraals, smaller livestock enclosures, lower grindstones and ceramic scatters. These sites form part of a larger settlement complex dating to the Later Iron Age. Middle Stone Age artefacts are found scattered over the study area with higher frequencies of artefacts found around small hills and rocky outcrops. As this is an underground mine no impact is foreseen on surface indicators of heritage sites. The SAHRIS Paleontological Sensitivity Map indicate that the area is of insignificant paleontological significance. Therefore, no further mitigation prior to construction is recommended in terms of Section 35 for the proposed activities to proceed.

Similarly, no impact is foreseen on the built environment or on burial sites as the proposed activities consist of an underground mine with no surface impacts. No public monuments are located within or close to the study area. The study area is surrounded by mining activities and road infrastructure developments and the proposed activities will not impact negatively on significant cultural landscapes or views. During the public participation process undertaken to date, no heritage concerns were raised.

As this is an underground mine with no surface impacts the impact of the proposed project on heritage resources is considered low and it is recommended that the proposed project can commence on the condition that the following recommendations are implemented as part of the EMP and based on approval from SAHRA.

Any surface infrastructure development will have to be subjected to a Heritage Impact Assessment.

Declaration of Independence


Specialist Name Declaration of Independence	Jaco van der Walt I declare, as a specialist appointed in terms of the National Environmental Management Act (Act No 108 of 1998) and the associated 2014 Environmental Impact Assessment (EIA) Regulations, that I: <ul style="list-style-type: none"> • I act as the independent specialist in this application; • I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant; • I declare that there are no circumstances that may compromise my objectivity in performing such work; • I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity; • I will comply with the Act, Regulations and all other applicable legislation; • I have no, and will not engage in, conflicting interests in the undertaking of the activity; • I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority; • All the particulars furnished by me in this form are true and correct; and • I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.
Signature	
Date	7 July 2017

Table of Contents

APPROVAL PAGE	1
DOCUMENT PROGRESS	2
INDEMNITY AND CONDITIONS RELATING TO THIS REPORT	3
COPYRIGHT	3
REPORT OUTLINE	4
EXECUTIVE SUMMARY	5
DECLARATION OF INDEPENDENCE	1
1 INTRODUCTION AND TERMS OF REFERENCE	1
1.1 TERMS OF REFERENCE	1
1.1.1 <i>Field Study</i>	1
1.1.2 <i>Reporting</i>	1
1.1.3 <i>Expertise of the Specialist</i>	2
2 LEGISLATIVE REQUIREMENTS	6
3 METHODOLOGY	8
3.1 LITERATURE REVIEW	8
3.2 GENEALOGICAL SOCIETY AND GOOGLE EARTH MONUMENTS	8
3.3 PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT	8
3.4 SITE INVESTIGATION.....	8
3.5 SITE SIGNIFICANCE AND FIELD RATING	9
3.6 IMPACT ASSESSMENT METHODOLOGY.....	10
3.7 LIMITATIONS AND CONSTRAINTS OF THE STUDY.....	11
4 DESCRIPTION OF SOCIO ECONOMIC ENVIRONMENT	11
5 DESCRIPTION OF THE PHYSICAL ENVIRONMENT	11
6 RESULTS OF PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT	11
7 LITERATURE / BACKGROUND STUDY	12
7.1 LITERATURE REVIEW	12
7.1.1 <i>Genealogical Society and Google Earth Monuments</i>	12
7.2 GENERAL HISTORY OF THE AREA.....	12
7.2.1 <i>Archaeology of the Area</i>	12
7.3 HISTORICAL BACKGROUND	15
7.4 A BRIEF HISTORY OF THE GENERAL STUDY AREA.....	19

8	FINDINGS OF THE SURVEY	21
8.1	BUILT ENVIRONMENT (SECTION 34 OF THE NHRA)	22
8.2	ARCHAEOLOGICAL AND PALAEOLOGICAL RESOURCES (SECTION 35 OF THE NHRA)	22
8.3	BURIAL GROUNDS AND GRAVES (SECTION 36 OF THE NHRA)	24
8.4	CULTURAL LANDSCAPES, INTANGIBLE AND LIVING HERITAGE	24
8.5	BATTLEFIELDS AND CONCENTRATION CAMPS	24
8.6	POTENTIAL IMPACT	24
8.6.1	<i>Pre-Construction phase</i>	24
8.6.2	<i>Construction Phase</i>	24
8.6.3	<i>Operation Phase</i>	24
9	RECOMMENDATIONS AND CONCLUSION	26
9.1	REASONED OPINION	26
10	REFERENCES	27
11	APPENDICES	29
	CURRICULUM VITAE OF SPECIALIST	29

LIST OF FIGURES

FIGURE 1:	PROVINCIAL LOCALITY MAP (1: 250 000 TOPOGRAPHICAL MAP)	3
FIGURE 2:	REGIONAL LOCALITY MAP (1:50 000 TOPOGRAPHICAL MAP)	4
FIGURE 3:	SATELLITE IMAGE INDICATING THE STUDY AREA IN BLUE (GOOGLE EARTH 2017).	5
FIGURE 4:	MOVEMENT OF BANTU SPEAKING FARMERS (HUFFMAN 2007)	14
FIGURE 5:	ANGLO PLATINUM MAP SHOWING PRESENT-DAY MINING ACTIVITIES ON ELANDSFONTEIN AND GOVERNMENTS PLAATS. (ANGLO PLATINUM 2011).	16
FIGURE 6:	MAP OF THE FARM ELANDSFONTEIN 366 KQ AND THE PROPOSED BLACK RESIDENTIAL DEVELOPMENTS THEREON (NATIONAL ARCHIVES OF SOUTH AFRICA, 1973).	17
FIGURE 7:	1921 RUSTENBURG MAGISTERIAL MAP, INDICATING THE LOCATION OF ELANDSFONTEIN, MODDERGAT AND GOVERNMENT PLAATS THEN KNOWN AS GOUVERNEMENTS-PLAATS AND ITS NEIGHBOURING FARMS. (NATIONAL ARCHIVES OF SOUTH AFRICA, 1921).	18
FIGURE 8:	HERITAGE SENSITIVE AREAS.	21
FIGURE 9:	EXAMPLE OF TOOLS FOUND IN THE AREA.	22
FIGURE 10:	EXAMPLE OF STONE WALLED SITES IN THE STUDY AREA.	23
FIGURE 11:	STUDY AREA LOCATED IN AN AREA OF LOW SIGNIFICANCE ON THE SAHRIS PALEONTOLOGICAL MAP.	23

LIST OF TABLES

TABLE 1: SPECIALIST REPORT REQUIREMENTS.	4
TABLE 2: PROJECT DESCRIPTION.	2
TABLE 3: INFRASTRUCTURE AND PROJECT ACTIVITIES.	2
TABLE 4: SITE INVESTIGATION DETAILS.	8
TABLE 5: FIELD RATINGS.	10
TABLE 6: IMPACT OF THE PROJECT ON HERITAGE RESOURCES.	24

ABBREVIATIONS

AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
BGG	Burial Ground and Graves
BIA	Basic Impact Assessment
CFP	Chance Find Procedures
CMP	Conservation Management Plan
CRR	Comments and Response Report
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment*
EIA	Early Iron Age*
EMP	Environmental Management Programme
ESA	Early Stone Age
ESIA	Environmental and Social Impact Assessment
GIS	Geographical Information System
GPS	Global Positioning System
GRP	Grave Relocation Plan
HIA	Heritage Impact Assessment
HTA	Human Tissues Act
LIA	Late Iron Age
LSA	Late Stone Age
MEC	Member of the Executive Council
MIA	Middle Iron Age
MPRDA	Mineral and Petroleum Resources Development Act
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NID	Notification of Intent to Develop
NoK	Next-of-Kin
PHRA	Provincial Heritage Resource Agency
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency

**Although EIA refers to both Environmental Impact Assessment and the Early Iron Age both are internationally accepted abbreviations and must be read and interpreted in the context it is used.*

GLOSSARY

Archaeological site (remains of human activity over 100 years old)

Early Stone Age (~ 2.6 million to 250 000 years ago)

Middle Stone Age (~ 250 000 to 40-25 000 years ago)

Later Stone Age (~ 40-25 000, to recently, 100 years ago)

The Iron Age (~ AD 400 to 1840)

Historic (~ AD 1840 to 1950)

Historic building (over 60 years old)

1 INTRODUCTION AND TERMS OF REFERENCE

Heritage Contracts and Archaeological Consulting CC (“**HCAC**”) were appointed by Prism Environmental Management Services (“**Prism EMS**”) to conduct an Archaeological and Heritage Resources Impact Assessment of the proposed mining activities. The report forms part of the Environmental Impact Assessment Report (EIA) and Environmental Management Programme Report (EMPR) Amendment for the Northam Platinum Limited (“**Northam**”).

The aim of the study was to assess the impact of the proposed project on non-renewable heritage resources, and to submit appropriate recommendations with regard to the responsible cultural resources management measures that might be required to assist the developer in managing the discovered heritage resources in a responsible manner. It was also conducted to protect, preserve, and develop such resources within the framework provided by the National Heritage Resources Act of 1999 (Act No 25 of 1999). The report outlines the approach and methodology utilized before and during the survey, which includes: Phase 1, review of relevant literature; Phase 2, a high-level field survey of portions of the study area was conducted; Phase 3, reporting the outcome of the study.

General site conditions and features on sites were recorded by means of photographs, GPS locations, and site descriptions. Possible impacts were identified and mitigation measures are proposed in the following report. SAHRA as a commenting authority under section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) require all environmental documents, compiled in support of an Environmental Authorisation application as defined by NEMA EIA Regs section 40 (1) and (2), to be submitted to SAHRA. As such the Basic Assessment report and its appendices must be submitted to the case as well as the EMPr, once it's completed by the Environmental Assessment Practitioner (EAP).

1.1 Terms of Reference

1.1.1 Field Study

Conduct a field study to:

- locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest;
- record GPS points of sites/areas identified as significant areas;
- determine the levels of significance of the various types of heritage resources potentially affected by the proposed activities.

1.1.2 Reporting

Report on the identification of anticipated and cumulative impacts the operational units of the proposed project activity may have on the identified heritage resources for all 3 phases of the project; i.e., construction, operation and decommissioning phases. Consider alternatives, should any significant sites be impacted adversely by the proposed project. Ensure that all studies and results comply with the relevant legislation, SAHRA minimum standards and the code of ethics and guidelines of ASAPA.

To assist the developer in managing the discovered heritage resources in a responsible manner, and to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act No 25 of 1999).

Table 2: Project Description.

Size of farm and portions	1632,2827 hectares on: 1. A part of the remainder of farm Elandsfontein 386-KQ 2. A part of Ptn 1 of farm Elandsfontein 386-KQ 3. A part of Ptn 2 of farm Moddergat 389-KQ 4. A part of the remainder of farm Moddergat 389-KQ 5. A part of the remainder of farm Goevernements Plaats 417-KQ 6. A part of the remainder of Ptn 1 of farm Goevernements Plaats 417-KQ 7. A part of Ptn 2 of farm Goevernements Plaats 417-KQ 8. A part of the remainder of Ptn 3 of farm Goevernements Plaats 417-KQ 9. A part of Ptn 4 of farm Goevernements Plaats 417-KQ 10. Ptn 7 of farm Goevernements Plaats 417-KQ
Magisterial District	Thabazimbi
1: 50 000 map sheet number	2427CD
Central co-ordinate of the activities	24° 51' 42.5047" S 27° 18' 35.1470" E

Table 3: Infrastructure and project activities.

Type of development	Mining Activities
Project size	1632,2827 hectares
Project Components	Underground mining of Merensky and access to the UG2 Reefs

1.1.3 Expertise of the Specialist

Jaco van der Walt has been practising as a CRM archaeologist for 15 years. He obtained an MA degree in Archaeology from the University of the Witwatersrand focussing on the Iron Age in 2012 and is a PhD candidate at the University of Johannesburg focussing on Stone Age Archaeology with specific interest in the Middle Stone Age (MSA) and Later Stone Age (LSA). Jaco van der Walt is an accredited member of ASAPA (#159) and have conducted more than 500 impact assessments in Limpopo, Mpumalanga, North West, Free State, Gauteng, KZN as well as he Northern and Eastern Cape Provinces in South Africa.

Jaco van der Walt has worked on various international projects in Zimbabwe, Botswana, Mozambique, Lesotho, DRC Zambia and Tanzania. Through this he has a sound understanding of the IFC Performance Standard requirements, with specific reference to Performance Standard 8 – Cultural Heritage.

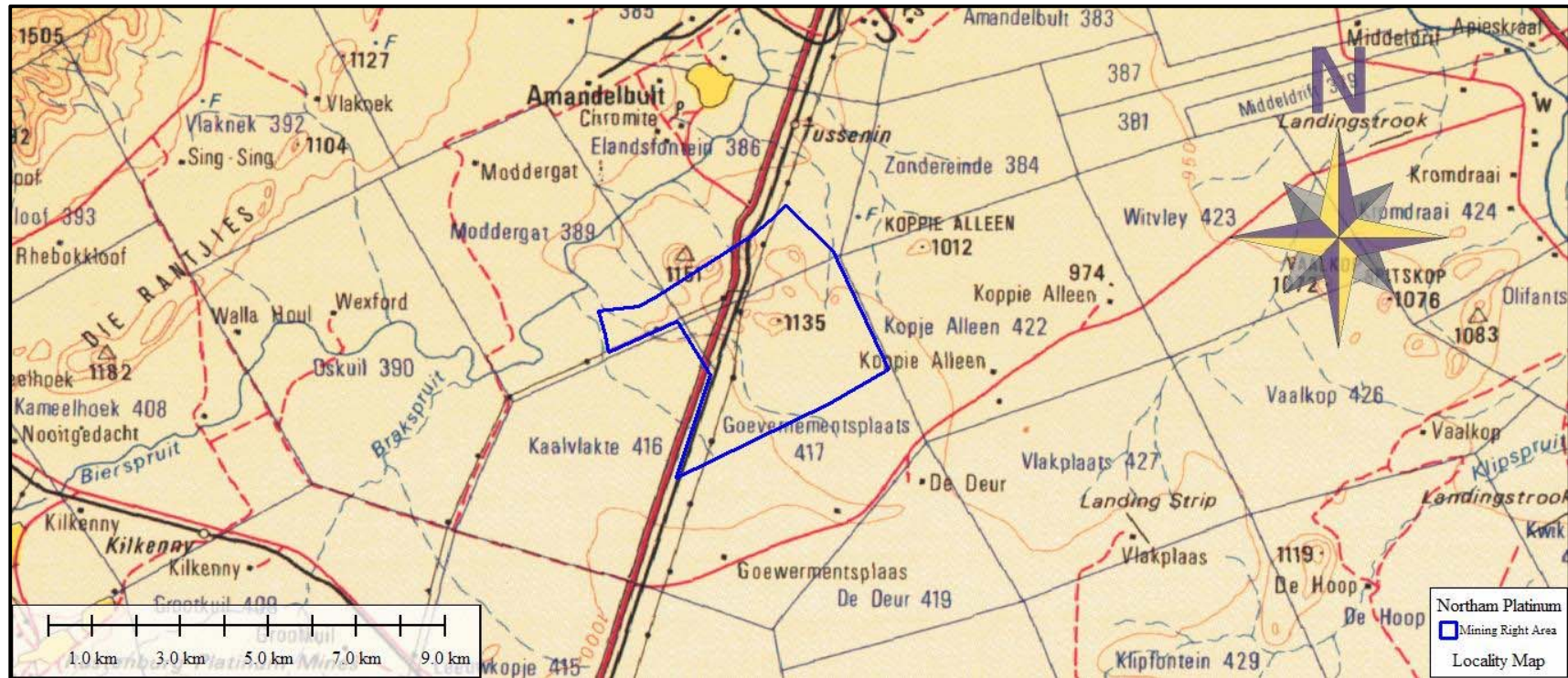


Figure 1: Provincial locality map (1: 250 000 topographical map).

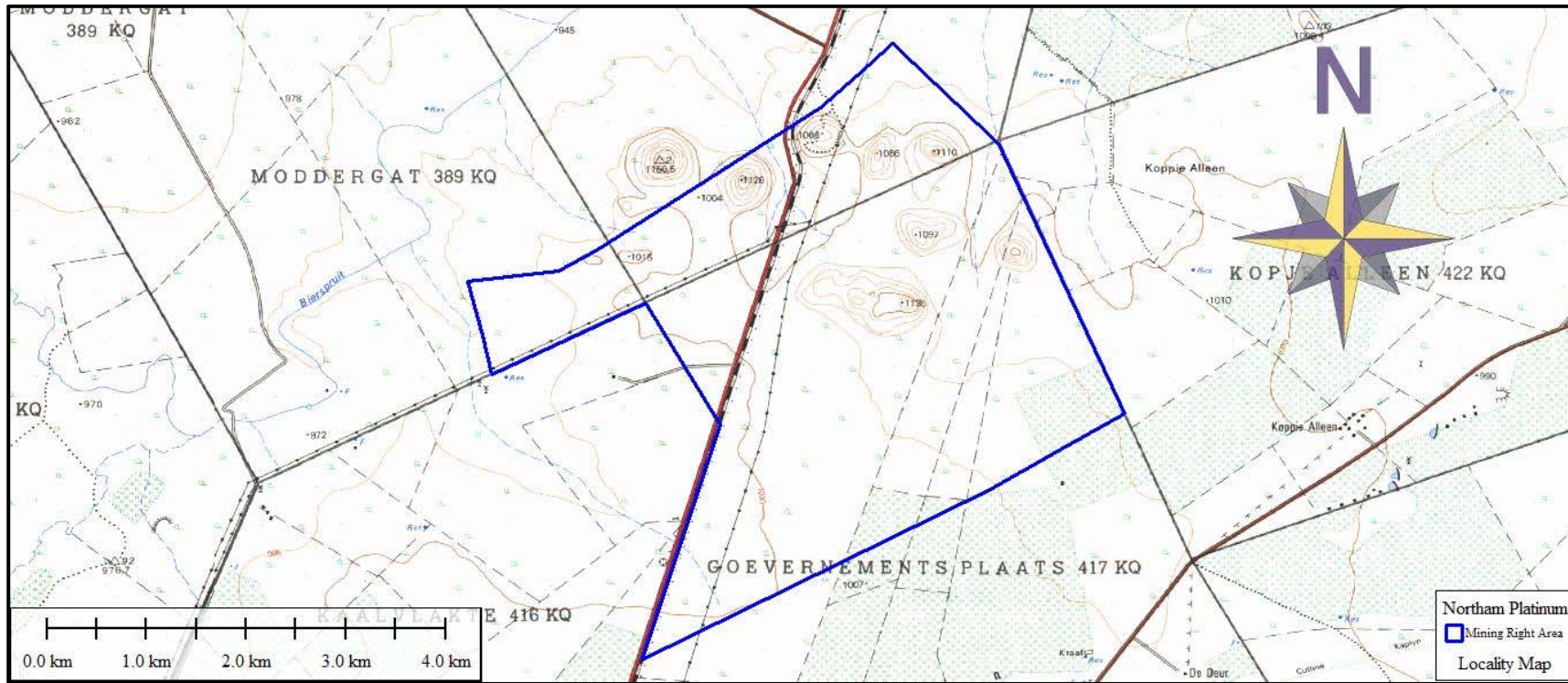


Figure 2: Regional locality map (1:50 000 topographical map).



Figure 3: Satellite image indicating the study area in blue (Google Earth 2017).

2 LEGISLATIVE REQUIREMENTS

The HIA, as a specialist sub-section of the EIA, is required under the following legislation:

- National Heritage Resources Act (NHRA), Act No. 25 of 1999)
- National Environmental Management Act (NEMA), Act No. 107 of 1998 - Section 23(2)(b)
- Mineral and Petroleum Resources Development Act (MPRDA), Act No. 28 of 2002 - Section 39(3)(b)(iii)

A Phase 1 HIA is a pre-requisite for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of specialist input is to:

- Identify any heritage resources, which may be affected;
- Assess the nature and degree of significance of such resources;
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;
- Assess the negative and positive impact of the activities/development on these resources; and
- Make recommendations for the appropriate heritage management of these impacts.

The HIA should be submitted, as part of the impact assessment report or EMPr, to the PHRA if established in the province or to SAHRA. SAHRA will ultimately be responsible for the professional evaluation of Phase 1 reports upon which review comments will be issued. 'Best practice' requires Phase 1 reports and additional development information, as per the impact assessment report and/or EMPr, to be submitted in duplicate to SAHRA after completion of the study. SAHRA accepts Phase 1 AIA reports authored by professional archaeologists, accredited with ASAPA or with a proven ability to do archaeological work.

Minimum accreditation requirements include an Honours degree in Archaeology or related discipline and 3 years post-university CRM experience (field supervisor level). Minimum standards for reports, site documentation and descriptions are set by ASAPA in collaboration with SAHRA. ASAPA is based in South Africa, representing professional archaeology in the SADC region. ASAPA is primarily involved in the overseeing of ethical practice and standards regarding the archaeological profession. Membership is based on proposal and secondment by other professional members.

Phase 1 AIA's are primarily concerned with the location and identification of heritage sites situated within a proposed development area. Identified sites should be assessed according to their significance. Relevant conservation or Phase 2 mitigation recommendations should be made. Recommendations are subject to evaluation by SAHRA.

Conservation or Phase 2 mitigation recommendations, as approved by SAHRA, are to be used as guidelines in the developer's decision-making process. Phase 2 archaeological projects are primarily based on salvage/mitigation excavations preceding development destruction or impact on a site. Phase 2 excavations can only be conducted with a permit, issued by SAHRA to the appointed archaeologist. Permit conditions are prescribed by SAHRA and includes (as minimum requirements) reporting back strategies to SAHRA and deposition of excavated material at an accredited repository.

In the event of a site conservation option being preferred by the developer, a site management plan, prepared by a professional archaeologist and approved by SAHRA, will suffice as minimum requirement.

After mitigation of a site, a destruction permit must be applied for with SAHRA by the applicant before the proposed activities may proceed.

Human remains older than 60 years are protected by the NHRA, with reference to Section 36. Graves older than 60 years, but younger than 100 years fall under Section 36 of NHRA, as well as the HTA, and are the jurisdiction of SAHRA. The procedure for Consultation Regarding Burial Grounds and Graves

(Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in this age category, located inside a formal cemetery administrated by a local authority, require the same authorisation as set out for graves younger than 60 years, in addition to SAHRA authorisation. If the grave is not situated inside a formal cemetery, but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws, set by the cemetery authority, must be adhered to.

Human remains that are less than 60 years old are protected under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925), as well as the HTA, and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning; or in some cases, the MEC for Housing and Welfare. Authorisation for exhumation and reinternment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. To handle and transport human remains, the institution conducting the relocation should be authorised under Section 24 of HTA.

3 METHODOLOGY

3.1 Literature Review

A brief survey of available literature was conducted to extract data and information on the area in question to provide general heritage context into which the activities would be set. This literature search included published material, unpublished commercial reports and online material, including reports sourced from the South African Heritage Resources Information System (SAHRIS).

3.2 Genealogical Society and Google Earth Monuments

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where sites of heritage significance might be located; these locations were marked and visited during the field work phase. The database of the Genealogical Society was consulted to collect data on any known graves in the area.

3.3 Public Consultation and Stakeholder Engagement

Stakeholder engagement is a key component of any BAR process, it involves stakeholders interested in, or affected by the proposed activities. Stakeholders are provided with an opportunity to raise issues of concern (for the purposes of this report only heritage related issues will be included). The aim of the public consultation process was to capture and address any issues raised by community members and other stakeholders during key stakeholder and public meetings. The process involved:

- Placement of advertisements and site notices
- Stakeholder notification (through the dissemination of information and meeting invitations)
- Stakeholder meetings undertaken with I&APs
- Authority Consultation
- The compilation of a Basic Assessment Report (BAR)
- The compilation of a Comments and Response Report (CRR)

3.4 Site Investigation

A high-level field survey of portions of the study area was conducted and the results of previous surveys were used to inform the results of this report.

Table 4: Site Investigation Details.

	Site Investigation
Date	2016 & 2017
Season	Early Winter – vegetation in the study area is relatively low and archaeological visibility is high.

3.5 Site Significance and Field Rating

Section 3 of the NHRA 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:

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

The presence and distribution of heritage resources define a 'heritage landscape'. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area, or a representative sample, depending on the nature of the project. In the case of the proposed project the local extent of its impact necessitates a representative sample and only the footprint of the Extended Mining Right Area were surveyed. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface. This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites.

The following criteria were used to establish site significance with cognisance of Section 3 of the NHRA:

- The unique nature of a site
- The integrity of the archaeological/cultural heritage deposits
- The wider historic, archaeological and geographic context of the site
- The location of the site in relation to other similar sites or features
- The depth of the archaeological deposit (when it can be determined/is known)
- The preservation condition of the sites
- Potential to answer present research questions

In addition to this criteria field ratings prescribed by SAHRA (2006), and acknowledged by ASAPA for the SADC region, were used for the purpose of this report. The recommendations for each site should be read in conjunction with Section 10 of this report.

Table 5: Field Ratings

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction

3.6 Impact Assessment Methodology

The criteria below are used to establish the impact rating on sites:

- The **nature**, which shall include a description of what causes the effect, what will be affected and how it will be affected
- The **extent**, wherein it will be indicated whether the impact will be local (limited to the Extended Mining Right Area) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high)
- The **duration**, wherein it will be indicated whether:
 - * the lifetime of the impact will be of a very short duration (0-1 years), assigned a score of 1
 - * the lifetime of the impact will be of a short duration (2-5 years), assigned a score of 2
 - * medium-term (5-15 years), assigned a score of 3
 - * long term (> 15 years), assigned a score of 4
 - * permanent, assigned a score of 5
- The **magnitude**, quantified on a scale from 0-10 where; 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The **probability of occurrence**, which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1-5 where; 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- **The significance**, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and
 - the status, which will be described as either positive, negative or neutral.
 - the degree to which the impact can be reversed.
 - the degree to which the impact may cause irreplaceable loss of resources.
 - the degree to which the impact can be mitigated.

The **significance** is calculated by combining the criteria in the following formula:

$$S=(E+D+M)P$$

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The **significance weightings** for each potential impact are as follows:

- < 30 points: Low (i.e., where this impact would not have a direct influence on the decision to develop in the area),
- 30-60 points: Medium (i.e., where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- 60 points: High (i.e., where the impact must have an influence on the decision process to develop in the area).

3.7 Limitations and Constraints of the Study

The authors acknowledge that the brief literature review is not exhaustive on the literature of the area. Due to the high-level scan and subsurface nature of archaeological artefacts, the possibility exists that some features or artefacts may not have been discovered/recorded during the survey and the possible occurrence of unmarked graves and other cultural material cannot be excluded. Similarly, the depth of the deposit of heritage sites cannot be accurately determined due its subsurface nature. This report only deals with the footprint area of the proposed activities mostly based on a desktop assessment. This study did not assess the impact on medicinal plants and intangible heritage as it is assumed that these components would have been highlighted through the public consultation process if relevant. It is possible that new information could come to light in future, which might change the results of this Impact Assessment.

4 DESCRIPTION OF SOCIO ECONOMIC ENVIRONMENT

The Thabazimbi IDP indicates that “*Thabazimbi lies within the southern African bushveld eco region of Limpopo, renowned for cattle ranching and game farming. Platinum and iron ore mining are major contributors to the economy of the region. The total area of the Thabazimbi Local Municipality is approximately 986 264.85 ha. It consists mainly of commercial farms, game farming, etc. but a few towns and informal settlements are found in the area. There are no former homeland areas located within the municipal area.*” The unemployment rate is at around 20%.

5 DESCRIPTION OF THE PHYSICAL ENVIRONMENT

The topography of the area is relatively flat characterised by deep turf and sandy soils. The study area falls within a Savannah Biome with the bioregion described by Mucina *et al* (2006) as the Central Bushveld Bioregion with the vegetation described as Dwaalboom Thornveld. Land use in the general area is characterized by mining and agriculture, dominated by game and cattle farming as well as chrome mines. Several small hills occur in the study area that would have been focal points in antiquity.

6 RESULTS OF PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT

Adjacent landowners and the public at large were informed of the proposed activity as part of the EIA process. Site notices and advertisements notifying interested and affected parties were placed at strategic points and in local newspapers as part of the process.

7 LITERATURE / BACKGROUND STUDY

7.1 Literature Review

On the 1:50 000 map sheet 2427 CD several sites are on record for the larger study area at the Wits Archaeological database consisting of historic and LIA (Moloko) sites. Several previous CRM surveys are on record for the larger study area e.g. van Schalkwyk (2004), Huffman (2006) and van der Walt (2009; 2014 and 2016).

Mitigation conducted in the study area by the National Cultural History Museum on the farm Elandsfontein 386 KQ, Amandelbult Platinum Mine (van Schalkwyk 2004) included the survey and mapping of sites in and around the Madeleine Robinson Nature Reserve of the Amandelbult Platinum Mine as part of the proposed extension of the mines operations into the area. From the survey, several stone walled sites conforming to the CCP were identified along the base and between the saddles of the hills. Sites contained central kraals, smaller livestock enclosures, lower grindstones and ceramic scatters. These sites form part of a larger settlement complex dating to the Later Iron Age.

Mitigation of the Rhino Andalusite Mine by Archaeological Resources Management (ARM) (Huffman 2006) to the north of the study area resulted in excavation and recording of several Early and Late Iron Age sites. Specifically, the Happy Rest and Mzonjani facies (EIA) and the Icon and Madikwe facies of the Moloko group (LIA) have been identified. Additionally, ancient mine workings for ochre have been identified. A Survey for the Cronimet Underground Mine and Process Plant (van der Walt & du Piesanie 2009) recorded 37 sites ranging from historic dwellings, graves, MSA and Iron Age sites. Some of these are located within the current study area.

7.1.1 Genealogical Society and Google Earth Monuments

No cemeteries have been identified for the area under investigation.

7.2 General History of the Area

7.2.1 Archaeology of the Area

South Africa has one of the longest archaeological sequences in the world because humanity evolved in the area stretching from the Cape to Ethiopia. Most of this sequence covers the times when our ancestors used stone tools. It is worthwhile, thus, to review the archaeological record for southern Africa and to place in context the known occurrences. The archaeology of the area can be divided into the Stone Age, Iron Age and Historical timeframe. These can be divided as follows:

7.2.1.1 Stone Age

South Africa has a long and complex Stone Age sequence of more than 2 million years. The broad sequence includes the Later Stone Age, the Middle Stone Age and the Earlier Stone Age. Each of these phases contains sub-phases or industrial complexes, and within these we can expect regional variation regarding characteristics and time ranges. For Cultural Resources Management (CRM) purposes it is often only expected or possible to identify the presence of the three main phases. Yet sometimes the recognition of cultural groups, affinities or trends in technology and/or subsistence practices, as represented by the sub-phases or industrial complexes, is achievable (Lombard 2011). The three main phases can be divided as follows;

- Later Stone Age; associated with Khoi and San societies and their immediate predecessors. Recently to ~30 thousand years ago.
- Middle Stone Age; associated with Homo sapiens and archaic modern humans. 30-300 thousand years ago.

- Earlier Stone Age; associated with early Homo groups such as Homo habilis and Homo erectus. 400 000-> 2 million years ago.

Early Stone Age

The Early Stone Age in Southern Africa is defined by the Oldowan complex, primarily found at the sites Sterkfontein, Swartkrans and Kromdraai, situated within the Cradle of Humankind, just outside Johannesburg (Kuman, 1998). Within this complex, tools are more casual and expediently made and tools consist of rough cobble cores and simple flakes. The flakes were used for such activities as skinning and cutting meat from scavenged animals. This industry is unlikely to occur in the study area.

The second complex is that of the more common Acheulean, defined by large handaxes and cleavers produced by hominids at about 1.4 million years ago (Deacon & Deacon, 1999). Among other things these Acheulian tools were probably used to butcher large animals such as elephants, rhinoceros and hippopotamus that had died from natural causes. Acheulian artefacts are usually found near the raw material from where they were quarried, at butchering sites, or as isolated finds. No Acheulian sites are on record near the project area, but isolated finds are possible. However, isolated finds have little value. Therefore, the project is unlikely to disturb a significant site.

Middle Stone Age

During the Middle Stone Age, significant changes start to occur in the evolution of the human species. These changes manifest themselves in the complexity of the stone tools created, as seen in the diversity of tools, the standardisation of these tools over a wide spread area, the introduction of blade technology, and the development of ornaments and art. What these concepts ultimately attest to is an increase or development of abstract thinking. By the beginning of the Middle Stone Age (MSA), tool kits included prepared cores, parallel-sided blades and triangular points hafted to make spears (Volman, 1984). MSA people had become accomplished hunters by this time, especially of large grazing animals such as wildebeest, hartebeest and eland.

These hunters are classified as early humans, but by 100,000 years ago, they were anatomically fully modern. The oldest evidence for this change has been found in South Africa, and it is an important point in debates about the origins of modern humanity. In particular, the degree to which behaviour was fully modern is still a matter of debate. The repeated use of caves indicates that MSA people had developed the concept of a home base and that they could make fire. These were two important steps in cultural evolution (Deacon & Deacon, 1999). Accordingly, if there are caves in the study area, they may be sites of archaeological significance. MSA artefacts are common throughout Southern Africa, but unless they occur in undisturbed deposits, they have little significance. Some MSA sites are on record close to the Mining Right Area.

Later Stone Age

By the Late Stone Age, human beings are anatomically and culturally modern. Tools associated with this time period are specialised, and commonly associated with hunter-gatherer groups. It is also within this period that contacts with migrating groups occur throughout southern Africa. Initial contact was between hunter-gatherer groups and expanding Bantu farming societies, and secondly with the arrival of colonist along the coast.

San rock art has a well-earned reputation for aesthetic appeal and symbolic complexity (Lewis-Williams, 1981). Several rock art sites are on record to the north and east of the general project area.

In addition to art, LSA sites contain diagnostic artefacts, including microlithic scrapers and segments made from very fine-grained rock (Wadley, 1987). Spear hunting probably continued, but LSA people also hunted small game with bows and poisoned arrows. Sites in the open are usually poorly preserved and therefore have less value than sites in caves or rock shelters. If there are rock shelters or caves in the Extended Mining Right Area, they may contain LSA sites of significance. The closest Stone Age terrain to the

Extended Mining Right Area is located a small distance to the west thereof. This Early Stone Age terrain is situated near the Rooiberg Hill and the Blaauwberg Stone Age Terrain (Bergh 1999: 4).

7.2.1.2 Iron Age (General)

The Iron Age as a whole represents the spread of Bantu speaking people and includes both the pre-Historic and Historic periods. It can be divided into three distinct periods:

- The Early Iron Age: Most of the first millennium AD
- The Middle Iron Age: 10th to 13th centuries AD
- The Late Iron Age: 14th century to colonial period

The Iron Age is characterised by the ability of these early people to manipulate and work Iron ore into implements that assisted them in creating a favourable environment to make a better living.

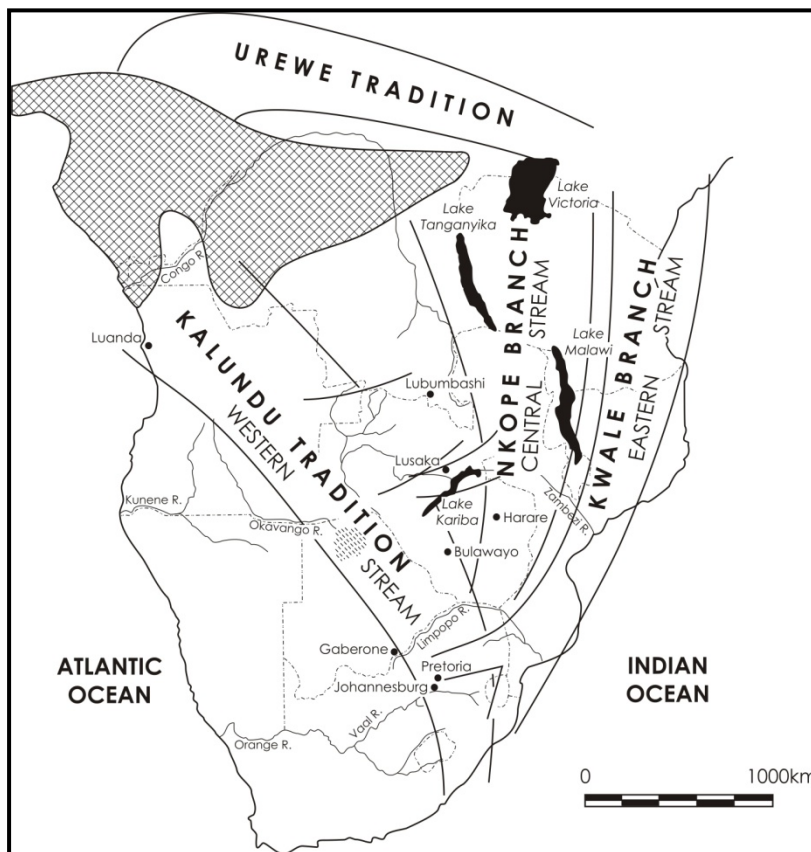


Figure 4: Movement of Bantu speaking farmers (Huffman 2007)

Early Iron Age

Early in the first millennium AD, there seem to be a significant change in the archaeological record of the greater part of eastern and Southern Africa lying between the equator and Natal. This change is marked by the appearance of a characteristic ceramic style that belongs to a single stylistic tradition. These Early Iron Age people practised a mixed farming economy and had the technology to work metals like iron and copper. A meaningful interpretation of the Early Iron Age has been hampered by the uneven distribution of research conducted so far; this can be partly attributed to the poor preservation of these early sites.

Sites belonging to the EIA consisting of *Happy Rest* and *Mzonjani facies* have been recorded to the north of the project area. Happy Rest and Mzonjani pottery form part of two traditions (Kalundu and Urewe) that represent the spread of mixed farmers into southern Africa during the Early Iron Age (See Figure 4). This find is important as it provides evidence for early interaction between these groups. Later, by the 8th and 9th centuries, the two merged to form a new facies, *Doornkop*.

Middle Iron Age

No sites dating to this period are on record close to the Extended Mining Right Area.

Late Iron Age

For the area in question the history and archaeology of the Sotho Tswana are of interest. The ceramic sequence for the Sotho Tswana is referred to as Moloko and consists of different facies with origins in either the Icon facies or a different branch associated with Nguni speakers. Several sites belonging to the Madikwe and Olifantspoort facies (from Icon) have been recorded close to the project area. These sites date to between AD 1500 and 1700 and predate stone walling ascribed to Sotho-Tswana speakers. Sotho Tswana stonewalled sites with Uitkomst pottery have been found close to the study area and dates to the seventeenth to nineteenth centuries. Stone walled sites belonging to the LIA have also been identified next to the Extended Mining Right Area but so far have not been linked to a cultural group.

Late Iron Age peoples were attracted to the area because of the relatively fertile soils around the hills and valleys, and because of the iron ore and red ochre. Mining techniques associated with the ancient mine workings are the same as those found in the Rooiberg area some 30km from Thabazimbi (Huffman 2006). Three groups are found in the Rooiberg area, specifically Madikwe, Melora and Rooiberg groups. Stratigraphically, the relationship between Madikwe and Rooiberg is evident where the Madikwe site 20/85 lies underneath the Rooiberg site 11/85, suggesting that Rooiberg is the more recent (Mason 1986). Ceramic evidence suggests then that at one time Sotho-Tswana people were mining at Rooiberg. The ceramic evidence from the Rhino Andalusite Mine shows that the Sotho-Tswana people living there were directly related to the miners at Rooiberg: both belonged to the Western Sotho-Tswana cluster. Therefore, the relationship, between the ochre mine and Madikwe settlements, is of importance. Associated with the Madikwe settlements, in addition to the ochre mine is the several maize grindstones found.

Trade connections for ochre and tin have a bearing on the presence of maize. Trade networks spanned a wide area, up to the Zimbabwe culture area in the north, and as far as Maputo in the east before the arrival of the Dutch (Friede & Steel 1976). Maize came to Maputo sometime after the early 16th century through Portuguese trade with the New World. The grindstones found at the site CB14 in the Rhino Andalusite Mine indicate that maize was grown in the Thabazimbi area during the 17th century (Huffman 2006). If one accepts the grindstone as diagnostic, then maize was cultivated some 150 years earlier than in KwaZulu-Natal.

Evidence for Iron Age activity will most likely be concentrated along water courses and rocky outcrops marked by ceramic clusters or dry-stone walling and similar sites are expected within the mining right area.

7.3 Historical Background

The historic timeframe sometimes intermingles with the later parts of the Stone and Iron Age, and can loosely be regarded as times when written and oral accounts of incidents became available.

Since the mid 1800's up until the present, South Africa had been classified into various different districts. In 1848, farms in the study area would have been located in the Soutpansberg District. Since 1851, however, the farm area formed part of the Rustenburg District. This remained the case up until 1977, when the country was subdivided into various smaller Magisterial Districts. The study area fell under the authority of the Thabazimbi Magisterial District. This still remains the case today (Bergh 1999: 17-27).

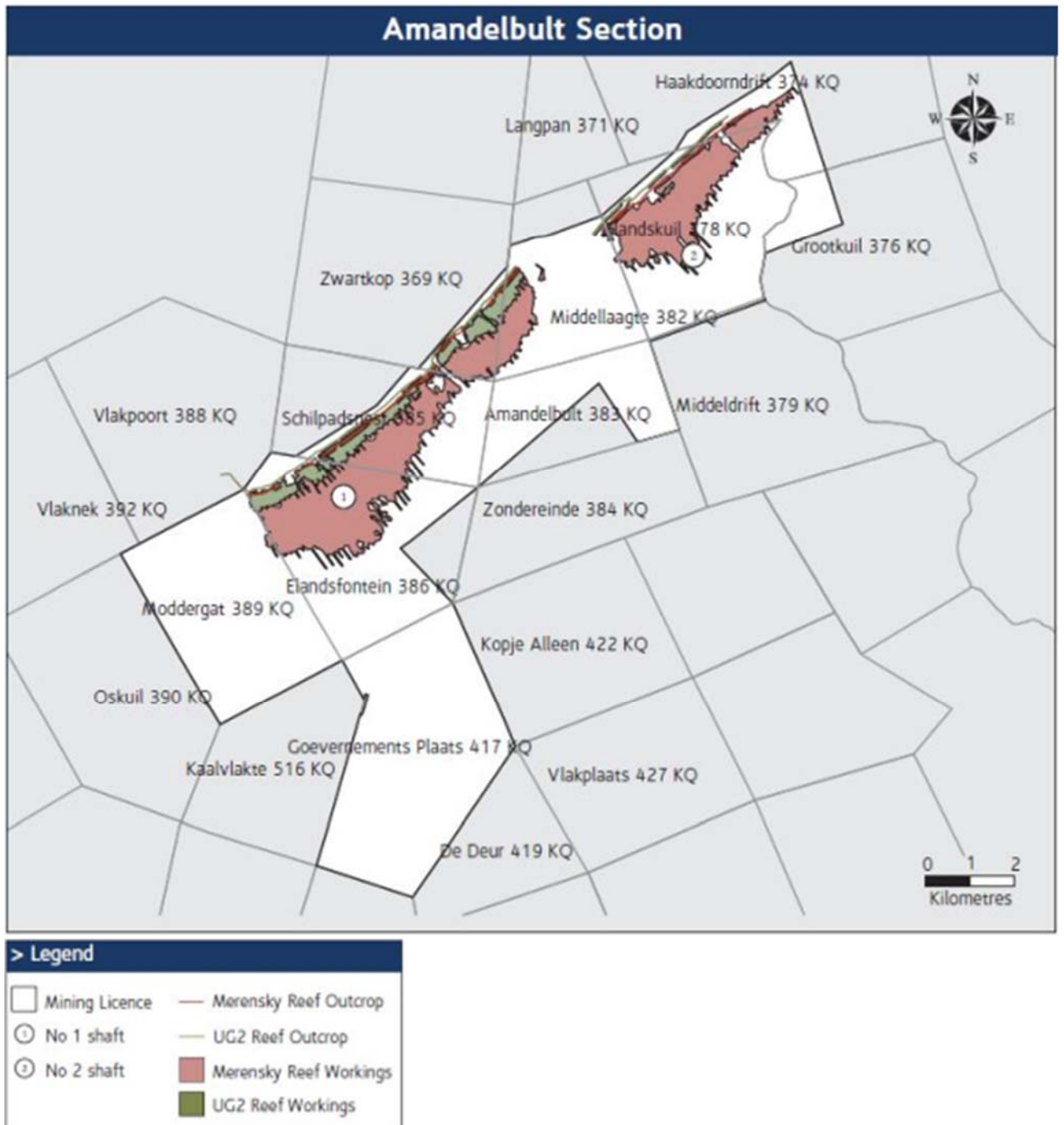


Figure 5: Anglo Platinum Map showing present-day mining activities on Elandsfontein and Governments Plaats. (Anglo Platinum 2011).

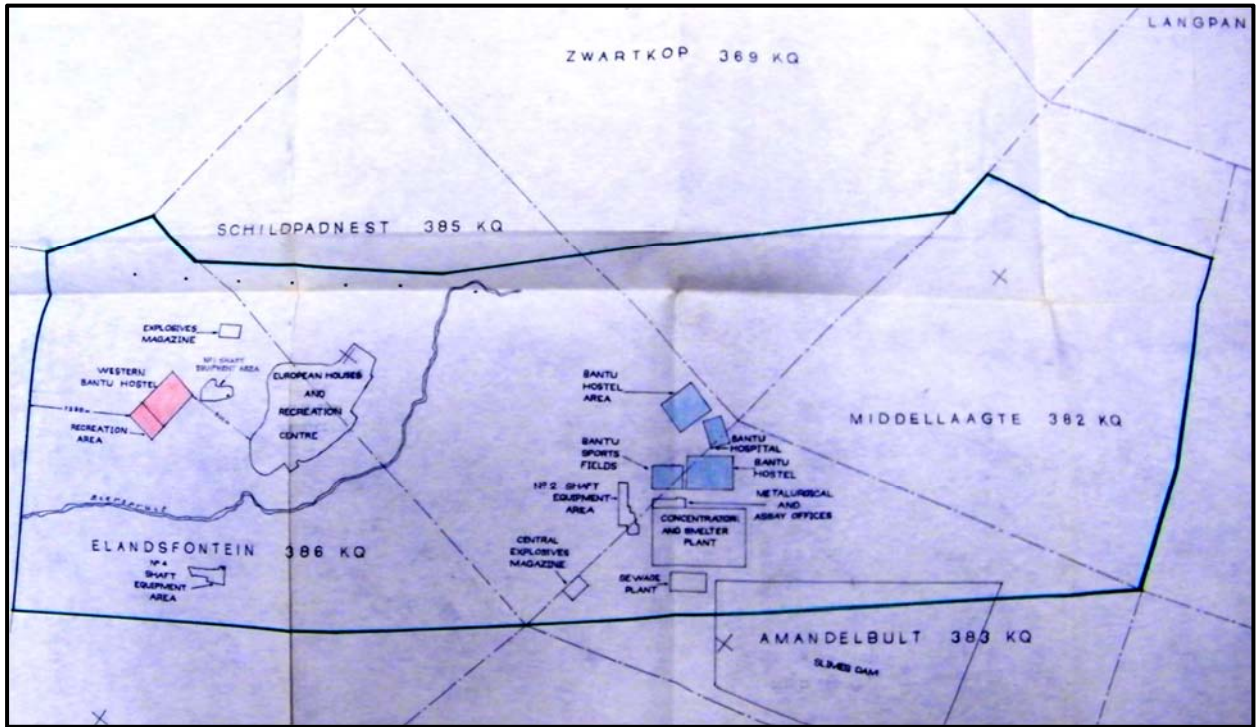


Figure 6: Map of the farm Elandsfontein 366 KQ and the proposed black residential developments thereon (National Archives of South Africa, 1973).

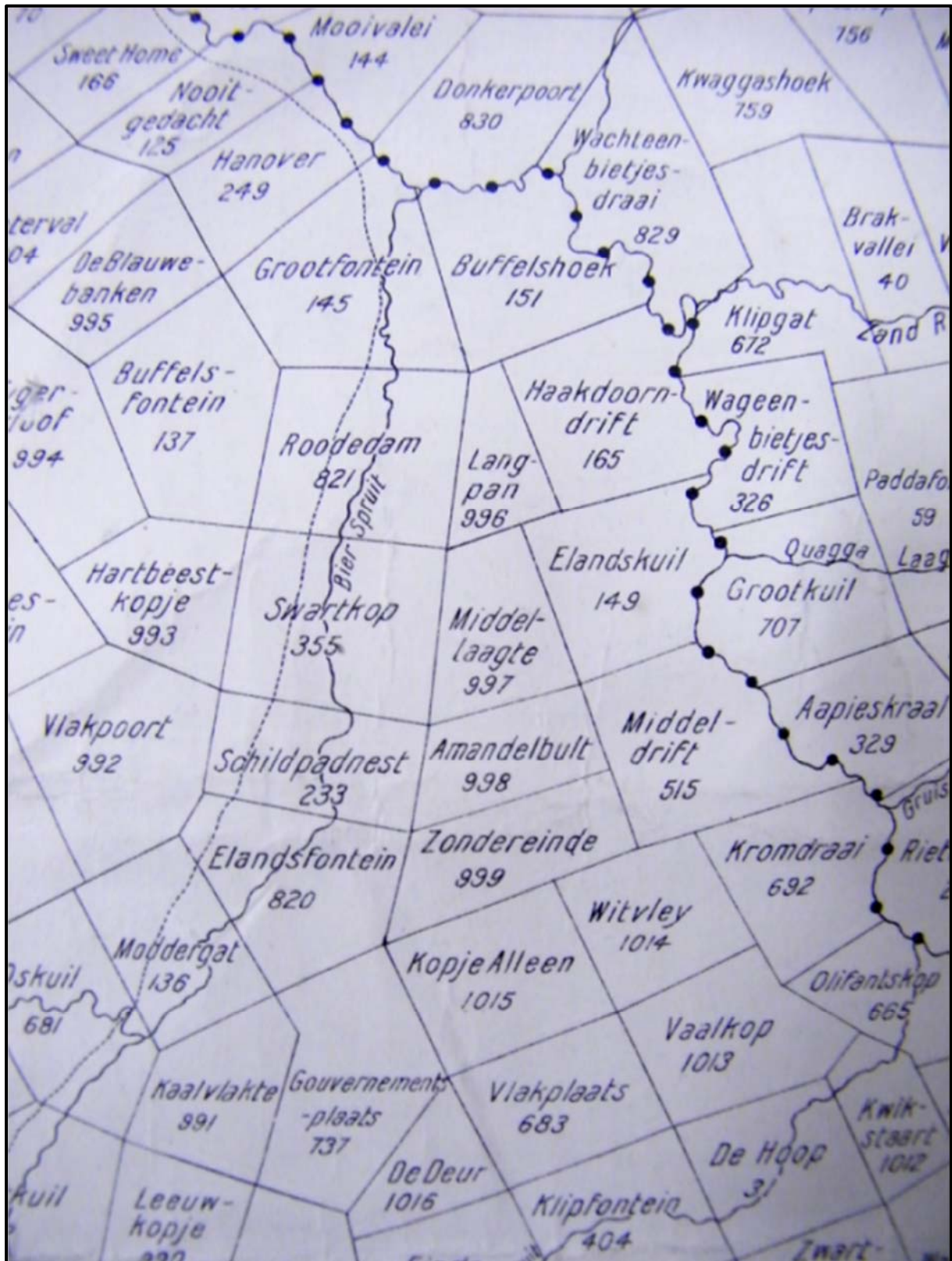


Figure 7: 1921 Rustenburg Magisterial Map, indicating the location of Elandsfontein, Moddergat and Government Plaats then known as Gouvernements-plaats and its neighbouring farms. (National Archives of South Africa, 1921).

7.4 A Brief History of the General Study Area

The general study area includes the Extended Mining Right Area as well as the surrounding area. J. S. Bergh's historical atlas of the four northern provinces of South Africa is a very useful source for the writing of local and regional histories. It seems that, by the start of the nineteenth century, the predominant black community living in the area was the Kgatla (Bergh, 1999: 11). In a few decades, however, the sociographic nature of the then Transvaal province would change forever. The Difaqane (Sotho), or Mfekane ("the crushing" in Nguni) was a time of bloody upheavals in Natal and on the Highveld, which occurred around the early 1820's until the late 1830's. (Bergh, 1999: 109-115). It came about in response to heightened competition for land and trade, and caused population groups like gun-carrying Griquas and Shaka's Zulus to attack other tribes (Bergh, 1999: 14; 116-119). Whereas several tribes were scattered and displaced from their original residences, the Kgatla still inhabit this part of the country today. Though especially the Ndebele of Mzilikazi troubled this tribe during the Difaqane, these people mostly returned to their original settlements after this time of upheaval. The areas settled by the Kgatla included the land to the north of Pretoria in the area of the Crocodile-, Pienaars- and Apies Rivers; the Magaliesberg Mountain; the area of the present-day Brits, Rustenburg, Warmbad (Bela Bela), Nylstroom (Modimolle); as well as the Pilanesberg and the Waterberg areas. The specific Kgatla community that lived in the Rustenburg district, and possibly in the study area, was the Modimosana ba Maake-Kwena under Kgaswane and the Modimosana ba Matlhaku-Kwena of Madintsi (Bergh, 1999: 106).

During the time of the Difaqane, a northwards migration of white settlers from the Cape was also taking place. Some travellers, missionaries and adventurers had gone on expeditions to the northern areas in South Africa – some as early as in the 1720's. A year after the second British occupation of the Cape in 1806, a number of white travellers with official authorization ventured northward with the intention of reaching Delagoa Bay by land. This expedition was led by Dr Andrew Cowan and Lieutenant Donovan. These travellers passed close by the area where the study area is located in 1808. The entire party however disappeared, and it is believed that they either perished from fever or at the hand of black tribes (Bergh, 1999: 12, 117). From the 1830's onward, a number of other adventurers also passed through or close by the area. These were Hume (1830), Harris (1836) and Livingstone (1847). (Bergh, 1999: 13) David Hume, a Scottish trader, advanced to the north of the Limpopo into the inland. It is possible that he was the first European person to travel this far north in South Africa. (Bergh, 1999: 120) The flamboyant British officer, Captain William Cornwallis Harris, left Port Elizabeth in 1836 on a hunting expedition to the northern provinces. He was accompanied by a friend, William Richardson, and a number of servants. These travellers managed to meet the Ndebele chief, Mzilikazi, during their travels. Harris is well known for his descriptions and sketches of wild animals that he saw during his journey. David Livingstone is very well known, and he did not only travel in South Africa, but also deep into mid Africa. Livingstone arrived in Kuruman in 1841 as a missionary of the London Mission Society. In the following years, he undertook various travels in the northern provinces, establishing mission stations where he went. (Bergh, 1999: 122-123).

By the late 1820's, a mass-movement of Dutch speaking people in the Cape Colony started advancing into the northern areas. This was due to feelings of mounting dissatisfaction caused by economical and other circumstances in the Cape. This movement later became known as the Great Trek. This migration resulted in a massive increase in the extent of that proportion of modern South Africa dominated by people of European descent. (Ross, 2002: 39) These Dutch settlers allocated farms in the greater study area during the 1840s. (Bergh, 1999: 15) It therefore is possible that the farms may date back to the middle of the 19th century (Bergh, 1999: 15). The district of Waterberg was established in 1866 (Bergh, 1999: 139). This indicates that there must have been enough people to make the establishment of a district a viable option.

As can be expected, the movement of whites into the northern provinces would have a significant impact on the black people who populated the land. This was also the case in Limpopo, the then Northern Transvaal area. By 1860, the population of whites in the central Transvaal was already very dense and the administrative machinery of their leaders was firmly in place. Many of the policies that would later be entrenched as legislation during the period of apartheid had already been developed (Bergh, 1999: 170).

Much can be said about the systematic oppression of black people in South Africa. In 1904 about a half of the black population in the Transvaal was living on private land, owned by whites or companies. According to the Squatters' Law of 1895, no more than five families of "natives" could live on any farm or divided portion of a farm, without special permission of the Government in the Transvaal. (Massie 1905: 97) In Bergh's source, one can see a map indicating the areas where blacks had settled by 1904. It is interesting that there were a number of private farms owned by blacks in the vicinity of the study area by 1904. (Bergh 1999: 41) The 1913 and 1936 Acts concerning the establishment of black "homelands" however delimited areas of land that were located to the southeast and southwest of the greater study area. This land, including other portions of land, collectively became known as Bophuthatswana (Bergh, 1999: 42-43).

8 Findings of the Survey

The Extended Mining Right Area is known to contain several stone walled sites conforming to the CCP along the base and between the saddles of the hills. These sites consist of central kraals, smaller livestock enclosures, lower grindstones and ceramic scatters. These sites form part of a larger settlement complex dating to the Later Iron Age and are expected around hills (Figure 8).

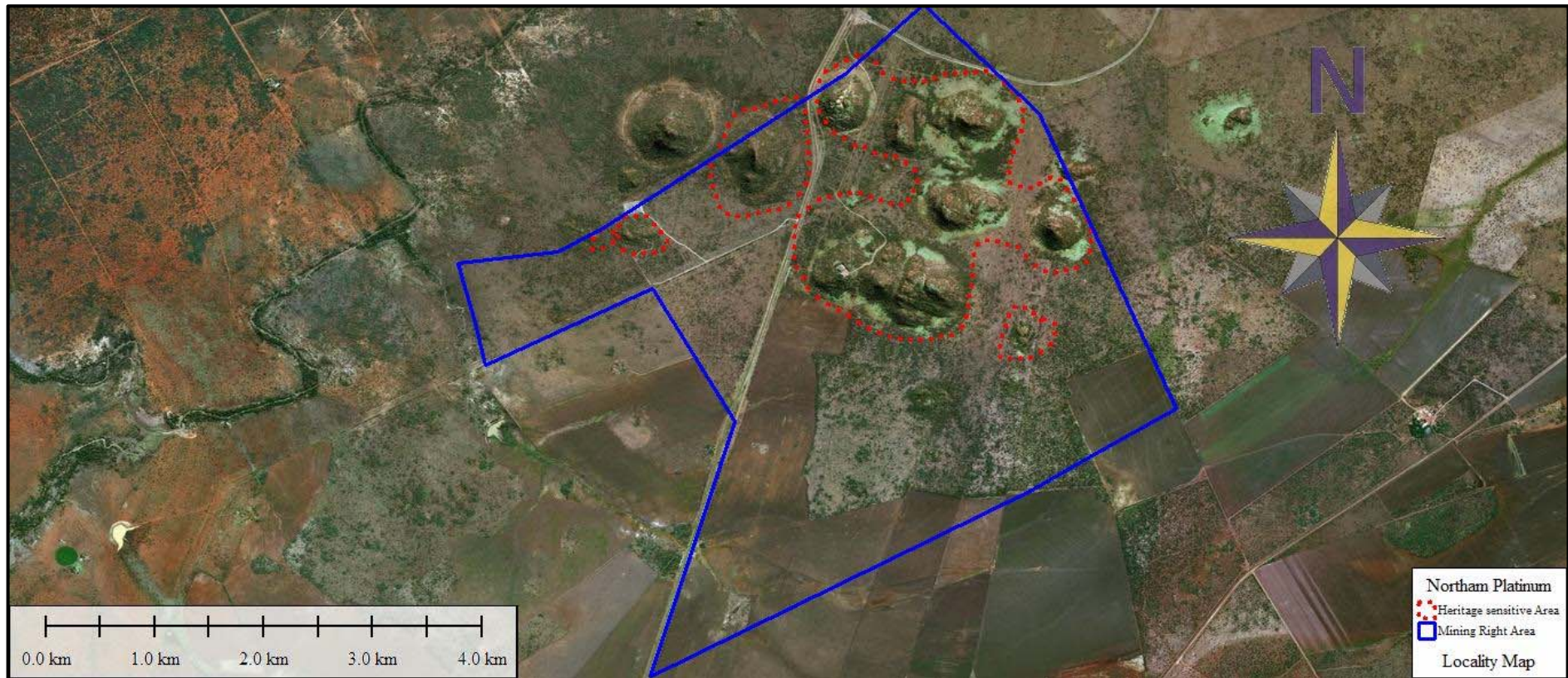


Figure 8: Heritage sensitive areas.

8.1 Built Environment (Section 34 of the NHRA)

Based on aerial imagery and topographic maps of the area no standing structures older than 60 years occur within the Extended Mining Right Area.

8.2 Archaeological and palaeontological resources (Section 35 of the NHRA)

Stone Age artefacts are found scattered over the study area with higher frequencies of artefacts found around small hills and rocky outcrops. Due to sheet erosion, the artefacts are weathered and badly preserved. Diagnostic features on the tools consist of facets on the striking platform indicating Middle Stone Age occupation. Raw material consists of igneous rock, Hornfels and possibly Silcrete.



Figure 9. Example of tools found in the area.

All the sites found in the area are associated with the Later Iron Age. Decorated ceramics found represent stamped ware and could possibly be related to the Rooiberg facies, but a bigger ceramic sample is needed to confirm this. The sites are important because of the alternative stone walled settlement layout. The sites consist of several kraals clustered together without an outer wall. These sites have research potential that could clarify the new stone walled arrangement represented here that has not yet been identified and could hold clues to the interaction between the Uitkoms ceramic facies and Madikwe that formed Rooiberg.



Figure 10: Example of stone walled sites in the study area.

Based on the SAHRIS Paleontological Sensitivity Map (Figure 11) the area is of insignificant paleontological significance.



Figure 11: Study area located in an area of low significance on the SAHRIS Paleontological Map.

8.3 Burial Grounds and Graves (Section 36 of the NHRA)

In terms of Section 36 of the Act burial sites is expected anywhere on the landscape and they should ideally be preserved *in-situ* or alternatively relocated according to existing legislation.

8.4 Cultural Landscapes, Intangible and Living Heritage

Long term impact on the cultural landscape is considered to be negligible as the surrounding area consists of an area extensively mined. As this is an underground mine, visual impacts to scenic routes and sense of place are also considered to be low.

8.5 Battlefields and Concentration Camps

There are no battlefields or related concentration camp sites located in the study area.

8.6 Potential Impact

The chances of impacting unknown archaeological sites in the study area are considered to be negligible as this an underground mine. Any direct impacts that did occur would be on the surface and can be mitigated. Cumulative impacts occur from the combination of effects of various impacts on heritage resources. The importance of identifying and assessing cumulative impacts is that the whole is greater than the sum of its parts. In the case of the underground mine it will not impact any heritage resources directly.

8.6.1 Pre-Construction phase

Because this is an underground mine it is assumed that the pre-construction phase will not impact on any surface features.

8.6.2 Construction Phase

During this phase, the impacts and effects are similar in nature but more extensive than the pre-construction phase. Again, it is assumed that the pre-construction phase will not impact on any surface features.

8.6.3 Operation Phase

No impact is envisaged for heritage resources during this phase.

Table 6: Impact of the project on heritage resources.

Nature: During the construction phase activities resulting in disturbance of surfaces and/or sub-surfaces may destroy, damage, alter, or remove from its original position archaeological material or objects. As this is an underground mine no impact is foreseen on heritage resources.		
	Without Mitigation	With Mitigation (Preservation/ excavation of site)
Extent	Local (3)	Local (3)
Duration	Permanent (5)	Permanent (5)
Magnitude	Low (2)	Low (2)
Probability	Not Probable (2)	Not probable (2)
Significance	20 (Low)	20 (Low)
Status (positive or negative)	Negative	Negative
Reversibility	Not reversible	Not reversible
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	Yes, all surface developments must be subjected to an HIA.	Yes

Mitigation:

Surface infrastructure developments must be subjected to an HIA.

Cumulative Impacts:

Due to the lack of apparent significant heritage resources and the fact that the entire development will be conducted underground cumulative impacts are considered to be low.

Residual Impacts:

If any sites are destroyed this results in the depletion of archaeological record of the area. However, if sites are recorded and preserved or mitigated this adds to the record of the area.

9 Recommendations and Conclusion

The study area is known to contain several stone walled sites conforming to the CCP along the base and between the saddles of the hills. These sites consist of central kraals, smaller livestock enclosures, lower grindstones and ceramic scatters. These sites form part of a larger settlement complex dating to the Later Iron Age. Middle Stone Age artefacts are found scattered over the study area with higher frequencies of artefacts found around small hills and rocky outcrops. As this is an underground mine no impact is foreseen on surface indicators of heritage sites. The SAHRIS Paleontological Sensitivity Map indicate that the area is of insignificant paleontological significance. Therefore, no further mitigation prior to construction is recommended in terms of Section 35 for the proposed activities to proceed.

Similarly, no impact is foreseen on the built environment or on burial sites as the proposed activities consist of an underground mine with no surface infrastructure and impacts. No public monuments are located within or close to the study area. The proposed Extended Mining Right Area is surrounded by mining developments and road infrastructure developments and the proposed activities will not impact negatively on significant cultural landscapes or views.

As this is an underground mine with no surface impacts the impact of the proposed Extended Mining Right Area on heritage resources is considered low and it is recommended that the proposed project can commence on the condition that the following recommendations are implemented as part of the EMP and based on approval from SAHRA. Any surface infrastructure will have to be subjected to a Heritage Impact Assessment.

9.1 Reasoned Opinion

From a heritage perspective, the proposed activities are acceptable, if the above recommendations are adhered to and based on approval from SAHRA, HCAC is of the opinion that the development can continue as the proposed activities will not impact negatively on the heritage record of the area. If during the pre-construction phase or during construction, any archaeological findings are made (e.g. graves, stone tools, and skeletal material), the operations must cease immediately, and the archaeologist must be contacted for an assessment of the finds. Due to the subsurface nature of archaeological material and graves the possibility of the occurrence of unmarked or informal graves and subsurface finds cannot be excluded.

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MAPS

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11 Appendices

Curriculum Vitae of Specialist

Jaco van der Walt
Archaeologist

jaco.heritage@gmail.com

+27 82 373 8491

+27 86 691 6461

Education:

Particulars of degrees/diplomas and/or other qualifications:

Name of University or Institution: University of Pretoria
Degree obtained : BA Heritage Tourism & Archaeology
Year of graduation : 2001

Name of University or Institution: University of the Witwatersrand
Degree obtained : BA Hons Archaeology
Year of graduation : 2002

Name of University or Institution : University of the Witwatersrand
Degree Obtained : MA (Archaeology)
Year of Graduation : 2012

Name of University or Institution : University of Johannesburg
Degree : PhD
Year : Currently Enrolled

EMPLOYMENT HISTORY:

2011 – Present: **Owner – HCAC (Heritage Contracts and Archaeological Consulting CC)**
 2007 – 2010: **CRM Archaeologist**, Managed the Heritage Contracts Unit at the University of the Witwatersrand
 2005 - 2007: **CRM Archaeologist**, Director of Matakoma Heritage Consultants
 2004: **Technical Assistant**, Department of Anatomy University of Pretoria
 2003: **Archaeologist**, Mapungubwe World Heritage Site
 2001 - 2002: **CRM Archaeologists**, For R & R Cultural Resource Consultants, Polokwane
 2000: **Museum Assistant**, Fort Klapperkop

Countries of Work Experience Include:

Republic of South Africa, Botswana, Zimbabwe, Mozambique, Tanzania, The Democratic Republic of the Congo, Lesotho and Zambia.

SELECTED PROJECTS INCLUDE:

Archaeological Impact Assessments (Phase 1)

Heritage Impact Assessment Proposed Discharge of Treated Mine Water Via The Wonderfonteinspruit Receiving Water Body Specialist as part of team conducting an Archaeological Assessment for the Mmamabula mining project and power supply, Botswana.

Archaeological Impact Assessment Mmamethlake Landfill
Archaeological Impact Assessment Libangeni Landfill

Linear Developments

Archaeological Impact Assessment Link Northern Waterline Project at The Suikerbosrand Nature Reserve
Archaeological Impact Assessment Medupi – Spitskop Power Line,
Archaeological Impact Assessment Nelspruit Road Development

Renewable Energy developments

Archaeological Impact Assessment Karoshoek Solar Project

Grave Relocation Projects

Relocation of graves and site monitoring at Chloorkop as well as permit application and liaison with local authorities and social processes with local stakeholders, Gauteng Province
Relocation of the grave of Rifle Man Maritz as well as permit application and liaison with local authorities and social processes with local stakeholders, Ndumo, Kwa Zulu Natal
Relocation of the Magolwane graves for the office of the premier, Kwa Zulu Natal
Relocation of the OSuthu Royal Graves office of the premier, Kwa Zulu Natal

Phase 2 Mitigation Projects

Field Director for the Archaeological Mitigation for Booyendal Platinum Mine, Steelpoort, Limpopo Province. Principle investigator Prof. T. Huffman
Monitoring of heritage sites affected by the ARUP Transnet Multipurpose Pipeline under directorship of Gavin Anderson
Field Director for the Phase 2 mapping of a late Iron Age site located on the farm Kameelbult, Zeerust, North West Province. Under directorship of Prof T. Huffman
Field Director for the Phase 2 surface sampling of Stone Age sites effected by the Medupi – Spitskop Power Line, Limpopo Province

Heritage Management Projects

Platreef Mitigation project – mitigation of heritage sites and compilation of conservation management plan

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS:

- Association of Southern African Professional Archaeologists. Member number 159
Accreditation:
 - Field Director Iron Age Archaeology
 - Field Supervisor Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation
- Accredited CRM Archaeologist with SAHRA
- Accredited CRM Archaeologist with AMAFA
- Co-opted council member for the CRM Section of the Association of Southern African Association Professional Archaeologists (2011 – 2012)

PUBLICATIONS AND PRESENTATIONS

- A Culture Historical Interpretation, Aimed at Site Visitors, of the Exposed Eastern Profile of K8 on the Southern terrace at Mapungubwe.
 - J van der Walt, A Meyer, WC Nienaber
 - Poster presented at Faculty day, Faculty of Medicine University of Pretoria 2003
- 'n Reddingsondersoek na Anglo-Boereoorlog-ammunisie, gevind by Ifafi, Noordwes-Provinsie. South-African Journal for Cultural History 16(1) June 2002, with A. van Vollenhoven as co-writer.
- Fieldwork Report: Mapungubwe Stabilization Project.
 - WC Nienaber, M Hutten, S Gaigher, J van der Walt
 - Paper read at the Southern African Association of Archaeologists Biennial Conference 2004
- A War Uncovered: Human Remains from Thabantšho Hill (South Africa), 10 May 1864.
 - M. Steyn, WS Boshoff, WC Nienaber, J van der Walt
 - Paper read at the 12th Congress of the Pan-African Archaeological Association for Prehistory and Related Studies 2005
- Field Report on the mitigation measures conducted on the farm Bokfontein, Brits, North West Province.
 - J van der Walt, P Birkholtz, W. Fourie
 - Paper read at the Southern African Association of Archaeologists Biennial Conference 2007
- Field report on the mitigation measures employed at Early Farmer sites threatened by development in the Greater Sekhukhune area, Limpopo Province. J van der Walt
 - Paper read at the Southern African Association of Archaeologists Biennial Conference 2008
- Ceramic analysis of an Early Iron Age Site with vitrified dung, Limpopo Province South Africa.
 - J van der Walt. Poster presented at SAFA, Frankfurt Germany 2008

- Bantu Speaker Rock Engravings in the Schoemanskloof Valley, Lydenburg District, Mpumalanga (*In Prep*)
 - J van der Walt and J.P Celliers
- Sterkspruit: Micro-layout of late Iron Age stone walling, Lydenburg, Mpumalanga. W. Fourie and J van der Walt. A Poster presented at the Southern African Association of Archaeologists Biennial Conference 2011
- Detailed mapping of LIA stone-walled settlements' in Lydenburg, Mpumalanga. J van der Walt and J.P Celliers
 - Paper read at the Southern African Association of Archaeologists Biennial Conference 2011
- Bantu-Speaker Rock engravings in the Schoemanskloof Valley, Lydenburg District, Mpumalanga. J.P Celliers and J van der Walt
 - Paper read at the Southern African Association of Archaeologists Biennial Conference 2011
- Pleistocene hominin land use on the western trans-Vaal Highveld ecoregion, South Africa, Jaco van der Walt.
 - J van der Walt. Poster presented at SAFA, Toulouse, France. Biennial Conference 2016

REFERENCES:

1. Prof Marlize Lombard Senior Lecturer, University of Johannesburg, South Africa
E-mail: mlombard@uj.ac.za
2. Prof TN Huffman Department of Archaeology Tel: (011) 717 6040
University of the Witwatersrand
3. Alex Schoeman University of the Witwatersrand
E-mail: Alex.Schoeman@wits.ac.za