

# HERITAGE IMPACT ASSESSMENT

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

**FOR THE PROPOSED TEMPORARY RELOCATION OF SERITARITA SECONDARY  
SCHOOL, MOKOPANE, LIMPOPO PROVINCE.**

**Type of development:**

Temporary Secondary School Relocation and Development

**Client:**

Alta van Dyk Environmental Consultants cc

**Applicant:**

Anglo American Platinum Rustenburg Platinum Mines: Mogalakwena Mine

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May 2023

## APPROVAL PAGE

<b>Project Name</b>	Temporary Relocation of Seritarita Secondary School, Mogalakwena Mine, Limpopo Province.
<b>Report Title</b>	Heritage Impact Assessment for the Proposed Temporary Relocation of Seritarita Secondary School, Mogalakwena Mine, Limpopo Province.
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<b>Responsibility</b>	<b>Name</b>	<b>Qualifications and Certifications</b>	<b>Date</b>
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<b>Date</b>	<b>Report Reference Number</b>	<b>Description of Amendment</b>

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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.**

<b>Requirement from Appendix 6 of GN 326 EIA Regulation 2017</b>	<b>Chapter</b>
(a) 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 a
(b) Declaration that the specialist is independent in a form as may be specified by the competent authority	<i>Declaration of Independence</i>
(c) Indication of the scope of, and the purpose for which, the report was prepared	Section 1
(cA) an indication of the quality and age of base data used for the specialist report	Section 3.4.
(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 9
(d) Duration, Date and season of the site investigation and the relevance of the season to the outcome of the assessment	Section 3.4
(e) Description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used	Section 3
(f) 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 site plan identifying site alternatives;	Section 8 and 9
(g) Identification of any areas to be avoided, including buffers	Section 8 and 9
(h) 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
(I) Description of any assumptions made and any uncertainties or gaps in knowledge	Section 3.7
(j) 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 1.3
(k) Mitigation measures for inclusion in the EMPr	Section 10.1 and 10.5
(l) Conditions for inclusion in the environmental authorisation	Section 10. 1 and 10.5
(m) Monitoring requirements for inclusion in the EMPr or environmental authorisation	Section 10. 4.
(n) 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
(o) Description of any consultation process that was undertaken during the course of preparing the specialist report	Section 5
(p) A summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	Refer to the EA report
(q) Any other information requested by the competent authority	No other information requested at this time

## Executive Summary

Seritarita Secondary School is located in the Skimming and Leruleng Villages approximately 25km northwest of the town of Mokopane, Mogalakwena Local Municipality, Limpopo Province. The school is adjacent to Anglo American Platinum (AAP) Rustenburg Platinum Mines' Mogalakwena Mine (Mogalakwena Mine), specifically it's South Pit. The open pit is impacting the school due to its close proximity (~800m from the centre of the pit) to the opencast operations. The effects of this situation can lead to higher levels of dust, noise, and tremors, which can negatively impact health and safety. Learning at the school as well as the productivity of the mine are impacted by their incompatible co-existence. Alta van Dyk Environmental Consultants cc has been appointed as the independent environmental assessment practitioner (EAP) to apply for the environmental authorisation for the Project. Beyond Heritage was appointed to conduct a Heritage Impact Assessment (HIA) for the project and the study area was assessed through a desktop assessment and by a non-intrusive pedestrian field survey. Key findings of the assessment include:


- Due to and in anticipation of mining activities in the area several Heritage Assessments are on record (e.g., Birkholtz and Smeyatsky 2019, Coetzee 2011, Pistorius 2002, Birkholtz and de Bruyn 2021) that recorded a suite of heritage sites situated within the Mogalakwena mine complex that is located nearby;
- The Project area itself is however transformed through intensive cultivation from as early as the 1960's until recently which would have impacted on heritage resources if any were present in this area and the study area is considered to be of low heritage potential;
- As a result of the continued cultivation, pioneer species and more specifically *Dichrostachys cinerea*, known as sickle bush severely limited accessibility into the study area;
- In order to mitigate this limitation and in line with the Anglo Social Way and the National Heritage Resources Act (NHRA) the survey team consulted with the local community and was accompanied by community representatives (Annexure A) nominated by the Traditional Council;
- During the survey no surface evidence of heritage features was recorded, corroborating the community representatives view no heritage-significant features occur in the study area;
- According to the SAHRA Paleontological sensitivity map the study area is of insignificant/zero sensitivity and no further studies are required for this aspect.

The impact on heritage resources is low, and the project can be authorised provided that the recommendations in this report are adhered to and based on the South African Heritage Resource Authority's (SAHRA) approval.

## Recommendations:

- Vegetation clearing in the project site should be conducted prior to construction and monitored by an archaeologist.
- Monitoring of the project area by the ECO during the construction phases for heritage chance finds, and if chance finds are encountered to implement the Chance Find Procedure for the project as outlined in the Anglo American Social Way Toolkit.

**Declaration of Independence**

<b>Specialist Name</b>	Jaco van der Walt
<b>Declaration of Independence</b>	<p>I declare, as a specialist appointed in terms of the National Environmental Management Act (Act No 107 of 1998) and the associated 2014 Environmental Impact Assessment (EIA) Regulations (as amended), that I:</p> <ul style="list-style-type: none"> <li>• I act as an independent specialist in this application;</li> <li>• 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;</li> <li>• I declare that there are no circumstances that may compromise my objectivity in performing such work;</li> <li>• 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;</li> <li>• I will comply with the Act, Regulations and all other applicable legislation;</li> <li>• I have no, and will not engage in, conflicting interests in the undertaking of the activity;</li> <li>• 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;</li> <li>• All the particulars furnished by me in this form are true and correct; and</li> <li>• I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 49 A of the Act.</li> </ul>
<b>Signature</b>	
<b>Date</b>	25/05/2023

**a) Expertise of the specialist**

Jaco van der Walt has been practising as a Cultural Resource Management (CRM) archaeologist for 15 years. Jaco is an accredited member of the Association of South African Professional Archaeologists (ASAPA) (#159) and APHP #114 and have conducted more than 500 impact assessments in Limpopo, Mpumalanga, North West, Free State, Gauteng, Kwa Zulu Natal (KZN) as well as the Northern and Eastern Cape Provinces in South Africa.

Jaco has worked on various international projects in Zimbabwe, Botswana, Mozambique, Lesotho, Democratic Republic of the Congo (DRC) Zambia, Guinea, Afghanistan, Nigeria and Tanzania. Through this, he has a sound understanding of the International Finance Corporations (IFC) Performance Standard requirements, with specific reference to Performance Standard 8 – Cultural Heritage

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**TABLE OF CONTENTS**

<b>REPORT OUTLINE.....</b>	<b>4</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>5</b>
<b>DECLARATION OF INDEPENDENCE .....</b>	<b>6</b>
A) EXPERTISE OF THE SPECIALIST.....	6
<b>ABBREVIATIONS.....</b>	<b>10</b>
<b>GLOSSARY .....</b>	<b>10</b>
<b>1 INTRODUCTION AND TERMS OF REFERENCE:.....</b>	<b>11</b>
1.1 TERMS OF REFERENCE.....	15
1.2 PROJECT DESCRIPTION .....	16
1.3 ALTERNATIVES .....	19
<b>2 LEGISLATIVE REQUIREMENTS .....</b>	<b>19</b>
<b>3 METHODOLOGY .....</b>	<b>20</b>
3.1 LITERATURE REVIEW.....	20
3.2 GENEALOGICAL SOCIETY AND GOOGLE EARTH MONUMENTS.....	20
3.3 PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT:.....	20
3.4 SITE INVESTIGATION.....	21
3.5 SITE SIGNIFICANCE AND FIELD RATING.....	23
3.6 IMPACT ASSESSMENT METHODOLOGY .....	25
3.7 ASSUMPTIONS AND LIMITATIONS OF THE STUDY.....	27
<b>4 DESCRIPTION OF SOCIO-ECONOMIC ENVIRONMENT.....</b>	<b>27</b>
<b>5 RESULTS OF PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT: .....</b>	<b>27</b>
5.1.1 Stakeholder Identification .....	27
<b>6 CONTEXTUALISING THE STUDY AREA:.....</b>	<b>28</b>
6.1 LITERATURE REVIEW (SAHRIS) .....	28
6.2 GOOGLE EARTH AND THE GENEALOGICAL SOCIETY OF SOUTH AFRICA (GRAVES AND BURIAL SITES) .....	31
6.3 ARCHAEOLOGICAL BACKGROUND .....	31
6.3.1 Stone Age.....	31
6.3.2 Iron Age .....	32
6.3.3 Historical Period .....	33
<b>7 DESCRIPTION OF THE PHYSICAL ENVIRONMENT .....</b>	<b>34</b>



<b>8</b>	<b>CULTURAL HERITAGE BASELINE .....</b>	<b>36</b>
8.1	HERITAGE RESOURCES.....	36
8.2	CULTURAL LANDSCAPE.....	36
8.3	PALEONTOLOGICAL HERITAGE .....	42
<b>9</b>	<b>ASSESSMENT OF IMPACTS .....</b>	<b>43</b>
9.1.1	<i>Cumulative impacts</i> .....	43
9.2	IMPACT ASSESSMENT TABLES.....	44
<b>10</b>	<b>CONCLUSION AND RECOMMENDATIONS .....</b>	<b>47</b>
10.1	RECOMMENDATIONS FOR CONDITION OF AUTHORISATION.....	47
10.2	REASONED OPINION .....	47
10.3	POTENTIAL RISK.....	47
10.4	MONITORING REQUIREMENTS .....	48
10.5	MANAGEMENT MEASURES FOR INCLUSION IN THE EMPr .....	49
<b>11</b>	<b>REFERENCES .....</b>	<b>50</b>

#### LIST OF FIGURES

FIGURE 1.1.	REGIONAL SETTING OF THE PROJECT (2328 1: 250 000 TOPOGRAPHICAL MAP).....	12
FIGURE 1.2.	LOCAL SETTING OF THE PROJECT (2328DD 1: 50 000 TOPOGRAPHICAL MAP). .....	13
FIGURE 1.3.	AERIAL IMAGE SHOWING THE STUDY AREA AND SURROUNDS. ( <i>GOOGLE EARTH 2023</i> ) .....	14
FIGURE 3.1.	TRACKLOG OF THE SURVEY PATH IN GREEN. ....	22
FIGURE 6.1.	MOVEMENT OF BANTU SPEAKING FARMERS (HUFFMAN 2007) .....	32
FIGURE 7.1.	GENERAL SITE CONDITIONS – OVERGROWN VEGETATION WHERE AGRICULTURAL FIELDS ARE LOCATED.....	35
FIGURE 7.2.	PROJECT BOUNDARY AS VIEWED FROM THE MAPELA ROAD. ....	35
FIGURE 7.3.	GENERAL SITE CONDITIONS – LITTERING OCCURS THROUGHOUT THE PROJECT AREA.....	35
FIGURE 7.4.	<i>DICHRISTACHYS CINEREA</i> , KNOWN AS SICKLE BUSH RENDERED THE SITE INACCESSIBLE.....	35
FIGURE 8.1.	1954 AERIAL IMAGE SHOWING THE APPROXIMATE LOCATION OF THE STUDY AREA THAT IS CULTIVATED WITHOUT ANY STRUCTURES OR OTHER FEATURES VISIBLE.....	37
FIGURE 8.2.	1970 2328DD TOPOGRAPHIC MAP OF THE PROJECT AREA INDICATING CULTIVATION WITHIN THE PROJECT AREA. NO DEVELOPMENTS ARE INDICATED IN THE STUDY AREA. ....	38
FIGURE 8.3.	1983 2328DD TOPOGRAPHIC MAP INDICATING WIDESPREAD CULTIVATION IN THE PROJECT AREA AS WELL AS THE SURROUNDING AREA. ....	39
FIGURE 8.4.	1995 AERIAL IMAGE SHOWING THE APPROXIMATE LOCATION OF THE STUDY AREA THAT IS CULTIVATED WITHOUT ANY STRUCTURES OR OTHER FEATURES VISIBLE.....	40
FIGURE 8.5.	2004 2328DD TOPOGRAPHIC MAP SHOWING THE CONSTRUCTION OF A ROAD RUNNING ALONG THE WESTERN BOUNDARY OF THE PROJECT AREA. ....	41

FIGURE 8.6. PALEONTOLOGICAL SENSITIVITY OF THE APPROXIMATE STUDY AREA (YELLOW POLYGON) AS INDICATED ON THE SAHRA

PALAEONTOLOGICAL SENSITIVITY MAP. .... 42

## LIST OF TABLES

TABLE 1. SPECIALIST REPORT REQUIREMENTS. ....	4
TABLE 2: PROJECT DESCRIPTION .....	16
TABLE 3: INFRASTRUCTURE AND PROJECT ACTIVITIES .....	16
TABLE 4: SITE INVESTIGATION DETAILS .....	21
TABLE 5: HERITAGE SIGNIFICANCE AND FIELD RATINGS .....	24
TABLE 6. SELECTED STUDIES CONSULTED FOR THIS PROJECT. ....	29
TABLE 7. IMPACT ASSESSMENT FOR THE CONSTRUCTION PHASE OF THE PROJECT (TANGIBLE HERITAGE RESOURCES) .....	44
TABLE 8. IMPACT ASSESSMENT FOR THE CONSTRUCTION PHASE OF THE PROJECT (INTANGIBLE HERITAGE RESOURCES). ....	44
TABLE 9. IMPACT ASSESSMENT FOR THE OPERATION PHASE OF THE PROJECT (TANGIBLE AND INTANGIBLE) .....	45
TABLE 10. IMPACT ASSESSMENT FOR THE CLOSURE PHASE OF THE PROJECT (TANGIBLE AND INTANGIBLE). ....	46
TABLE 11. MONITORING REQUIREMENTS FOR THE PROJECT .....	48
TABLE 12. HERITAGE MANAGEMENT PLAN FOR EMPr IMPLEMENTATION .....	49

**ABBREVIATIONS**

ASAPA: Association of South African Professional Archaeologists
BGG Burial Ground and Graves
CFPs: Chance Find Procedures
CMP: Conservation Management Plan
CRR: Comments and Response Report
CRM: Cultural Resource Management
DFFE: Department of Fisheries, Forestry and Environment,
EA: Environmental Authorisation
EAP: Environmental Assessment Practitioner
ECO: Environmental Control Officer
EIA: Environmental Impact Assessment*
EIA: Early Iron Age*
EAP Environmental Assessment Practitioner
EMPr: 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
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, 2002 (Act No. 28 of 2002)
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
PRHA: 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 the historic period)

The Iron Age (~ AD 400 to 1840)

Historic (~ AD 1840 to 1950)

Historic building (over 60 years old)

## 1 Introduction and Terms of Reference:

Beyond Heritage was appointed to conduct a Heritage Impact Assessment (HIA) for Anglo American Platinum (AAP) Rustenburg Platinum Mines: Mogalakwena Mine's proposed relocation of the Seritarita Secondary School. Seritarita Secondary School is located in the Skimming and Leruleng Villages approximately 25km northwest of the town of Mokopane, Mogalakwena Local Municipality, Limpopo Province (Figure 1.1 to 1.3). The school is adjacent to Mogalakwena Mine, specifically it's South Pit. The proposed location for the temporary relocation is approximately 2,5 km west from the school's current location. The school is currently adjacent to Anglo American Platinum (AAP) Rustenburg Platinum Mines' Mogalakwena Mine (Mogalakwena Mine), specifically it's South Pit. The open pit is impacting the school due to its close proximity (~800m from the centre of the pit) to the opencast operations. The effects of this situation can lead to higher levels of dust, noise, and tremors, which can negatively impact health and safety. Learning at the school as well as the productivity of the mine are impacted by their incompatible co-existence. The report forms part of the Basic Assessment environmental authorisation process for the development.

The aim of the study is to survey the proposed development footprint to understand the cultural layering of the study area. It serves 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 is 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) (NHRA). The report outlines the approach and methodology utilized before and during the survey, which includes Phase 1, review of relevant literature; Phase 2, the physical surveying of the area on foot and by vehicle; Phase 3, reporting the outcome of the study.

During the survey, no heritage resources were recorded in the study area. 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 this report. The South African Heritage Resources Agency (SAHRA) as a commenting authority under section 38(8) of NHRA requires all environmental documents, compiled in support of an Environmental Authorisation application as defined by National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations section 40 (1) and (2), to be submitted to SAHRA for commenting. Upon submission to SAHRA the project will be automatically given a case number as reference. As such the EIA report and its appendices must be submitted to the case as well as the EMP, once it's completed by the Environmental Assessment Practitioner (EAP).

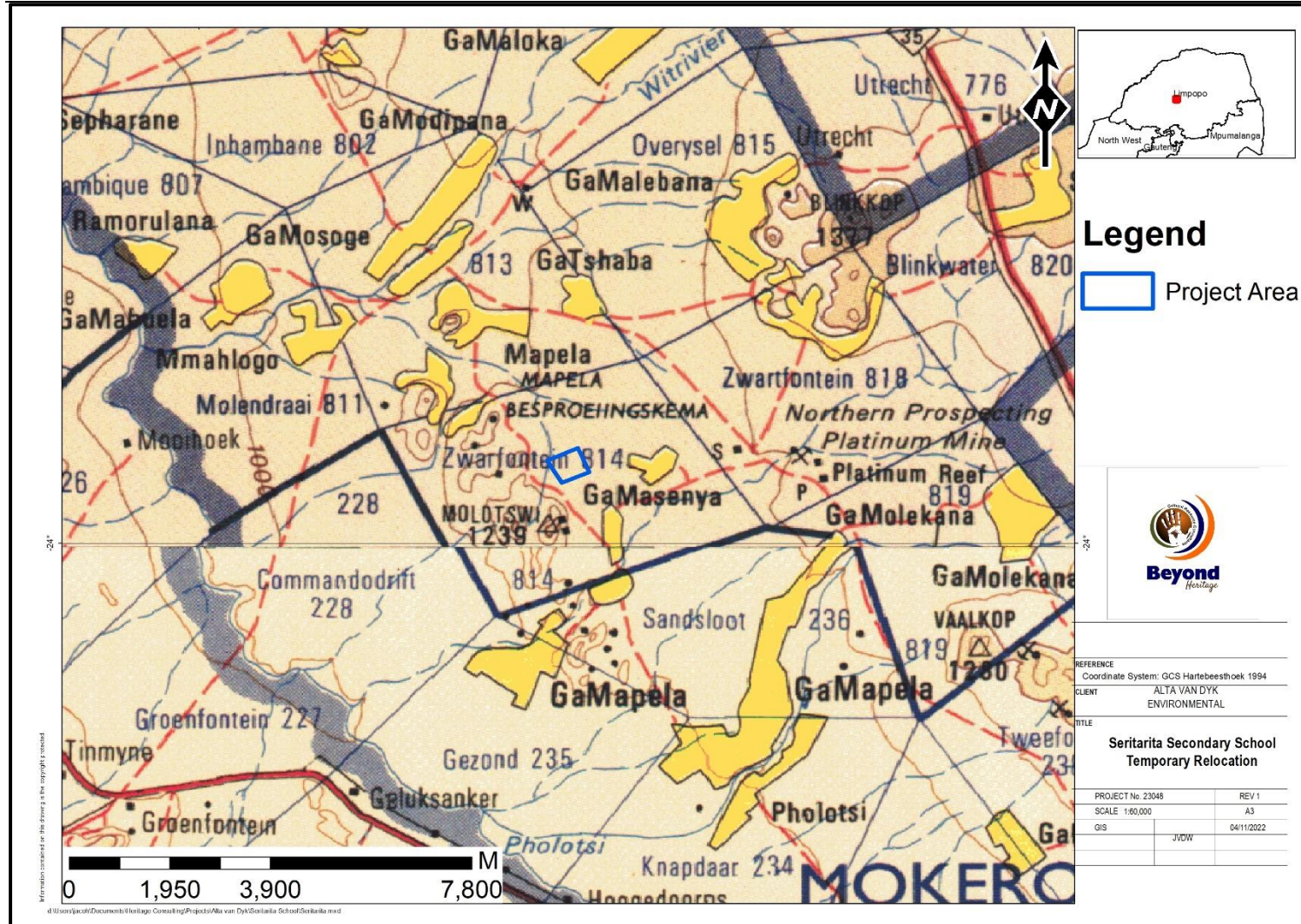


Figure 1.1. Regional setting of the Project (2328 1: 250 000 topographical map).



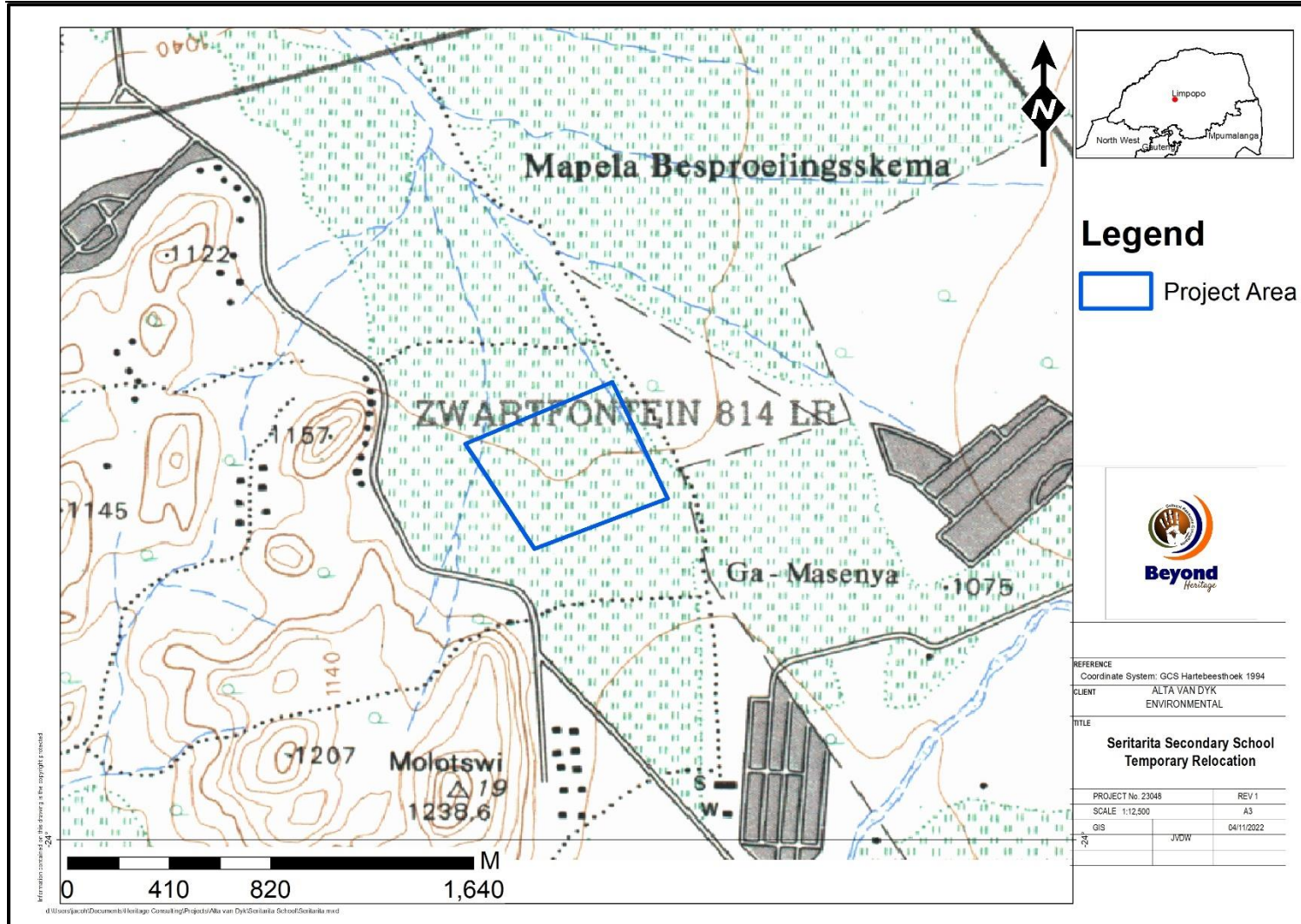


Figure 1.2. Local setting of the Project (2328DD 1: 50 000 topographical map).

HIA – Seritarita Secondary School Temporary Relocation

May 2023

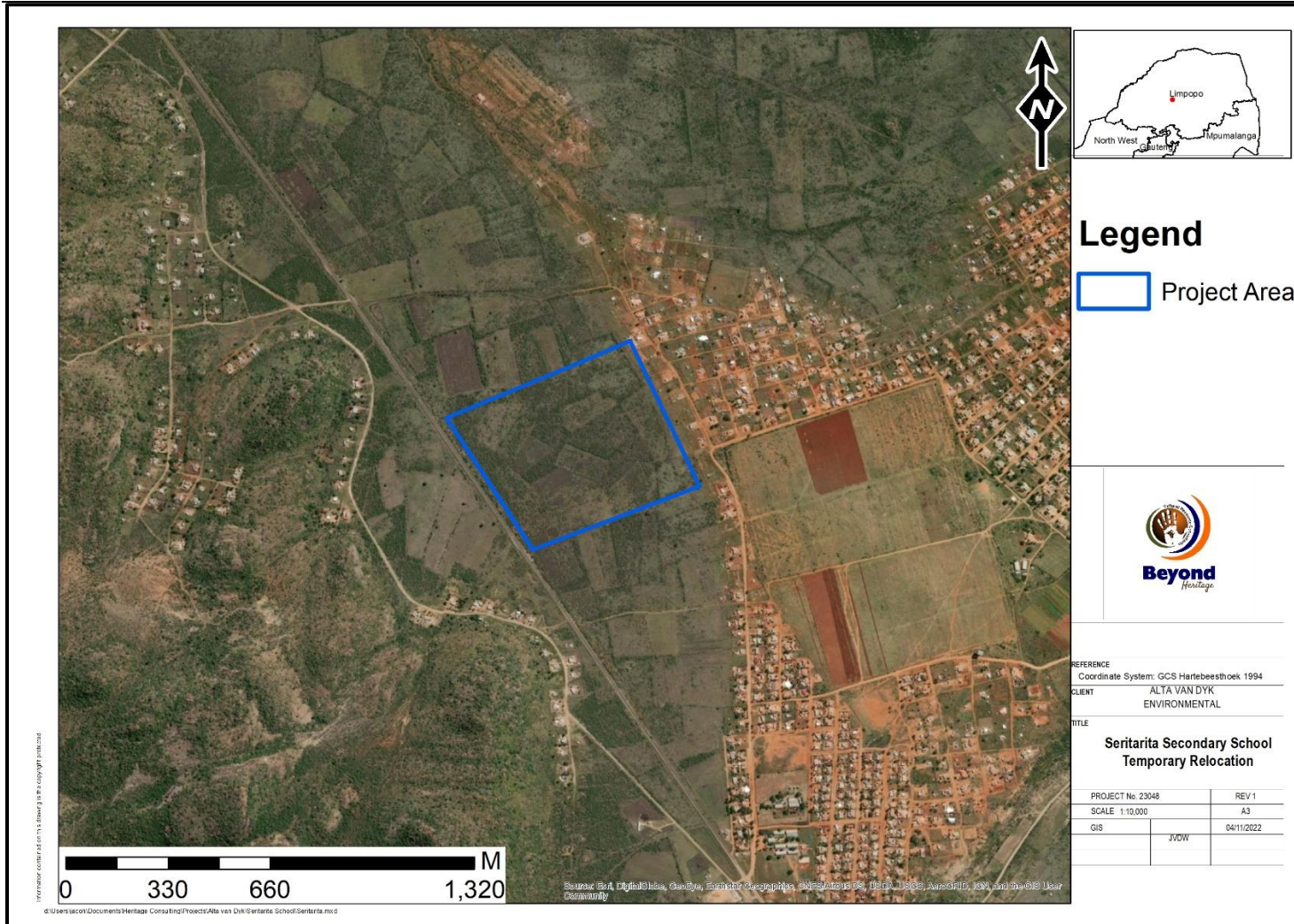


Figure 1.3. Aerial image showing the study area and surrounds. (Google Earth 2023)

## 1.1 Terms of Reference

### Field study

Conduct a field study to: (a) locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest; b) record GPS points of sites/areas identified as significant areas; c) determine the levels of significance of the various types of heritage resources affected by the proposed development.

### 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 Association of South African Professional Archaeologists (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).



## 1.2 Project Description

Project components and the location of Project Seritarita is outlined under Table 2 and 3.

**Table 2: Project Description**

<b>Magisterial District</b>	Mogalakwena Local Municipality within the Waterberg District Municipality
<b>Central co-ordinate of the development</b>	-23.9894625, 28.8629361
<b>1:50 000 Topographic Map Number</b>	2328DD

**Table 3: Infrastructure and project activities**

<b>Type of development</b>	Secondary School Temporary Relocation and Development
<p><b>Project Details:</b> The following sections detail the infrastructure that will form part of the relocated school:</p> <p><b>Access roads to the school</b> Access to the relocated school will be obtained via the Mapela Provincial Road. A new access road from the Mapela Road to the newly constructed school will be constructed. The new access road will be a two lane single carriage way road (one lane in each direction), approximately 700 m long and 7m wide. An additional access road linking the new relocated school to Skimming Village will be constructed on the perimeter of the school site (400m long, 7m wide). Refer to Figure 2 for the location of the access roads.</p> <p><b>Earthworks</b> Vegetation clearing and levelling of the area earmarked for the establishment of the relocated new school will be undertaken by bulldozers and mechanical excavators. Bulk earthworks are expected to be localised excavations in preparation to construct concrete platforms for the buildings. Site preparation will include the removal of bushes and topsoil from the proposed construction areas. The removed topsoil will be re-used within the school for landscaping and vegetable gardens. Excavations of up to 1m depth are anticipated for the installation of services. Preparation of the platforms (soil rafts) will require compaction of the excavated areas. Paved walkways and parking areas will be provided, and this will require the use of in-situ materials (upon top-soil removal) with minimal importation of sand materials to prepare final layers for the paving installation.</p> <p><b>Building Requirements</b> The scope of works for the design and construction supervision of the proposed temporary relocation of the existing Seritarita Secondary School includes but is not limited to the following: Buildings All buildings shall respond to appropriate green building design principal and be constructed in a prefabricated system:</p> <ul style="list-style-type: none"> <li>• A large size Administration Block</li> <li>• Classroom Blocks comprising 25 classrooms</li> <li>• Library Block with storage</li> <li>• Computer Laboratory with storage</li> <li>• Science Laboratory with storage</li> <li>• Biology Laboratory with storage</li> </ul>	

- Multi-purpose classroom block (two classrooms)
- Kitchen/ Nutrition Centre block
- Three Workshops
- School Hall
- Ablution Blocks, (Staff, Boys and Girls Blocks)
- General Store Block
- Sport Changing Rooms
- The Caretaker's Unit

#### Sports and reaction facilities

- Soccer field with running tracks
- Two combination courts
- Outside Assembly area

### 1.1 Power supply

The total school system's daily energy requirement has been estimated as 350 kWh/day). A hybrid power supply approach will be followed:

#### Connected to Eskom Power Grid:

3 Phase Power will be supplied by Eskom. A Medium Voltage/Low Voltage (MV/LV) powerline has been identified within close proximity (~600m away) of the proposed relocation site. An underground cable will be installed from the school to a ground mounted approximately 100 kVA transformer. No overhead powerlines will be required. HVAC System Energy efficient system for air conditioning will be used.

#### Solar Photovoltaic (PV)

AAP will install a grid tied solar photovoltaic installation with battery backup to provide additional power for power for essential services and buildings during loadshedding.

#### Back-Up Generator

A backup generator will be available.

### 1.2 Water supply

Each learner is expected to require 25-30 litres of water per day, therefore, the estimated daily demand is approximately 40 000ℓ/day (14 600m<sup>3</sup> per annum).

Water for potable and sanitary use will be sourced from a newly drilled borehole. A water filtration plant will be provided and water will be stored in 1 x 40m<sup>3</sup> (40 000ℓ) elevated steel sectional tank.

Carting water trucks will be used as a backup option to the borehole water supply.

In addition, rainwater and grey water harvesting will be implemented.

### 1.3 Sanitation

There is no bulk municipality sewage reticulation in the vicinity of the project site. As municipal sanitation is not present in the area, an underground pre-digestion tank is planned with a sewer treatment plant installed. The estimated sewage flow at a day school is 37 litres/person/day. A conservancy tank together with a sewer treatment plant (wastewater treatment plant) will be installed to collect and treat sewage from the school facilities. The resultant grey water which shall be fit for use from the treatment process shall be used for irrigation of the school landscaped areas and sports field. Certificate of Compliance (COC) shall be issued by accredited installers upon the installation of the wastewater treatment plant. A maintenance plan shall also be in place for the plant. Alternative options of sewage disposal/treatment are being explored, such as dry ventilated toilet systems.

### **Lighting**

Area lighting in the school is planned with solar flood lights around the entire school. Floodlights will be connected to both the grid power and solar.

### **Security/Fire prevention**

The schoolgrounds will be fenced with a 2.4m fence.

School security and safety shall be in compliance with School Infrastructure Safety and Security Guidelines (SISSG)/requirements by the Department of Basic Education (DBE). security guard arrangement shall also be in place.

A CCTV circuit will be installed for monitoring the property.

The School buildings and other school facilities shall comply with fire regulations in terms of the National Building Regulations and SANS 10-400. This to be in line with The South African Schools Act (84/1996): Regulations relating to minimum uniform norms and Standards for public school Infrastructure.

### **Information and Communication Technology (ICT)**

ICT system installation will be informed by the appropriate supported technology.

### **Internal roads**

All internal roads are to be paved

### **General waste**

General waste generated at the school will be segregated and stored in wheelie bins or skips kept in a designated refuse yard. Waste will be removed frequently off-site by an approved waste management contractor to an appropriate facility.

### **Services required during the construction phase**

- **Temporary laydown area**

A material laydown area and office area for contractors of approximately 5 000m<sup>2</sup> will be required. The location of this area shall be indicated to the appointed contractor by the OHS Consultant.

- **Waste management**

All waste generated during the construction phase of the project will be temporarily stored in skips located at the laydown area. The skips will be removed at regular intervals and disposed of appropriately at a licensed municipal waste site or acceptable disposal facility situated within the jurisdiction of the local municipality.

- **Water and sanitation**

Sanitation services will be required for onsite personnel during the construction phase of the project. Chemical toilets will be used and serviced regularly by a registered waste contractor. The chemical toilets will be located at the contractor's laydown area. Construction duration is expected to be 6 months. Potable water will be provided by the appointed contractor.

### 1.3 Alternatives

Three alternatives were considered but Option 1 & 2 were discarded during the screening process and this assessment only considers Option 3 as the only feasible option from an Environmental point of view. The area assessed for Option 3 does however allow for siting of the development to avoid impacts to heritage resources.

## 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))

The HIA was also compiled in line with the requirements of the Anglo-American Social Way (AASW) with specific reference to Section 4H.

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 heritage 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 development on these resources; and
- Make recommendations for the appropriate heritage management (or avoidance) of these impacts.

The HIA should be submitted, as part of the impact assessment report or EMP, to the Provincial Heritage Resource Agency (PHRA) - (Limpopo Heritage Resource Authority (LIRHA)) or to SAHRA. SAHRA will ultimately be responsible for the evaluation of Phase 1 HIA reports upon which review comments will be issued. 'Best practice' requires Phase 1 HIA reports and additional development information, as per the impact assessment report and/or EMP, to be submitted in duplicate to SAHRA after completion of the study. SAHRA accepts Phase 1 HIA 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 HIA'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 requirement) 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 a minimum requirement. After mitigation of a site, a destruction permit must be applied for with SAHRA by the applicant before development may proceed.

Human remains older than 60 years are protected by the National Heritage Resources Act, with reference to Section 36 and GNR 548 as well as the SAHRA BGG Policy 2020. Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 of the National Heritage Resources Act (NHRA), as well as the National Health Act of 2003 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) re-instituted by Proclamation 109 of 17 June 1994 and implemented by CoGHSTA as well as the National Health Act 2003 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. 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 the National Health Act of 2003

### **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 development 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 fieldwork 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 EIA process, it involves stakeholders interested in, or affected by the proposed development. 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 undertaken by the EAP was to capture and address any issues raised by community members and other stakeholders. In addition, the heritage team

**HIA – Seritarita Secondary School Temporary Relocation****May 2023**

consulted with the local community and was accompanied by community representatives Mr Percy and James Nyatlo nominated by the Traditional Council to the study area.

**3.4 Site Investigation**

The aim of the site visit was to:

- a) survey the proposed project area to understand the heritage character of the area and to record, photograph and describe sites of archaeological, historical or cultural interest;
- b) record GPS points of sites/areas identified as significant areas;
- c) determine the levels of significance of the various types of heritage resources recorded in the project area.

Field Work was conducted by Mr Ruan van der Merwe and included a pedestrian survey. He was accompanied by community representatives Mr Percy and James Nyatlo nominated by the Traditional Council to the study area.

**Table 4: Site Investigation Details**

	<b>Site Investigation</b>
Date	17 March 2023
Season	Summer – The time of year did influence the survey as heritage visibility was extremely low and completely inaccessible due to dense <i>Dichrostachys cinerea</i> (Figure 3.1).



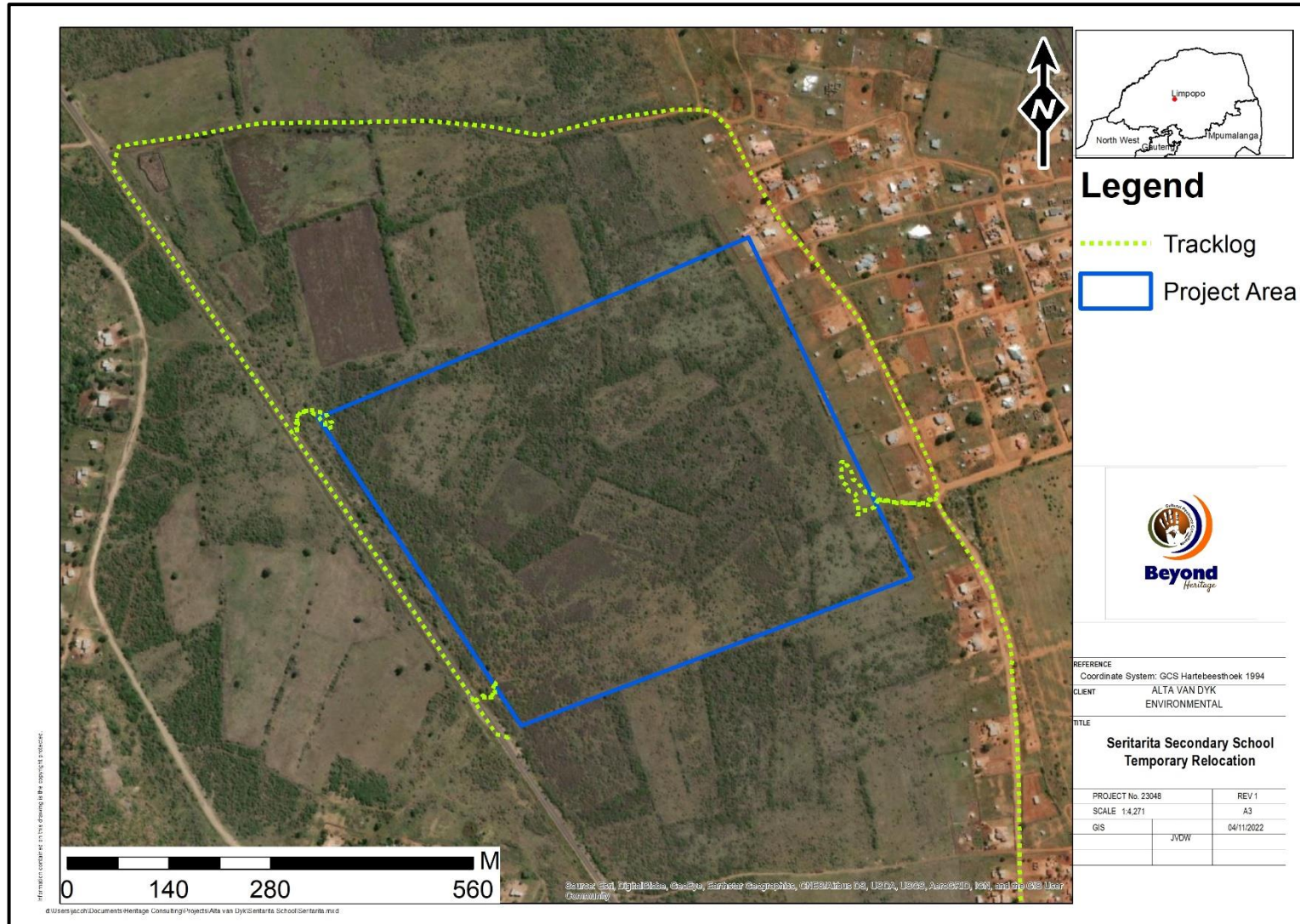


Figure 3.1. Tracklog of the survey path in green.

### 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.

Based on the AASW 4H the classifications of cultural heritage resources are considered as follows:

- Replicable (movable) - tangible forms of cultural heritage that can themselves be moved to another location;
- Non-replicable (immovable) - Unique or relatively unique for the period it represents, and/or unique or relatively unique in linking several periods in the same site;
- Critical - Critical cultural heritage: Internationally recognised heritage of communities who use, or have used within living memory, the cultural heritage for longstanding cultural purposes. Legally protected cultural heritage areas, including those proposed by host governments for such designation;

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 areas demarcated for development 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; and
- Potential to answer present research questions.

In addition to this criteria field ratings prescribed by SAHRA (2007), 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: Heritage significance and field ratings**

<b>FIELD RATING</b>	<b>GRADE</b>	<b>SIGNIFICANCE</b>	<b>RECOMMENDED MITIGATION</b>
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 Impact Assessment Methodology was provided by Alta van Dyk Environmental Consultants cc.

The significance of the identified impacts will be determined using an accepted methodology from the Department of Environmental Affairs and Tourism Guideline document on EIA Regulations, April 1998. As with all impact methodologies, the impact is defined in a semi-quantitative way and will be assessed according to methodology prescribed in the following section.

#### Scale utilised for the evaluation of the Environmental Risk Ratings

Evaluation Component	Rating	Scale	Description / criteria
<b>MAGNITUDE of negative impact</b> (at the indicated spatial scale)	10	Very high	Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.
	8	High	Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.
	6	Medium	Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.
	4	Low	Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.
	2	Very low	Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.
	0	Zero	Bio-physical and/or social functions and/or processes will remain <i>unaltered</i> .
<b>MAGNITUDE of POSITIVE IMPACT</b> (at the indicated spatial scale)	10	Very high	Positive: Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.
	8	High	<b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced.
	6	Medium	<b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.
	4	Low	<b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.
	2	Very low	<b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.
	0	Zero	<b>Positive:</b> Bio-physical and/or social functions and/or processes will remain <i>unaltered</i> .
<b>DURATION</b>	5	Permanent	<b>Impact in perpetuity. –</b>
	4	Long term	Impact ceases after operational phase/life of the activity >40 years.
	3	Medium term	Impact might occur during the operational phase/life of the activity – 40 years.
	2	Short term	Impact might occur during the construction phase - < 2 years.
	1	Immediate	<b>Instant impact.</b>
<b>EXTENT</b> (or spatial scale/influence of impact)	5	International	<b>Beyond the National boundaries.</b>
	4	National	Beyond provincial boundaries, but within National boundaries.
	3	Regional	Beyond 5 km of the Landfill site and within the provincial boundaries.
	2	Local	Within a 5 km radius of the Landfill site.
	1	Site-specific	<b>On site or within 100 meters of the site boundaries.</b>
	0	None	<b>Zero extent.</b>
<b>IRREPLACEABLE</b> loss of resources	5	Definite	<b>Definite</b> loss of irreplaceable resources.
	4	High potential	<b>High</b> potential for loss of irreplaceable resources.
	3	Moderate potential	<b>Moderate</b> potential for loss of irreplaceable resources.
	2	Low potential	<b>Low</b> potential for loss of irreplaceable resources.
	1	Very low potential	<b>Very low</b> potential for loss of irreplaceable resources.
	0	None	<b>Zero potential.</b>
<b>REVERSIBILITY</b> of impact	5	Irreversible	Impact <b>cannot</b> be reversed.
	4	Low irreversibility	<b>Low</b> potential that impact might be reversed.
	3	Moderate reversibility	<b>Moderate</b> potential that impact might be reversed.
	2	High reversibility	<b>High</b> potential that impact might be reversed.
	1	Reversible	Impact <b>will be</b> reversible.
	0	No impact	No impact.
<b>PROBABILITY</b> (of occurrence)	5	Definite	>95% chance of the potential impact occurring.
	4	High probability	75% - 95% chance of the potential impact occurring.
	3	Medium probability	25% - 75% chance of the potential impact occurring
	2	Low probability	5% - 25% chance of the potential impact occurring.
	1	Improbable	<5% chance of the potential impact occurring.
	0	No probability	<b>Zero probability.</b>

Evaluation Component	Rating scale and description / criteria
<b>CUMULATIVE</b> impacts	<p><b>High:</b> The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p><b>Medium:</b> The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p><b>Low:</b> The activity is localised and might have a negligible cumulative impact.</p> <p><b>None:</b> No cumulative impact on the environment.</p>

Once the Environmental Risk Ratings have been evaluated for each potential environmental impact, the Significance Score of each potential environmental impact is calculated by using the following formula:

- **SS (Significance Score) = (magnitude + duration + extent + irreplaceable + reversibility) x probability.**

The maximum Significance Score value is 150.

The Significance Score is then used to rate the Environmental Significance of each potential environmental impact as per the table below. The Environmental Significance rating process is completed for all identified potential environmental impacts both before and after implementation of the recommended mitigation measures.

#### Scale used for the evaluation of the Environmental Significance Ratings

Significance Score	Environmental Significance	Description / criteria
125 – 150	Very high (VH)	An impact of very high significance will mean that the project cannot proceed, and that impacts are irreversible, regardless of available mitigation options.
100 – 124	High (H)	An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.
75 – 99	Medium-high (MH)	If left unmanaged, an impact of medium-high significance could influence a decision about whether or not to proceed with a proposed project. Mitigation options should be relooked at.
40 – 74	Medium (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.
<40	Low (L)	An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation.
+	Positive impact (+)	A positive impact is likely to result in a positive consequence/effect, and is likely to contribute to positive decisions about whether or not to proceed with the project.

### 3.7 Assumptions and limitations of the study

The authors acknowledge that the brief literature review is not exhaustive on the literature of the area. Due to the nature of heritage resources and pedestrian surveys, the possibility exists that some features or artefacts may not have been discovered/recorded and the possible occurrence of graves and other cultural material cannot be excluded.

The study area was completely inaccessible due to dense *Dichrostachys cinerea* (sickle bush) growth. This limitation is mitigated with the implementation of a Chance Find Procedure and monitoring of the study area by an archaeologist during vegetation clearing.

This report only deals with the footprint area of the proposed development and consisted of non-intrusive surface surveys.

This study did not assess the impact on medicinal plants and intangible heritage as it is assumed that these components will be highlighted through the public consultation process if relevant. Additionally, community representatives Mr Percy and James Nyatlo nominated by the Traditional Council and were asked to indicate any heritage sites in the area (tangible and intangible) and no sites were indicated. 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

According to statsSA: Of the 307 682 residents of Mogalakwena Local Municipality, 96,1% are black African, 3% are white, with the other population groups making up the remaining 0,9%. Of those aged 20 years and above, 18,2% completed/have some primary education, 35,6% have secondary education, 21,7% have completed matric, 8,5% have some form of higher education, and 16% have no form of schooling.

## 5 Results of Public Consultation and Stakeholder Engagement:

### 5.1.1 Stakeholder Identification

In line with the Anglo Social Way and the NHRA, stakeholder engagement is a key component of any Environmental Authorisation (EA) process, it involves stakeholders interested in, or affected by the proposed development. A Stakeholder consultation process is facilitated by the EAP and no heritage concerns have been raised thus far.

In addition, the heritage team consulted with the local community and was accompanied by community representatives (Annexure A) nominated by the Traditional Council to the study area. According to the representatives no heritage significant sites or features occur within the development footprint.

## 6 Contextualising the study area:

### 6.1 Literature Review (SAHRIS)

Several Cultural Resource Management (CRM) surveys are on record for the area (e.g., Birkholtz and Smeyatsky 2019, Coetzee 2011, Pistorius 2002, Birkholtz and de Bruyn 2021) the relevant results of these studies are briefly discussed below.

In 2002, Pistorius surveyed the southern part of the farm Zwartfontein 818 LR and identified six grave sites, dwelling ruins and old abandoned mines. A survey as part of an expansion of the mine by Birkholtz and Smeyatsky (2019) on the farms Oversysel 815 LR, Zwartfontein 818 LR, Vaalkop 819 LR, and Blinkwater 820 LR identified numerous heritage sites. The following sites were identified:

- Eleven sites containing confirmed graves and burial grounds,
- Four sites containing possible graves,
- Two sites containing relocated burial grounds which may still contain graves,
- Twenty-eight black homesteads where the potential risk for the presence of unmarked stillborn graves exist,
- One historic farmstead which is certainly older than 60 years and quite likely older than 100 years as well (The farmstead site also comprises a historic black farmstead and a confirmed burial ground),
- Twelve Stone Age sites,
- One possible rain-making site,
- One Late Iron Age stonewalled site,
- Eight sites comprising historic to recent stonewalling,
- One site comprising a single lower grinding stone,
- One site comprising a rock boulder associated with cupules and stonewalling,
- And one site comprising a rubbing post.

A survey by Coetzee (2011), which was integrated into the report by Birkholtz and Smeyatsky (2019) was conducted on the farms Oversysel 815 LR and Zwartfontein 818 LR whereby 8 grave sites and cemeteries and 4 historical house foundations and structures were identified.

In 2021 a survey by Birkholtz and de Bruyn, on the farms Vaalkop 819 LR, Blinkwater 820 LR and Zwartfontein 818 LR, largely overlapped the survey conducted in 2019. The sites identified during the recent fieldwork include five Stone Age sites, two Iron Age sites, one homestead with the risk for unmarked graves, one farming-related structure, one historic structure, four possible graves, and seven sites comprising graves and burial grounds. Some of these sites were already recorded in the 2019 survey, and the 2021 survey identified 17 new sites.

**Table 6. Selected studies consulted for this project.**

Author	Year	Project	Findings
Küsel, U.	2005	Cultural Heritage Resources Impact Assessment on Malokong Hill.	Informal settlement of Malokong, stonewalling sites, Moloko pottery.
Van der Walt, J.	2016	Archaeological Impact Assessment for the Proposed Bulk Water Supply Pipelines from Pruisen to Piet-Se-Kop Reservoir, as Part of the Mogalakwena Water Master Plan, Mogalakwena Municipality Area, Limpopo Province.	MSA scatters, Iron Age remains
Van der Walt, J.	2017	Heritage Impact Assessment: Mogalakwena Municipality Water Master Plan: Phase 2A Bulk Water Supply Zone 1, Waterberg District Municipality, Limpopo Province	LIA structures, MSA scatters, burial grounds, historical stonewalling
Birkholtz, P., Smeyatsky, I.	2019	Mogalakwena Mine Expansion Project: Phase 1 – Heritage Impact Assessment	Graves, burial grounds, 28 homesteads, a historic farmstead, 12 Stone Age sites, a possible rain-making site, LIA stonewalled site, 8 sites comprising historic to recent stonewalling, lower grinding stone, rock boulder with cupules and stonewalling, a rubbing post.
Birkholtz, P., de Bruyn, C.	2021	Proposed Solar PV Plant for the Mogalakwena Mine, Situated near Mokopane, Limpopo Province – Heritage Impact Assessment.	Stone Age sites, Iron Age sites, one homestead, a farming related structure, an historic structure, four possible graves, seven sites comprising graves and burial grounds.
Roodt, F.	2008a	Phase 1 Heritage Resources Scoping Report Mogalakwena Bulk Water Supply Scheme – Phase 1 of Zone 1 Mokopane: Limpopo.	Burial grounds.
Roodt, F.	2008b	Phase 1 Heritage Resources Scoping Report Residential Development Sepharane, Limpopo	Moloko pottery scatters
Roodt, F.	2008c	Phase 1 Heritage Resource Impact Assessment (Scoping & Evaluation) Landfill and Salvage Yard. Anglo Platinum: Mogalakwena Section, Limpopo.	Low density MSA scatter
Roodt, F.	2012	Phase 1 Heritage Resource Impact Assessment (Scoping & Evaluation): Maruteng Waste Water Treatment Works Mokopane, Limpopo.	No sites
Roodt, F.	2017	Proposed filling station and shopping complex at Bakenberg. Mogalakwena Local	The author notes a Langa Ndebele stone walled

Author	Year	Project	Findings
		Municipality. Waterberg District. Limpopo Province	settlement outside of that study area.
Pistorius, J.C.C	2002	A Cultural Heritage Impact Assessment for the Proposed New Open Pit for PPRust on the Farm Zwartfontein 818LR in the Northern Province of South Africa. Amendment to the PPRust Environmental Management Programme Report (EMPR)	Dwelling ruins, and old abandoned mines, six grave sites.
Coetzee, F. P.	2011	Cultural Heritage Survey of the Proposed Provincial Road Deviation (P4380) Project for the Mogalakwena Platinum Mine, near Mokopane, Mogalakwena Municipality, Limpopo Province.	Historical structures and burial grounds
Murimbika, E.	2012	Proposed Eskom Platreef Power Line and Substation Project within Mogalakwena Local Municipality, Waterberg District in Limpopo Province: Archaeological and Heritage Impact Assessment Report.	Homestead remains and burial grounds
Hutten, M.	2013	Proposed Water Supply Infrastructure for the Residential Clusters of Tshamahansi, Sekuruwe, Seema, Phafola, Maala Perekisi, Witrivier and Millennium Park in the Mogalakwena Local Municipality, Waterberg District, Limpopo Province.	A living heritage site
Hutten, M.	2014	Proposed Development of a Shopping Centre on Portion 1 of the Farm Kroonstad 468 LR, west of Marken in the Mogalakwena Local Municipality, Waterberg District, Limpopo Province	No sites

## 6.2 Google Earth and The Genealogical Society of South Africa (Graves and burial sites)

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where archaeological and historical sites might be located. The database of the Genealogical Society of South Africa indicated no known grave sites within the study area.

## 6.3 Archaeological Background

### 6.3.1 Stone Age

Hominids began to make stone tools about 2.6 million years ago. Known as the Oldowan industry, most of the earliest tools were rough cobble cores and simple flakes. The flakes were used for such activities as skinning and cutting meat from scavenged animals. These early artefacts are difficult to recognize and have so far only been found in rock shelters such as the Sterkfontein Caves (Kuman 1998) and also in Makapan Valley in the caves in this area.

At about 1.4 million years ago hominids started producing more recognizable stone artefacts such as hand axes, cleavers and core tools (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. However, isolated finds have little value.

Evidence suggests that the region surrounding the project area has been inhabited during all periods of the Stone Age, including the Early Stone Age (ESA), Middle Stone Age (MSA) and Later Stone Age (LSA). This is most evident and extensively documented at the Cave of Hearths in the Makapans Valley some 37 km to the southeast (McNabb 2009; Phillipson, 2005).

Makapan Valley was declared a World Heritage Site in 2005. The UNESCO website states the following: "Fossils found in the many archaeological caves of the Makapan Valley have enabled the identification of several specimens of early hominids, more particularly of Paranthropus, dating back between 4.5 million and 2.5 million years, as well as evidence of the domestication of fire 1.8 million to 1 million years ago." (UNESCO, 2013).

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).

The Pietersburg lithic industry occurs in the Limpopo province and is epitomized by large, elongated products, including long points that are usually unifacial and manufactured on blades (Mason 1962; Sampson 1974). Cores and end products are often made on hornfels (Mason 1962; Sampson 1974), a rock that sometimes occurs in large blocks that allow the knapping of long blades or flakes. Other rocks that occur in large pieces, such as quartzite, were also used, suggesting that the appearance of Pietersburg assemblages may, to a degree, be influenced by available rocks.

Some known sites in the Waterberg are a small rock shelter with MSA and LSA components, North Brabant, (Schoonraad and Beaumont 1968, Van der Ryst 1998). MSA material was also recorded from a rock shelter at Schurfpoort 112 KR and Goergap 113 KR on the Waterberg plateau (van der Ryst 1998). Olieboomspoor rock shelter is an MSA site of considerable significance (Mason 1962) that underlies a long LSA sequence (van der Ryst 2006).

Relatively few MSA sites have been studied on the Waterberg plateau and none is dated (Wadley et al 2016). In contrast, several late LSA sites have been excavated (van der Ryst 1998). The hiatus between



MSA and LSA occupations on the plateau requires further research; LSA settlements are not present before the late eleventh/early twelfth century AD when Iron Age agro pastoralists also entered the region (van der Ryst 1998; Wadley et al 2016).

By the beginning of the Later Stone Age (LSA), human behaviour was undoubtedly modern. Uniquely human traits, such as rock art and purposeful burials with ornaments, became a regular practice. These people were the ancestors of the San (or Bushmen).

San rock art has a well-earned reputation for aesthetic appeal and symbolic complexity (Lewis-Williams 1981). 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. Important LSA deposits have been excavated in Olieboompoort Cave (Mason 1962) and other sites in the Waterberg to the West (Van der Ryst, 1998). According to Bergh (1999) some rock paintings, are known 20 to 30 km northeast of Mokopane and the Archaeological database at Wits also has paintings on record to the east of the study area on the Planknek Mountain range.

### 6.3.2 Iron Age

Bantu-speaking people moved into Eastern and Southern Africa about 2,000 years ago (Mitchell, 2002). These people cultivated sorghum and millets, herded cattle and small stock and manufactured iron tools and copper ornaments. Because metalworking represents a new technology, archaeologists call this period the Iron Age. Characteristic ceramic styles help archaeologists to separate the sites into different groups and time periods. The first 1,000 years is called the Early Iron Age followed by the Middle and Late Iron Age. As mixed farmers, Iron Age people usually lived in semi-permanent settlements consisting of pole-and daga (mud mixed with dung) houses and grain bins arranged around a central area for cattle (Huffman 1982). Usually, these settlements with the 'Central Cattle Pattern' (CCP) were sited near water and good soils that could be cultivated with an iron hoe.

According to the most recent archaeological cultural distribution sequences by Huffman (2007), the study area falls within the distribution area of various cultural groupings originating out of both the Urewe Tradition (eastern stream of migration) and the Kalundu Tradition (western stream of migration).

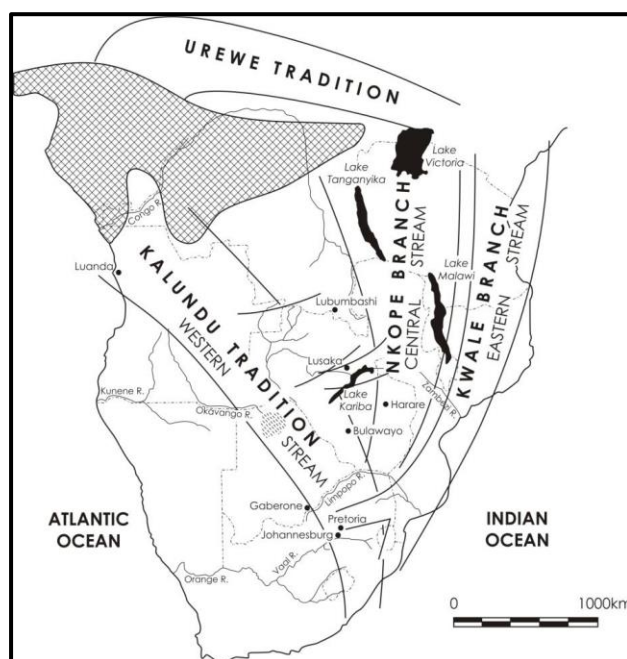


Figure 6.1. Movement of Bantu speaking farmers (Huffman 2007)

The ceramic facies associated with this region are:

<b>Urewe Tradition:</b>	Kwale branch- Mzonjani facies AD 450 – 750 (Early Iron Age). Moloko branch- Icon facies AD 1300 - 1500 (Late Iron Age)
<b>Kalundu Tradition:</b>	Happy Rest sub-branch - Doornkop facies AD 750 - 1000 (Early Iron Age) Eiland facies AD 1000 – 1300 (Middle Iron Age) Klingbeil facies AD 1000 - 1200 (Middle Iron Age) Letaba facies AD 1600 - 1840 (Late Iron Age) Uitkoms Facies AD 1650 – 1820 (Late Iron Age)

Van Warmelo (1930) classified the Ndebele chiefdoms of Mokopane and Polokwane as the Northern Transvaal Ndebele with the Langa Ndebele and Kekana Ndebele as the most prominent chiefdoms of the region. The Langa Ndebele are thought to have migrated out of northern Kwa-Zulu Natal between 1630 and 1670 and kept their Nguni language (Huffman 2004). The exact origin of the Kekana Ndebele is not known with certainty but speculated to have also been from northern Kwa-Zulu Natal (Huffman 2004). The Langa Ndebele comprised of numerous and varied clans whereby each ward was ruled by a different sub-headman who was ultimately ruled by the Langa chief (Jackson 1983).

### 6.3.3 Historical Period

In September of 1854, the Langa Ndebele and Kekana Ndebele attacked three Voortrekker groups in the region as an act of defiance against the demands set forth by the Boers for land from the Ndebele territory (Esterhuysen 2008). Prior to the attacks, the Kekana Ndebele with their chief Mugombane took refuge in Historic Cave and created their stronghold there. The first attack by the Langa Ndebele at Fothane Hill (Moordkoppie – located in the study area) saw the death of Voortrekker leader Andries Hendrik Potgieter's younger brother Hermanus Phillippus Potgieter. Makapaanspoort and Pruisen were then attacked the following day. The attacks have been speculated to have been planned ahead of time due to the preparation of the stronghold at the cave as well as the simultaneous attacks by separate Ndebele chiefdoms (Jackson 1983). Boer reinforcements from Rustenburg and the Soutpansberg were called to the area with around 500 men arriving in October of 1854 (Esterhuysen 2008). Meanwhile, the Kekana Ndebele sought refuge in the hills and the Langa in the Historic Cave. The arrival of Boer reinforcement allowed the Voortrekkers to attack the Kekana Ndebele at the Historic Cave. During their siege of the cave, 2000 Kekana Ndebele were killed along with the Commandant-General Piet Potgieter (Birkholtz and Smeyatsky 2019). In honour of Commandant-General Piet Potgieter, the nearby town of Vredenburg was renamed Piet Potgietersrust in September 1858. After the siege of the Historic Cave, the Voortrekkers proceeded to attack the Langa Ndebele at Fothane Hill on the 14<sup>th</sup> of April 1858 (Esterhuysen 2008). Eight hundred Langa Ndebele were killed with Mankopane and his remaining Langa Ndebele fleeing the hill and subsequently moving their capital to Thutlwane Hill in Magagamatala (Jackson 1983). Excavations at the base of the Historic Cave, now known as Makapan's Caves, yielded diagnostic ceramic sherds belonging to the late Moloko branch and Letaba/Phalaborwa facies. Huffman (2007), noted the potential presence of Urewe and Kalundu ceramic traditions within the region, signifying cultural material of both the eastern and western stream of the Bantu migration.

Ten years later, in January 1868, the Kekana Ndebele attacked the town of Piet Potgietersrust with the support of the Langa Ndebele. By March 1868, the conflict had escalated with Commandant Paul Kruger laying siege to the Kekana Ndebele at Sefakaulo Hill near to Piet Potgietersrust (Bergh 1999, Esterhuysen 2008). Unable to succeed in the full siege of Sefakaulo Hill, Kruger proceeded to attack Chief Mankopane and his Langa Ndebele at Thutlwane Hill on the 13<sup>th</sup> of June 1868. After the attack lasted for a few days, chief Mankopane had been triumphant and had forced Kruger and his men to retreat back to Piet Potgietersrust (Birkholtz and Smeyatsky 2019). On July 6<sup>th</sup> 1869, a peace agreement between the Langa Ndebele and the Boers was settled upon with no further development occurring in the town.

By 1870, the town had been evacuated due to Malaria and was only reoccupied in 1890 (Bergh 1999).

Under the leadership of Commandant Henning Pretorius from 1890, the town of Piet Potgietersrust was then further developed and expanded into a larger town. The town has since been renamed Mokopane. Chief Mankopane died on 30 May 1877 at Thutlwane and was succeeded by his son Masebe (Jackson 1983). Further attacks took place between 1883 and 1886 when the Langa Ndebele and Kekana Ndebele battled against each other (Jackson 1983). The war took place in several areas within the region, including a battle which took place along the Mogalakwena River. In 1886, State President Paul Kruger ordered the two chiefs to end the war and agree on peace (Jackson 1983).

In 1890, the Location Commission visited the Langa Ndebele and the Kekana Ndebele in order to demarcate territories to each chiefdom. The death of the successor of Mankopane, Chief Masebe, had created a rift within the Langa Ndebele as the two sons of Masebe were in disagreement for the new title of chief (Cartwright and Cowan 1978). This created a divide within the Langa Ndebele with some members following Hans Masebe and others following Backenberg Masebe (Cartwright and Cowan 1978). This created subsequent partitioning of the territory demarcated for the Langa Ndebele with the southern section being allocated to Chief Hans Masebe and his followers and the northern section to Chief Backenberg Masebe and his followers. The southern section included Fothane Hill, which was once the capital of Chief Mapela, and as such the southern chiefdom became known as ba ga Mapela (Jackson 1983). During the partition, conflicts rose between the two chiefs with both chiefdoms attacking each other. In 1901, under the British Army occupation of Pietersburg, the two chiefs were ordered to cease their attacks on each other.

## **7 Description of the Physical Environment**

The vegetation and landscape are described by Mucina and Rutherford (2006) as Makhado Sweet Bushveld. The Makhado Sweet Bushveld is described as slightly to moderately undulating plains sloping generally down to the north, with some hills in the southwest. Short and shrubby bushveld with a poorly developed grass layer.

The project area is situated along Mapela Road and consists of agricultural fields that have been ploughed for the last 60 years. These ploughed areas are clearly visible on areal imagery (Figure 1-3) of the area. As a result of the continued cultivation, pioneer species and more specifically *Dichrostachys cinerea*, known as sickle bush, severely limited accessibility into the study area. General site conditions are indicated in (Figure 7.1 to 7.4).



Figure 7.1. General site conditions – overgrown vegetation where agricultural fields are located.



Figure 7.2. Project boundary as viewed from the Mapela Road.



Figure 7.3. General site conditions – littering occurs throughout the project area.

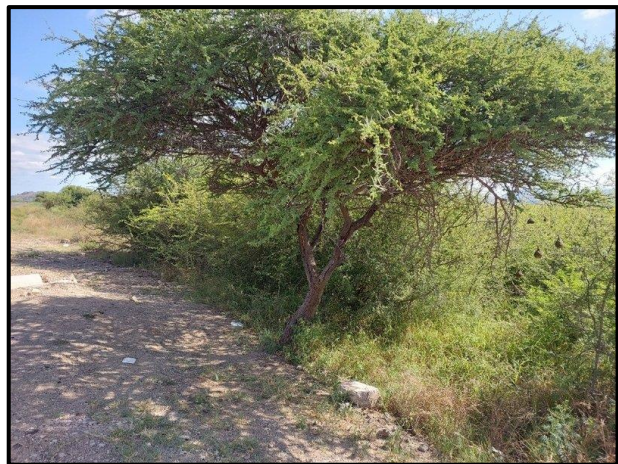


Figure 7.4. *Dichrostachys cinerea*, known as sickle bush rendered the site inaccessible.

## **8 Cultural Heritage Baseline**

### **8.1 Heritage Resources**

Although the study area is inaccessible due to dense vegetation, it can be inferred from the aerial imagery that the location has experienced ploughing and anthropogenic disturbance in recent history. Additionally, the study area predominantly consists of flat terrain devoid of significant topographical features commonly associated with archaeological or historic settlements, such as pans, rocky outcrops, or hills. These findings suggest, at the very least, a low probability of encountering tangible cultural heritage where the context remains intact. Furthermore, community representatives who actively participated in the primary data collection confirmed, to the best of their knowledge, the absence of any tangible or intangible cultural heritage in the study area as presented to them. . Appendix A includes the details of the community nominated representatives.

### **8.2 Cultural Landscape**

The study area is in a rural setting and characterised by historic and more recent cultivation. The larger area is characterised by mining activities. The project footprint is not part of an archaeological landscape since the majority of anthropogenic interventions relate to cultivation of the site with a road and a few tracks (Figure 8.1 to 8.5).





Figure 8.1. 1954 Aerial image showing the approximate location of the study area that is cultivated without any structures or other features visible.

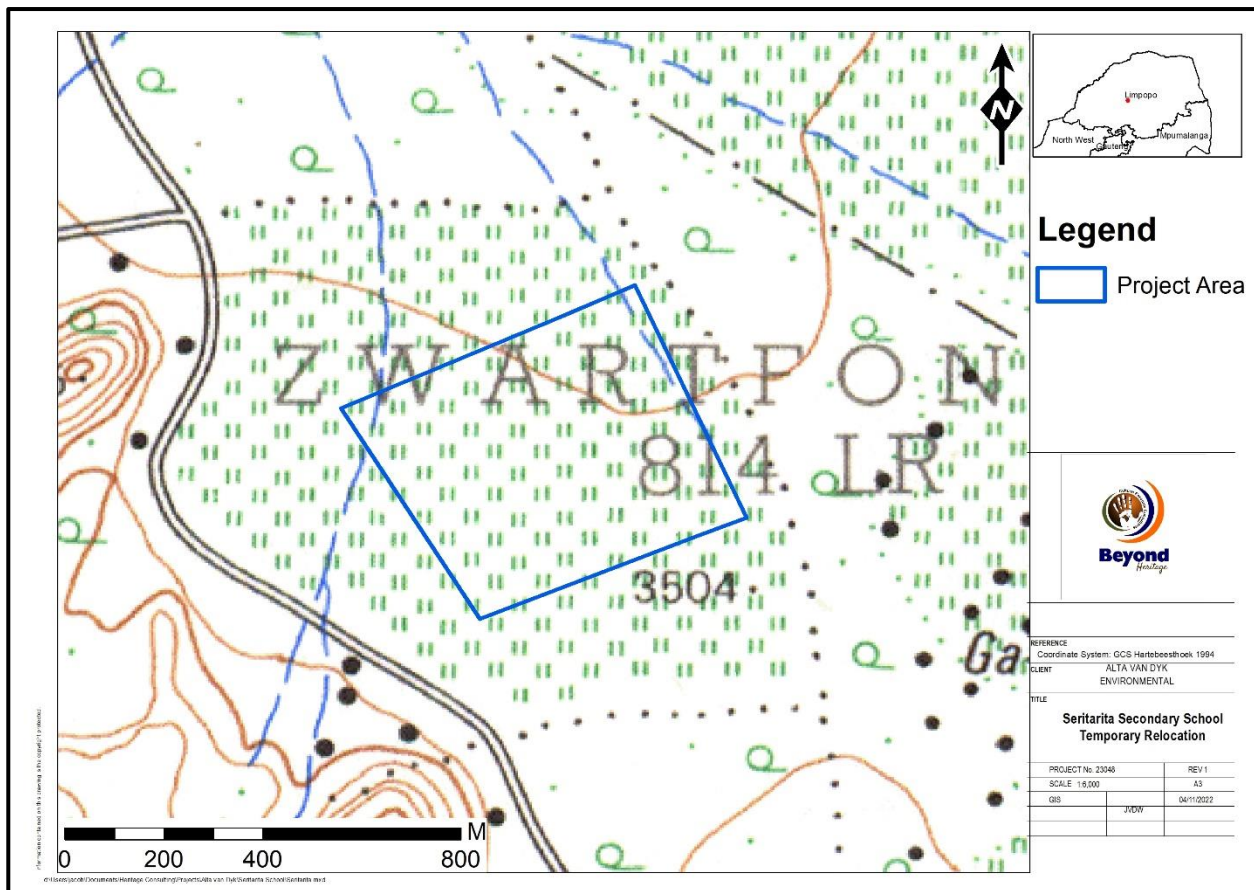


Figure 8.2. 1970 2328DD topographic map of the Project area indicating cultivation within the project area. No developments are indicated in the study area.

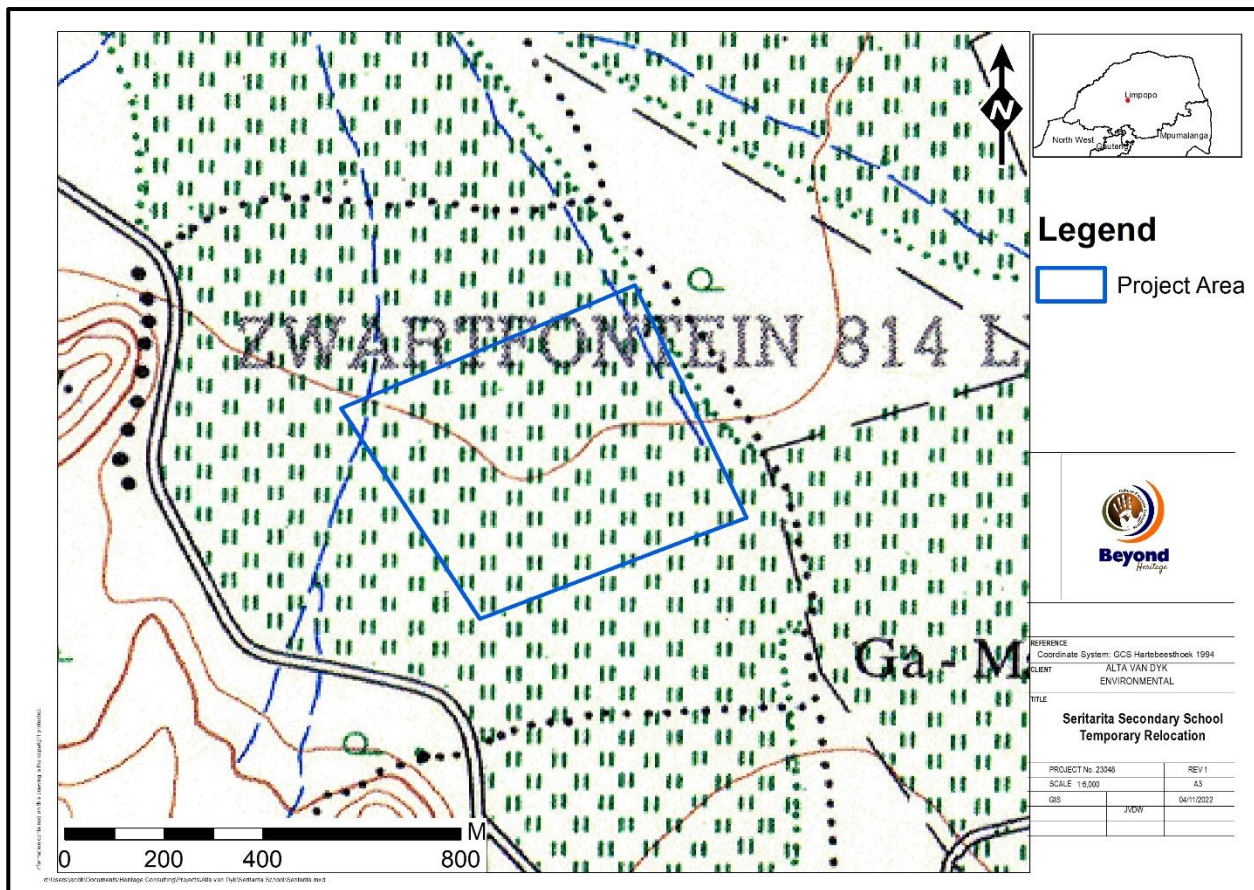


Figure 8.3. 1983 2328DD Topographic map indicating widespread cultivation in the project area as well as the surrounding area.





Figure 8.4. 1995 Aerial image showing the approximate location of the study area that is cultivated without any structures or other features visible.

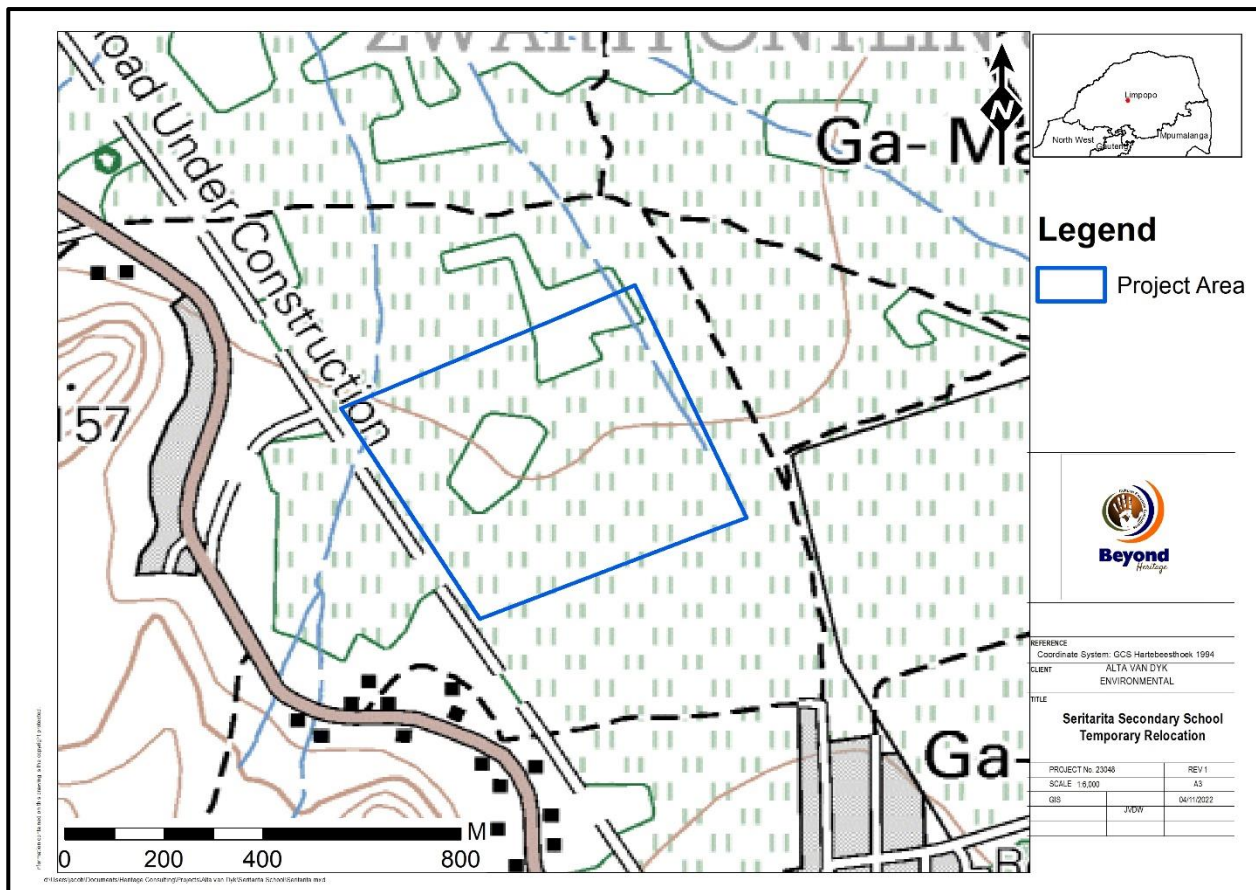


Figure 8.5. 2004 2328DD Topographic map showing the construction of a road running along the western boundary of the project area.

### 8.3 Paleontological Heritage

According to the SAHRA palaeontological sensitivity map the study area is indicated as of insignificant significance and no further studies are required (Figure 8.4).



Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map

Figure 8.6. Paleontological sensitivity of the approximate study area (yellow polygon) as indicated on the SAHRA Palaeontological sensitivity map.

## **9 Assessment of impacts**

It is assumed that the pre-construction and construction phase involves the removal of topsoil and vegetation as well as the establishment of infrastructure. These activities can result in impacts that include destruction or partial destruction of previously unknown and non-renewable heritage resources. The probability is however low since no known heritage features were pointed out by community representatives. Due to the lack of known heritage resources within the project area and the transformed nature of the study area through extensive cultivation in the past, no major impacts are expected on heritage resources.

### **9.1.1 Cumulative impacts**

The cumulative impacts on heritage resources in the Mogalakwena Mine area are increasing through urban sprawl and mining activities in the larger area with associated infrastructure developments. In the case of this Project, no additional impact on tangible heritage resources is expected. As such, it is not anticipated that the Project will have a high negative cumulative impact on the broader archaeological landscape which is already dominated by mining infrastructure but will affect the historical and contemporary landscape.

9.2 Impact Assessment Tables

Table 7. Impact assessment for the construction phase of the project (Tangible Heritage Resources)

ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACT	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION							Cumulative	Status	RECOMMENDED MITIGATION MEASURES/ REMARKS	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION								
		Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL				Significance	Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL	Significance
<b>Heritage</b>																				
Loss of heritage resources – at this stage the presence of heritage resources is assessed as unknown.	Vegetation clearing, excavations and installation of infrastructure	2	3	2	2	5	3	42	M	None	Negative	<ul style="list-style-type: none"> <li>Vegetation clearing in the project site should be conducted prior to construction and monitored by an archaeologist.</li> <li>Implementation of a Chance Find Procedure for the project.</li> </ul>	1	3	1	1	2	1	8	L

Table 8. Impact assessment for the construction phase of the project (Intangible Heritage Resources).

ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACT	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION							Cumulative	Status	RECOMMENDED MITIGATION MEASURES/ REMARKS	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION								
		Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL				Significance	Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL	Significance
<b>Heritage</b>																				
Impact on the cultural landscape, sense of place and	Vegetation clearing and construction activities.	2	2	2	2	3	3	33	L	The project will have an impact on the historical and contemporary landscape	Negative	<ul style="list-style-type: none"> <li>The likelihood is that impacts are very low and mitigation measures will not alleviate the impact as similar examples of the</li> </ul>	1	3	1	1	2	1	8	L



ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACT	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION							Cumulative	Status	RECOMMENDED MITIGATION MEASURES/ REMARKS	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION															
		Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL				Significance	Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL	Significance							
intangible heritage										changing it from a cultivated area that formed part of the foundation of Skimming to a contemporary landscape.			Mapela irrigation scheme occur in the area.														

Table 9. Impact assessment for the operation phase of the project (Tangible and Intangible)

ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACT	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION							Cumulative	Status	RECOMMENDED MITIGATION MEASURES/ REMARKS	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION								
		Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL				Significance	Magnitude	Duration	Extent	Irreplaceability	Reversibility	Probability	TOTAL	Significance
<b>Heritage</b>																				
Loss of heritage resources	Operation of school	1	3	1	1	3	2	18	L	None	Negative	NA	1	3	1	1	2	1	8	L

**Table 10. Impact assessment for the closure phase of the project (Tangible and Intangible).**

POTENTIAL ENVIRONMENTAL IMPACT	ACTIVITY	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION								Cumulative	Status	RECOMMENDED MITIGATION MEASURES/ REMARKS	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION													
		M	D	S	I	R	P	TOTAL	SP				M	D	S	I	R	P	TOTAL	SP						
Loss of heritage resources	Closure of temporary school	1	3	1	1	1	2	14	L	None									1	3	1	1	1	1	7	L

## 10 Conclusion and recommendations

The project area used to be part of the larger Mapela irrigation scheme that contributed to the founding of Skimming, and has been transformed through cultivation which would have impacted on tangible heritage resources if any were present in the project footprint. This was corroborated by the community representatives (Mr Percy and James Nyatlo) that were nominated by the Traditional Council who are not aware of any heritage resources in the study area although the irrigation scheme is of significance to the Skimming residents. According to the SAHRA Paleontological sensitivity map the study area is of insignificant paleontological significance and no further studies are required for this aspect.

The impact to heritage resources is low provided that the recommendations in this report are adhered to, based on the South African Heritage Resource Authority (SAHRA) 's approval.

### 10.1 Recommendations for condition of authorisation

The following recommendations for Environmental Authorisation apply and the project may only proceed based on approval from SAHRA:

#### Recommendations:

- Vegetation clearing in the project site should be conducted prior to construction and monitored by an archaeologist.
- Monitoring of the project area by the ECO during the construction phases for heritage chance finds, and if chance finds are encountered to implement the Chance Find Procedure for the project as outlined in the Anglo-American Social Way Toolkit.

### 10.2 Reasoned Opinion

The overall impact of the project with the recommended mitigation measures is considered to be low and residual impacts can be managed to an acceptable level through implementation of the recommendations made in this report. The socio-economic benefits also outweigh the possible impacts of the development if the correct mitigation measures are implemented for the project.

### 10.3 Potential risk

Potential risks to the proposed project are the occurrence of intangible features and unrecorded cultural resources (of which graves, and subsurface cultural material are the highest risk). This can cause delays during construction, as well as additional costs involved in mitigation and possible layout changes.



**10.4 Monitoring Requirements**

Day to day monitoring can be conducted by the Environmental Control Officers (ECO). The ECO or other responsible persons should be trained along the following lines:

- *Induction training:* Responsible staff identified by the developer should attend a short course on heritage management and identification of heritage resources.
- *Site monitoring and watching brief:* As most heritage resources occur below surface, all earth-moving activities need to be routinely monitored in case of accidental discoveries. The greatest potential impacts are from pre-construction and construction activities. The ECO should monitor all such activities. If any heritage resources are found, the chance finds procedure must be followed as outlined above.

**Table 11.** Monitoring requirements for the project

Heritage Monitoring					
Aspect	Area	Responsible for monitoring and measuring	Frequency	Proactive or reactive measurement	Method
Study area	Study Area	Developer and Project archaeologist	Prior to construction – once off	Proactively	<ul style="list-style-type: none"> <li>• Vegetation clearing in the project site should be conducted prior to construction and monitored by an archaeologist</li> </ul>
Cultural Heritage Resource Chance Find	Entire project area	EO & ECO	Weekly (Construction phase)	Proactively	<ul style="list-style-type: none"> <li>• The approved CFP must be implemented and awareness among contractors created (Refer to Appendix B).</li> </ul>

**10.5 Management Measures for inclusion in the EMPr**

**Table 12. Heritage Management Plan for EMPr implementation**

Area	Mitigation measures	Phase	Timeframe	Responsible party for implementation	Target	Performance indicators (Monitoring tool)
General project area	Vegetation clearing in the project site should be conducted prior to construction and monitored by an archaeologist	Prior to construction	Once off	Project Archaeologist Applicant EPC Contractor	Ensure compliance with relevant legislation and recommendations from SAHRA under Sections 35, 36 and 38 of NHRA	Monitoring report.
General project area	Monitoring of the project area by the ECO during pre-construction and construction phases for chance finds, if chance finds are encountered to implement the Chance Find Procedure for the project	Construction	Weekly	Applicant EPC Contractor	Ensure compliance with relevant legislation and recommendations from SAHRA under Sections 35, 36 and 38 of NHRA	ECO Checklist/Report Number of chance finds reported and resolved.

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Electronic sources

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**Appendix A – Attendance register of community representatives**

SITE ATTENDANCE REGISTER			
<b>Project:</b> Seritarita School	<b>Date:</b> 17 March 2023		
<b>Facilitator:</b> Ruan van der Merwe	<b>Place:</b> Seritarita School Relocation Project		
Name	Area	Phone	ID Number
<i>Evans Lobeke</i>	<i>AAP</i>	<i>066 305 0509</i>	—
<i>NYATLO Perchy</i>		<i>0760992638</i>	
<i>JAMES NYATLO</i>		<i>0661054411</i>	

Page 1 of 2

## Appendix B – Anglo American Chance Find Procedure



# OPERATIONAL PROCEDURE

## MOGALAKWENA COMPLEX

# CULTURAL HERITAGE CHANCE FIND

VERSION: 3.0

LAST REVISION DATE: 02 June 2021

FIRST IMPLEMENTATION DATE: 13 April 2018

REFERENCE NUMBER: MS-CA-CTY-PRO-0005

OLD REFERENCE NUMBER: N/A

	NAME	POSITION	SIGNATURE	DATE
<b>AUTHOR:</b>	Benjamin Moremi	Social Performance Specialist	Signed by:Kgadi Benjamin Moremi Signed at:2021-06-09 08:06:24 +02:00 Reason:Witnessing Kgadi Benjamin Mor  <i>Kgadi Benjamin Moremi</i>	09Jun2021
<b>REVIEWED BY:</b>	Justin du Piesanie	Cultural Heritage Specialist	Signed by:Justin John du Piesanie Signed at:2021-06-09 08:07:37 +02:00 Reason:Witnessing Justin John du Piesanie  <i>Justin John du Piesanie</i>	09Jun2021
<b>REVIEWED BY:</b>	Luyanda Ntlanjeni	Snr Resettlement Specialist	Signed by:Luyanda Ntlanjeni Signed at:2021-06-09 10:26:17 +02:00 Reason:Witnessing Luyanda Ntlanjeni  <i>Luyanda Ntlanjeni</i>	09Jun2021
<b>REVIEWED BY:</b>	Soza Nkuna	Snr Resettlement Specialist	Signed by:Sozabile Cedric Nkuna Signed at:2021-06-09 09:32:10 +02:00 Reason:Witnessing Sozabile Cedric Nkuna  <i>Sozabile Cedric Nkuna</i>	10Jun2021
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<b>APPROVED BY:</b>	Herman Kemp	Act Concentrator Manager	<i>Herman Kemp</i>	09Jun2021
<b>APPROVED BY:</b>	Tony Power	Snr. General Manager		

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

## Contents

1	Aim .....	3
2	Scope .....	3
3	Definitions .....	3
4	Abbreviations .....	8
5	Responsible for Review .....	9
6	Responsible for Implementation .....	9
7	General .....	10
7.1	Contravention .....	10
7.2	Distribution .....	10
7.3	Additional Information .....	10
8	Safety Requirements for this Procedure .....	11
9	Procedure .....	11
9.1	AASW CFP Framework .....	11
9.2	(1) Discovery, Stoppage of Works and Notification .....	11
9.3	(2) Delineate, Secure and Record .....	11
9.4	(3) Specialist Evaluation .....	12
9.5	(4) Significant Finds and Authority Notification .....	13
9.6	(5) Await Investigation .....	14
9.7	(6) Resume Work .....	15
9.8	Dispute .....	15
9.9	Record Keeping .....	15
10	History of Changes .....	15
11	Record Control .....	15
12	References .....	16
13	Appendices .....	16
13.1	CF Recording Form MS-CA-CTY-FRM-0005A .....	16

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

## 1 Aim

The aim of the procedure is to define the appropriate cultural heritage chance find (CF) response guidelines consistent with Group Standards and in accordance with international standards of good practice<sup>1</sup> for implementation at the Mogalakwena Platinum Mining Complex (MC). As a minimum, the procedure is to promote compliance with:

- i. The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA);
- ii. The NHRA Regulations, 2000 (Government Notice Regulation [GN R] 548);
- iii. The International Finance Corporation (IFC) Performance Standard (PS) 8: Cultural Heritage; and
- iv. Anglo American Social Way (AASW) 3.0 4H Cultural Heritage.

By adopting this procedure, the objective is to avoid and/or reduce operational risks that may result due to CFs, whilst demonstrating respect to the host communities culture and traditions.

## 2 Scope

The Chance Find Procedure (CFP) details the actions to be taken when CFs are found during exploration, construction and operational activities. The CFP describes training requirements, immediate actions to be taken when CFs are uncovered, communication and processing protocols, and reporting requirements consistent with Group Standards.

The scope applies to all employees of the Company performing duties at MC, as well as any contractors, sub-contractors, consultants or any other applicable service provider performing duties within the MC Surface Lease Area or Mining Right boundary.

## 3 Definitions

Term	Definition
Alter	Any action affecting the structure, appearance or physical properties of a place whether by way of structural or other works, or any other means.
Archaeological	Any material remains that were produced or created by humans or that resulted from any human activity and that are unused and older than 100 years. This includes artefacts, human and hominid remains and artificial features and structures. Archaeology also refers to Rock Art that is defined as any form of painting, engraving or other graphic representation on fixed rock surfaces or loose rocks or stones that was made by humans and that are older than 100 years, including a 10 m area surrounding such site. Archaeology also includes:

<sup>1</sup> The development of this procedure considered various legislations, guidelines and doctrinal texts including *inter alia* The World Heritage Convention Act, 1999 (Act No. 49 of 1999) (WHCA), The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM:PAA) and the related Cultural Heritage Survey Guidelines and Assessment Tools for Protected Areas in South Africa (GN R 1356, promulgated 8 December 2017), various International Council on Monuments and Sites (ICOMOS) Declarations and Charters, World Bank Operational Policies, Equator Principles and IFC PS Guidelines.

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Term	Definition
	<ul style="list-style-type: none"> <li>- Any wrecks or parts thereof that was wrecked in South Africa more than 60 years ago, including any cargo, debris or artefacts found or associated with it; and</li> <li>- Any features, structures and artefacts older than 75 years that are associated with military history, including the sites on which they are found.</li> </ul>
Archaeologist	A trained professional who uses scientific methods to excavate record and study archaeological sites and deposits.
Burial	Land utilised for the interment of a body or ashes or when a structure is employed for the interment of human remains or ashes;
Burial Ground or Grave	Any place, whether wholly or partly above or below ground level in which human remains are permanently interred or intended to be permanently interred, whether in a coffin or other receptacle or not, and also includes any monument, tombstone, cross, inscription, rail, fence, chain, erection or other structure of whatsoever nature forming part of or appurtenance to such grave
Chance Find Incident	Unintended and accidental discovery or damaging of previously unknown cultural heritage resources during construction, developmental or operational activities.
Chance Find Procedure	A project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered.
Company	Anglo American Platinum
Consent	The constitutional right of individuals to provide or deny free prior, and informed permission.
Conservation	The protection, maintenance, preservation and sustainable use of “places” to safeguard their “cultural significance”.
Critical Cultural Heritage	One or both of the following types of cultural heritage: (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes; or (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation.
Cultural Heritage Resource	Any place or object of cultural significance comprising: <ul style="list-style-type: none"> <li>- Tangible heritage: both moveable and immovable objects;</li> <li>- Natural features or objects;</li> <li>- Intangible forms of culture.</li> </ul>
Cultural Significance (CS)	The aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. A heritage may have cultural significance or other special value because of its: <ul style="list-style-type: none"> <li>- Importance in the community, or pattern of South Africa’s history;</li> <li>- Possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage;</li> <li>- Africa’s natural or cultural heritage;</li> <li>- Potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage;</li> </ul>

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Term	Definition
	<ul style="list-style-type: none"> <li>- Importance in demonstrating the principal characteristics of a particular class of South Africa’s natural or cultural places or objects;</li> <li>- Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;</li> <li>- Importance in demonstrating a high degree of creative or technical achievement at a particular period;</li> <li>- Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;</li> <li>- Strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and</li> <li>- Significance relating to the history of slavery in South Africa.</li> </ul>
Development	<p>Any physical intervention, excavation, or action that could cause changes to the nature, appearance, fabric of a place. In addition, development might also influence the stability or future well-being of a place. Development could include:</p> <ul style="list-style-type: none"> <li>- Construction, alteration, demolition, removal or change of use of a place or a structure at a place;</li> <li>- Carrying out any works on or over or under a place;</li> <li>- Any change to the natural or existing condition or topography of land; and</li> <li>- Any removal or destruction of trees, or removal of vegetation or topsoil.</li> </ul>
Excavation	The scientific excavation, recording and retrieval of archaeological deposit and objects through the use of accepted archaeological procedures and methods, and excavate has a corresponding meaning.
Exhumation	Authorised exposure and removal of human remains from its grave
Exposure	Unauthorized and accidental unearthing of cultural heritage resources
Field Rating	<p>The South African Heritage Resources Agency (SAHRA) requires heritage resources to be provisionally rated in accordance with Section 7 of the NHRA that provides a three tier grading system of resources that form part of the national estate. The rating system distinguishes between four categories:</p> <ul style="list-style-type: none"> <li>- Grade I: Heritage resources with qualities so exceptional that they are of special national significance;</li> <li>- Grade II: Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region;</li> <li>- Grade III: Other heritage resources worthy of conservation; and</li> <li>- General Protected: i.e. generally protected in terms of Sections 33 to 37 of the NHRA.</li> </ul>
General Protection	General protections are afforded to:

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Term	Definition
	<ul style="list-style-type: none"> <li>- Objects protected in terms of laws of foreign states;</li> <li>- Structures older than 60 years;</li> <li>- Archaeological and palaeontological sites and material and meteorites;</li> <li>- Burial grounds and graves; and</li> <li>- Public monuments and memorials.</li> </ul>
Grave Relocation	The process of exhuming mortal remains from their original place of interment to a new burial ground with the prior, informed consent of the NoK and under the authorisation of the requisite permits regulated by the national legislative framework
Heritage Resources Authority	SAHRA, established in terms of Section 11, or, insofar as the NHRA is applicable in or in respect of a province, a provincial heritage resources authority, in this instance the Limpopo Provincial Heritage Resources Authority (LIHRA).
Heritage Site	Any place declared to be a national heritage site by SAHRA or a place declared to be a provincial heritage site by a provincial heritage resources authority.
Immovable Heritage	Sites, structures, land and other historically-valuable items that are fixed in space and not portable
Interment	To commit human remains or ashes to its final resting place
Living / Intangible Heritage	The intangible aspects of inherited culture that could include cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems, the holistic approach to nature, society and social relationships.
Major Find	If the cultural heritage resource cannot feasibly be rescued in a specified timeframe without compromising the detailed material recovery and contextual observations, the resource is considered a Major Find.
Moveable Heritage	Any natural or manufactured object of heritage significance. Movable heritage may be an integral part of the significance of heritage places.
Next-of-Kin (NoK)	NoK of graves means the living relative/s of the deceased buried in a grave. The order of precedence of NoK is determined in accordance with the Exhumation Ordinance ( <i>now repealed</i> ) as: <ol style="list-style-type: none"> <li>1. The surviving spouse or partner of the deceased;</li> <li>2. In the absence of a surviving spouse or partner, the eldest adult child of the deceased;</li> <li>3. In the absence of an adult child, a parent of the deceased;</li> <li>4. In the absence of a parent, and adult sibling of the deceased; and</li> <li>5. In the absence of a sibling, the closest adult relative of the deceased.</li> </ol>
Non-Compliance	For the purpose of this procedure, this means any breach of the CFP or acts of negligence that results in the damage or destruction of cultural heritage.
Non-Replicable Heritage	May relate to the social, economic, cultural, environmental, and climatic conditions of past peoples, their evolving ecologies, adaptive strategies, and early forms of environmental management, where the

**Cultural Heritage Chance Find**



REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Term	Definition
	(i) cultural heritage is unique or relatively unique for the period it represents, or (ii) cultural heritage is unique or relatively unique in linking several periods in the same site.
Object	Any movable property of cultural significance that are protected in terms of the NHRA, including: <ul style="list-style-type: none"> <li>- All archaeological artefacts;</li> <li>- All palaeontological and rare geological specimens;</li> <li>- All meteorites; and</li> <li>- Any other object referred to in section 3 of the NHRA.</li> </ul>
Owner	Includes the owner's authorised agent and any person with a real interest in the property and in the case of a place owned by the State or State-aided institutions, the Minister or any other person or body of persons responsible for the care, management or control of that place; or in the case of tribal trust land, the recognised traditional authority.
Palaeontological	Any fossil remains or traces of animals or plants that were alive in the geological past, and any site that contains such fossils. Fossil fuels such as coal, and fossiliferous rock intended for industrial use are, however, excluded.
Palaeontologist	A trained professional who uses scientific methods to excavate, record and study fossils and palaeontological sites.
Permit	Licence, certificate, or authorisation under which the Competent Authority accepts and declares that AAP are allowed/enabled to conduct or perform certain activities. A permit is granted after a formal application is made by the Company, sometimes supported by technical documents, by a Government Ministry/Agency/Department, at either a national/ federal/ state/ provincial/ municipal level and is tangible. A permit is often dependent upon conditions either stated in the associated legislation or in the permit itself; it is sometimes of a determined duration, and possibly subject to renewal.
Place	A place may include: <ul style="list-style-type: none"> <li>- The site;</li> <li>- A structure such as a stonewall or historic building;</li> <li>- A group of structures such as a work; and</li> <li>- In relation to the management of a place, includes the immediate surroundings of a place.</li> </ul>
Provisional Protection	A protected area or heritage resource provisionally protected by SAHRA or a provincial heritage resources authority by a notice in the Gazette or Provincial Gazette.
Re-establishment	In relation to grave relocation, means actions and items required to re-establish graves at new locations in a manner similar to that of the original grave, grave relocation including the removal and re-erection of grave dressings, purchase of new coffins and grave plots, and possible performances. The rate of re-establishing graves must be calculated on the market value of the actions and items, plus transaction costs.
Reinter	To deposit human remains in a grave or tomb after exhumation.

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Term	Definition
Relocation	In relation to graves means the exhumation, relocation and reinternment of the contents of a grave from its original location to an alternative location.
Remedial action	Actions agreed on, following consultation between the Company and NoK or other I&APs, to remediate impacts on cultural heritage resources. Remedial actions may include conservation, improvement, presentation, and relocation where possible. Costs of remedial actions are the responsibility of the Company, unless otherwise agreed to.
Replicable Heritage	Tangible forms of cultural heritage that can themselves be moved to another location or that can be replaced by a similar structure or natural features to which the cultural values can be transferred by appropriate measures. Archaeological or historical sites may be considered replicable where the particular eras and cultural values they represent are well represented by other sites and/or structures.
Site	Any area of land, including land covered by water, and including any structures thereon
Stop Work Order	An order served on a person by the Minister on advice of SAHRA or MEC to immediately cease all work in and around a heritage site for a period not exceeding 10 years. The order attaches to land is binding on the current owner and any future owner.
Structure	Any works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.
Tangible Heritage	Considered a unique and often non-renewable resource that possesses cultural, scientific, spiritual, or religious value and includes moveable or immovable objects, sites, structures, groups of structures, natural features, or landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural value. Tangible heritage may be associated with intangible elements, e.g. the living cultural traditions, rituals and performances associated with burial grounds and graves and deceased persons.
Traditional Council	Council established and recognised for a traditional community in accordance with the provisions of section 3 of the Traditional Leadership and Governance Framework Act, 2003 (Act No. 41 of 2003) or any corresponding provision in provincial legislation.

**4 Abbreviations**

Abbreviation	Explanation
AASW	Anglo American Social Way
BGG	Burial Ground and Graves
BU	Business Unit
CF	Chance Find
CFP	Chance Finds Procedure
CHMP	Cultural Heritage Management Plan
CHRM	Cultural Heritage Resources Management
CHS	Cultural Heritage Specialist

**Cultural Heritage Chance Find**

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REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Abbreviation	Explanation
CS	Cultural Significance
EM	Environmental Manager
GRP	Grave Relocation Plan
H&SR	Health and Safety Representative
HoD	Head of Department
HR	Human Resources
HRAs	Heritage Resources Authorities
I&APs	Interested and Affected Parties
ICOMOS	International Council on Monuments and Sites
IFC	International Finance Corporation
LIHRA	Limpopo Provincial Heritage Resources Authority
MC	Mogalakwena Platinum Mining Complex
NEM: PAA	National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NoK	Next-of-Kin
PM	Project Manager
PSR	Protection Services Representative
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SAPS	South African Police Services
SE	Stakeholder Engagement
SED	Socio-Economic Development
SEP	Stakeholder Engagement Plan
SHE	Safety Health and Environment
Snr GM	Senior General Manager
SP	Social Performance
SPMC	Social Performance Management Committee
TC	Traditional Council
WHCA	World Heritage Convention Act, 1999 (Act No. 49 of 1999)

## 5 Responsible for Review

- BU Cultural Heritage Specialist (CHS)
- Social Performance (SP) Manager
- Mining Manager
- Safety, Health and Environment (SHE) Manager
- Snr Human Resources (HR) Manager
- Permitting Manager
- Resettlement Manager

## 6 Responsible for Implementation

The functions/ individuals responsible for implementation of the CFP are presented in the table below consistent with AASW 4H tools

Position	Contact Number	Email
Environmental Coordinator	015 418 2518	<a href="mailto:Timothy.Seimela@Angloamerican.com">Timothy.Seimela@Angloamerican.com</a>

## Cultural Heritage Chance Find

This document is maintained on an online electronic filing system and is intended for internal use only. The printed version should be compared to the online version as it may be outdated.

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Position	Contact Number	Email
Cultural Heritage Specialist	072 359 6775	<a href="mailto:justin.dupiesanie@angloamerican.com">justin.dupiesanie@angloamerican.com</a>
Snr Protection Service Superintendent	015 418 2101	<a href="mailto:Johan.j.vanheerden@angloamerican.com">Johan.j.vanheerden@angloamerican.com</a>
Snr Resettlement Specialist		<a href="mailto:Soza.nkuna@angloamerican.com">Soza.nkuna@angloamerican.com</a>
Full Time Health & Safety Rep	015 418 2402	<a href="mailto:lesetjaleonard.matsaung@angloamerican.com">lesetjaleonard.matsaung@angloamerican.com</a>

## 7 General

### 7.1 Contravention

Breach of this Procedure may lead to disciplinary/ legal action.

Cultural heritage is protected by the provisions encapsulated in the NHRA. Any individual found guilty of non-compliance to this this procedure or negligence resulting in the damage or destruction of cultural heritage resources may result in:

- 7.1.1 The HRAs instituting penalties by way of a fine as set out in Section 51 of the NHRA and the Schedule to the Act;
- 7.1.2 Legal action resulting in imprisonment in accordance with Section 51 of the NHRA and the Schedule to the Act;
- 7.1.3 Implementation of disciplinary procedures as set out in the Company policies.

### 7.2 Distribution

#	Distributed to	Physical Copy	Electronic Copy
1	Operations Managers	Mine offices	Anglo Platinum Intranet
2	Finance Managers		Policies and Procedures
3	Finance and Performance Management		Electronic Documents Library ( <a href="#">AAP Intranet</a> )

### 7.3 Additional Information

#### 7.3.1 Reporting and Documentation Requirements

##### 7.3.1.1 External

The CHS will be required to compile and maintain separate records of CFs, results of assessments, CF recommendations, internal and external communications and instructions and supporting photographic documentation (or other reference materials as appropriate), which will be submitted and reviewed by EM and/or SP staff.

##### 7.3.1.2 Interna

The EM will ensure the Chance Find Report is completed, approved and readily available. This report will contain the following information: date and time of the discovery, location (GPS coordinates), description of the discovery, significance of discovery, estimated weight and dimensions i.e. feasibility to move the discovery; estimated time needed to conduct excavation of discovery; recommendation of how to proceed; temporary protection measures implemented, etc. The EM will review, approve and store the rapid assessment report.

##### 7.3.1.3 Training and Induction

## Cultural Heritage Chance Find

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REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

CFs can be uncovered by any employee of the Company performing duties at MC, as well as any contractors, sub-contractors, consultants or any other applicable service provider. For the CFP to be effective, site must ensure that all relevant parties understand the CFP and the importance of adhering to it if CFs are encountered. Training (through induction or other means) on cultural heritage resources that might potentially be found on site must be provided. All personnel, especially those working on earth movements and excavations, are to be trained on the identification of potential cultural heritage items/sites and the actions prescribed in this procedure during the induction and regular toolbox talks.

**8 Safety Requirements for this Procedure**

- Mine Health and Safety Act, 1996 (Act No.29 of 1996) (MHSA) as amended.
- Occupational Health and Safety Act.1993(Act No.181 of 1993) (OHSA).
- AASW3.0 Section 3B Incident and Grievance Management.
- Anglo SHE Way.
- Anglo Environmental Way.

**9 Procedure**

**9.1 AASW CFP Framework**



**9.2 (1) Discovery, Stoppage of Works and Notification**

Steps	Action	Timing	Role
Discovery and Stoppage	In the case of a CF, the heritage resource will not be disturbed or removed and all activities in its vicinity will be ceased as soon as it is deemed safe to do so. The area will be demarcated, preferably by a site employee or alternatively the contractor, who will also be required to note the type of resource, location, photograph and depth below surface of the find.	As soon as it is safe to do so	Observer, site employee and/or sub-contractor.
Management Notification	After stopping the work, contact the Environmental Manager (EM) immediately to (1) report and describe the CF and (2) confirm that all activities around the CF have been ceased. EM to notify the Project Manager (PM) as well as nominated representatives from Protection Services (PSR), Health and Safety (H&SR), and Social Performance (SP) departments regarding the CF and requisite actions.	Immediately after stoppage of work	Observer, EM, PM, PSR, H&SR and SP

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

**9.3 (2) Delineate, Secure and Record**

Steps	Action	Timing	Role
Site Protection & Inspection	EM, together with PSR issue urgent instruction to properly demarcate and watch over site. Demarcation will provide a minimum 25 metre buffer zone from all sides of the find, as well as appropriate signage. EM, SP and PSR to visit the site as soon as practically possible to ensure that the area is appropriately demarcated and secured to prevent unauthorised access and/or potential damage. EM or SP to undertake the inspection process, in accordance with health and safety protocols, and record outstanding descriptive information, especially spatial and imagery data by completing the Chance Find Reporting Form – see appendices.	Same day as discovery	EM, PSM, & PS staff

**9.4 (3) Specialist Evaluation**

Steps	Action	Timing	Role
Rapid assessment & recommendation	EM engage BU and ad hoc cultural heritage specialist (CHS) to assess the find remotely or via site visit, whichever is appropriate. CHS will verify the finding and assess its potential cultural significance (CS). The CHS to specify whether the CF has no, negligible, low, medium or high CS. CHS to report assessment finding and recommend appropriate action to EM. The CHS' recommendation will describe the following: <ol style="list-style-type: none"> <li>1. <u>Potential for removal</u>: Indicate whether the find can be removed and the process for removal. This will indicate whether company employee can remove the object without the presence of the CHS</li> <li>2. <u>Security and protection requirements</u>: Whether on-going security is required and/or revised buffer area needs to be instated</li> <li>3. <u>Chain of custody and storage</u>: Identity appropriate chain of custody and storage requirements that will apply after removal</li> <li>4. <u>Need for preservation</u>: Where the location of the find and/or its significance allows for</li> </ol>	Within 2 days of discovery	EM, BU and ad hoc CHS

**Cultural Heritage Chance Find**

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REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Steps	Action	Timing	Role
	<p>preservation, the CHS will together with the EM and other relevant parties will decide on whether the find can be preserved in situ by rerouting future activities and/ or using alternative construction techniques or if rescue excavations in advance of additional construction work will be required, if avoidance is not possible. In case of the latter the Company will ensure that the rescue is conducted according to international and national standards and with oversight and involvement of the appropriate experts and Government Authorities.</p> <p>5. <u>Continuation of stopped activities:</u> Confirm whether construction activities should be suspended until further processing, or whether activities can resume on condition of additional safety buffers and/or removal of CF.</p> <p>6. <u>Identify applicable statutory requirements:</u> Inform EM of national or international processing requirements. EM to communicate and initiate statutory process.</p>		

#### 9.5 (4) Significant Finds and Authority Notification

Steps	Action	Timing	Role
Processing insignificant finds	CHS confirms process with EM. The CHS and EM decide whether work can resume unconditionally or whether certain restrictions are required.	Within 2 days of discovery	EM, BU and ad hoc CHS
Processing significant finds	The processing time of significant CFs will vary depending on the nature of the CF. The processing requirements that will be followed will depend on the assessment and recommendation of the CHS.	Within 7 days of discovery	EM, CHS, Labour required to undertake removal, protection and/or preservation activities
Processing: Burial Grounds	In certain contexts, it may be anticipated that significant finds will likely be limited to human remains. After completing the previous steps, the following procedure should be followed: <ol style="list-style-type: none"> <li>EM and CHS to notify the local policing authority (South African</li> </ol>	Reporting to policing authority should be within 1 day of specialist assessment Timing of	CHS, EM & Heritage authority

#### Cultural Heritage Chance Find

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REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

Steps	Action	Timing	Role
	<p>Police Services [SAPS]) of burial site</p> <ol style="list-style-type: none"> <li>2. Engage relevant traditional, local and national government authorities;</li> <li>3. CHS and EM to inspect the exposed burial and determine in consultation with policing authority the temporal context of the remains (i.e. noteworthy forensic features, authentic burial grave older than 60 years or archaeological burial older than 100 years) as well as whether there might be additional graves within the immediate vicinity of the find.</li> <li>4. Should the CHS conclude that the find is a heritage resource protected in terms of national legislation, they will inform the relevant heritage authority on behalf of the Company and confirm mitigation requirements</li> <li>5. Initiate grave relocation process according to national legislation and AASW requirements</li> <li>6. Establish multidisciplinary team to manage grave relocation process, including representative from mine management, SP, HR, PSR, group legal and SHE</li> <li>7. If necessary, the team will urgently appoint an experienced and qualified expert, which is appropriately registered in terms of national legislation</li> </ol>	remainder of process should be determined in consultation with relevant authorities	
Statutory notification & mitigation	Should the CHS conclude that the find is a heritage resource protected in terms of national legislation, they will inform the EM and ensure that the appropriate authority is formally notified.	Within 7 days (or as per national legislation)	CHS, EM & Heritage authority

### 9.6 (5) Await Investigation

Steps	Action	Timing	Role
Authority Investigation and Mitigation	The CHS will confirm with the relevant authority the processing and permitting requirements that apply to the find (e.g. requirements for additional heritage studies, grave relocations and/or rescue/preservation permits of highly significant sites).	Within 7 days of the CF. Timing of remainder of process should be determined in consultation with relevant authorities.	CHS, EM & Heritage authority

### Cultural Heritage Chance Find

This document is maintained on an online electronic filing system and is intended for internal use only. The printed version should be compared to the online version as it may be outdated.

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

## 9.7 (6) Resume Work

Steps	Action	Timing	Role
Resume activities	Project activities at an important find will resume after the implementation of government-approved mitigation measures and statutory permission, unless regulations allow for conditional continuation of activities.	Timing determined in consultation with relevant authorities.	CHS, EM & Heritage authority

## 9.8 Dispute

In the event of a dispute arising, this shall be managed through the MC Social Issues and Incident Mechanism and will follow the relevant procedure(s) (Refer to MS-CA-CTY-PRO-0001). It may be necessary to solicit the services of a mediator to resolve the dispute. The mediator will be selected by way of mutual agreement between the Company and stakeholder. The costs of the mediation will be borne by the Company. The process will be clearly documented and records provided to the stakeholder in their native language or language of their choice.

Should the mediation process fail, the last resort will be to bring an application to a court with jurisdiction for a decision on the matter.

## 9.9 Record Keeping

A record of the process will be maintained on site. Adequate record methods as specified in the Regulations and Guidelines pertaining to the National Resources Heritage Act must be observed as appropriate. Records will also include all stakeholder engagement minutes and attendance registers, agreements and affidavits.

## 10 History of Changes

Reason for Change - Index	
A. As a result of incidents	B. As a result of audit findings
C. New / changes in governance documents	D. Changes in legislation
E Changes in technology	F. Changes in machinery/equipment
G Results of risk assessments	H. Change in training requirements
I. New document format	J. Change due to spelling or grammatical error
K. To integrate a special instruction into the document control system	
L. Periodic Review	

Date of change	Revised Item (Paragraph number)	Changes Made	Reason Code	Name of reviewer
7 February 2018		NEW	C	Peter Lentswane & Libby Reddy
3 March 2021	Whole document	CHANGES IN BLUE	L	See cover page
02 June 2021	Whole document	CHANGES IN BLUE	C	See cover page

REF NO:	MS-CA-CTY-PRO-0005	DATE OF IMPLEMENTATION:	13 April 2018
VERSION NO:	3.0	LAST REVISION DATE:	02 June 2021

## 11 Record Control

Records to be maintained in accordance with the Finance and Performance Management Governance Documentation Group Policy CTR-FPM-GRA-POL-0011

Identification	Reference number	Responsible for filing	Responsible for maintenance	Location of storage area	Retention period	Method of disposal
Cultural Heritage Chance Find	MS-CA-CTY-PRO-0005	Standards officer	Social Performance Department	Mine Offices, North	Revision	Electronic Archiving and Shredding

## 12 References

- AASW 4H: Cultural Heritage
- AASW 4H.4: Tools
- IFC PS 8: Cultural Heritage
- Mogalakwena complex Heritage management plan ([MS-CA-CTY-SUP-0002](#))
- Mogalakwena Complex Social Issues and Incident Mechanisms Procedure ([MS-CA-CTY-PRO-001](#))
- Mogalakwena Complex Stakeholder Engagement Plan ([MS-CA-CTY-SUP-0004](#))
- NHRA
- NHRA Regulations, 2000 (GN R 548)

## 13 Appendices

### 13.1 CF Recording Form [MS-CA-CTY-FRM-0005A](#)