



Integrated Specialist Services (Pty) Ltd

**PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR AGGREGATE, ATTAPULGITE/SEPIOLITE (CLAY), BALL CLAY, BENTONITE (CLAY), BUILDING SAND (SILICA), CLAY (GENERAL), CONCRETE SAND (SILICA), CRUSHER SAND (SILICA), DIMENSION STONE (GENERAL), DOLOMITE, FILLING SAND (SILICA), FOUNDRY SAND (SILICA), FULLER'S EARTH, GLASS SAND, GRAVEL, GYPSUM, ILLITEMONTMORILLONITE GROUP (CLAY), KAOLIN (CLAY), MARBLE (DIMENSION STONE), NONTRONITE/SAPONITE (CLAY), ONE AGGREGATE GRAVEL, REFRACTORY CLAY (FLINT), SAND (GENERAL), SHALE/BRICKLAY, SILICA SAND (GENERAL) AND SILICA SAND (SILICA) IN RESPECT OF THE FARM PORTIONS 11,15,16,17, A PORTION OF PORTION 2 AND A PORTION OF PORTION 14 OF THE FARM ONBELEND 398 JR AND PORTIONS 8,9,13,14,15,17,19 AND THE REMAINDER OF PORTION 3 OF THE FARM KAMEEL ZYN KRAAL 547 JR SITUATED IN THE MAGISTERIAL DISTRICT OF TSHWANE.**

## DOCUMENT SYNOPSIS (EXECUTIVE SUMMARY)

Item	Description
Proposed development and location	Application for a Prospecting Right and Associated Environmental Authorisation for the proposed prospecting for several minerals on various farm portions in the Magisterial District of Tshwane in Gauteng Province.
Purpose of the study	The Phase 1 Archaeological Impact Assessment for the Prospecting Right Application in Gauteng Province
Coordinates	See Figure 3
Municipalities	Magisterial District of Tshwane
Predominant land use of surrounding area	The current land use on the affected properties is agriculture.
Applicant	Mutluva Mining (Pty) Ltd
DMR	GP30/5/1/1/1/2 (10781) PR
EAP	Vahlengwe Mining Advisory and Consulting Contact Person: Londolani Sitsula Address: 238 Voster Avenue, Glenvista Extention 3, Johannesburg South, 2058 Contact: +27 81 895 1540 E-mail: londolani@vahlengweadvisory.co.za
Heritage Practitioner	Integrated Specialist Services (Pty) Ltd Cell: 071 685 9247 Email: trust@issolutions.co.za
Authors	Trust Miilo
Date of Report	15 June 2023

The purpose of this report is to inform and guide the applicant and contractors about the possible impacts that the proposed prospecting may have on heritage resources (if any) located in the study area. In addition, this heritage report must also inform the South African heritage authorities (SAHRA) about the presence, absence and significance of heritage resources located on several farm portions earmarked for prospecting in the Magisterial District of Tshwane, Gauteng Province. Mutluva Mining (Pty) Ltd requires a prospecting right in terms of the Mineral and Petroleum Resources Development Act (Act No. 22 of 2002) (MPRDA). Before the prospecting right will be granted, Mutluva Mining (Pty) Ltd must undertake an EIA and WML application process in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM: WA). The competent authority for the environmental authorisation process is the Gauteng Department of Mineral Resources (DMR). This report is submitted in terms of Section 38 (8) of the National Heritage Resources Act 25 of 1999 as part of the Prospecting Right Application. The purpose of this study is to identify, record and if necessary, salvage the irreplaceable heritage resources that may be impacted upon by the proposed prospecting. In compliance with Section 38 (8) of the NHRA, Vahlengwe Mining Advisory and Consulting retained Integrated Specialist Services (Pty) Ltd on behalf of Mutluva Mining (Pty) Ltd to conduct a Phase 1 Archaeological and Heritage Impact Assessment (AIA/HIA) for the Prospecting Right Application. Desktop studies, drive-throughs and consultations with some residents were conducted in order to identify heritage sites within the proposed prospecting site. The proposed prospecting site has been altered by mainly agriculture and isolated silica mining activities. The Gauteng is known for occurrence of archaeological and historical sites; however, the study identified isolated lithic tools exposed by erosion. In terms of the built environment the study recorded a historical farmstead and associated farm structures. Several farmhouses occur in the proposed prospecting site, but they could not be documented because no permission was obtained from the owners. However, they are protected in terms of Section 34 of the NHRA which protects buildings and structures that are older than 60 years as well DMRE Regulations. It should be noted that archaeological remains and unmarked graves may exist in the area and when encountered during prospecting, work must be stopped forth-with, and the finds must be reported to the South African Heritage Resource Agency (SAHRA) or the heritage practitioner. This report must be submitted to the SAHRA for review in terms of Section 38 (4) of the NHRA.

The report makes the following observations:

- The findings of this report have been informed by desktop review and consultations with landowners and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the proposed prospecting.
- The immediate project area is predominantly agriculture and isolated industries and silica mining.
- Some sections of the proposed prospecting right sites are severely degraded from previous and current land use activities.

The report sets out the potential impacts of the proposed prospecting on heritage matters and recommends appropriate safeguard and mitigation measures that are designed to reduce the impacts where appropriate. The Report makes the following recommendations:

1. It is recommended that SAHRA endorse the report as having satisfied the requirements of Section 38 (8) of the NHRA requirements.
2. It is recommended that SAHRA make a decision in terms of Section 38 (4) of the NHRA to approve the proposed Prospecting Right Application on condition that the identified historical farmstead and associated structures are treated as a NO-GO Areas during prospecting and a 100m buffer zone must be provided for in terms of SAHRA Regulations of 2020.
3. The identified historical sites must be mapped and marked during prospecting to avoid any accidental damage during prospecting.
4. From a heritage perspective supported by the findings of this study, the Prospecting Right Application is supported. However, the prospecting should be approved under observation that prospecting does not extend beyond the area considered in this report/affect the identified heritage sites.
5. Should chance archaeological materials or human remains be exposed during prospecting on any section of the site, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in prospecting scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.
6. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMP, there are no significant cultural heritage resources barriers to the

Prospecting Right Application. SAHRA may approve the Prospecting Right Application as planned with special commendations to implement the recommendations here in made.

This report concludes that the impacts of the proposed prospecting on the cultural environmental values are not likely to be significant on the entire site if the EMPr includes recommended safeguard and mitigation measures identified in this report.

## NATIONAL LEGISLATION AND REGULATIONS GOVERNING THIS REPORT

This is a specialist report' and is compiled in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014.

## DECLARATION OF INDEPENDENCE

In terms of Chapter 5 of the National Environmental Management Act of 1998 specialists involved in Impact Assessment processes must declare their independence.

I, **Trust Mlilo**, do hereby declare that I am financially and otherwise independent of the client and their consultants, and that all opinions expressed in this document are substantially my own, notwithstanding the fact that I have received fair remuneration from the client for preparation of this report.

### Expertise:

Trust Mlilo, PhD *cand* (Wits), MA. (Archaeology), BA Hons, PDGE and BA & (Univ. of Pretoria) ASAPA (Professional affiliation member) and more than 15 years of experience in archaeological and heritage impact assessment and management. Mlilo is an accredited member of the Association for Southern African Professional Archaeologists (ASAPA), Amafa akwaZulu Natali and Eastern Cape Heritage Resources Agency (ECPHRA). He has conducted more than hundred AIA/HIA Studies, heritage mitigation work and heritage development projects over the past 15 years of service. The completed projects vary from Phase 1 and Phase 2 as well as heritage management work for government, parastatals (Eskom) and several private companies such as BHP Billiton, South 32, Seriti Power and Rhino Minerals.

### Independence

The views expressed in this document are the objective, independent views of Mr Trust Mlilo and the survey was carried out under Integrated Specialist Services (Pty) Ltd. The company has no business,

personal, financial or other interest in the proposed prospecting apart from fair remuneration for the work performed.

**Conditions relating to this report.**

The content of this report is based on the author's best scientific and professional knowledge as well as available information. Integrated Specialist Services (Pty) Ltd reserves the right to modify the report in any way deemed fit should new, relevant or previously unavailable or undisclosed information become known to the author from on-going research or further work in this field or pertaining to this investigation.

This report must not be altered or added to without the prior written consent of the author and Integrated Specialist Services (Pty) Ltd. This also refers to electronic copies of the report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a main report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.

**Authorship:** This AIA/HIA Report has been prepared by Mr Trust Mlilo (Professional Archaeologist). The report is for the review of the Heritage Resources Agency (PHRA).

**Geographic Co-ordinate Information:** Geographic co-ordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

**Maps:** Maps included in this report use data extracted from the NTS Map and Google Earth Pro.

**Disclaimer:** The Authors are not responsible for omissions and inconsistencies that may result from information not available at the time this report was prepared.

The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the SAHRA Regulations and Guidelines as to the approval of the Prospecting Right Application being submitted by Mutluva Mining (Pty) Ltd

Signed by



15/ 06/ 2023

## ACKNOWLEDGEMENTS

The author acknowledges Vahlengwe Mining Advisory and Consulting for their assistance with the project details and responding to technical queries related to the project.

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## ABBREVIATIONS

<b>AIA</b>	Archaeological Impact Assessment
<b>ASAPA</b>	Association of South African Professional Archaeologists
<b>EIA</b>	Environmental Impact Assessment
<b>EIA</b>	Early Iron Age ( <i>EIA refers to both Environmental Impact Assessment and the Early Iron Age but in both cases the acronym is internationally accepted.</i> )
<b>EIAR</b>	Environmental Impact Assessment Report
<b>ESA</b>	Early Stone Age
<b>GPS</b>	Global Positioning System
<b>HIA</b>	Heritage Impact Assessment
<b>ICOMOS</b>	International Council of Monuments and Sites
<b>LIA</b>	Late Iron Age
<b>LFC</b>	Late Farming Community
<b>LSA</b>	Late Stone Age
<b>MIA</b>	Middle Iron Age
<b>MSA</b>	Middle Stone Age
<b>NEMA</b>	National Environmental Management Act 107 of 1998
<b>NHRA</b>	National Heritage Resources Act 25 of 1999
<b>PHRA</b>	Provincial Heritage Resource Agency
<b>SAHRA</b>	South African Heritage Resources Agency
<b>ToR</b>	Terms of Reference

## KEY CONCEPTS AND TERMS

### Periodization

**Periodization** Archaeologists divide the different cultural epochs according to the dominant material finds for the different time periods. This periodization is usually region-specific, such that the same label can have different dates for different areas. This makes it important to clarify and declare the periodization of the area one is studying. These periods are nothing a little more than convenient time brackets because their terminal and commencement are not absolute and there are several instances of overlap. In the present study, relevant archaeological periods are given below.

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

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

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

Early Iron Age (~ AD 200 to 1000)

Late Iron Age (~ AD1100-1840)

Historic (~ AD 1840 to 1950, but a Historic building is classified as over 60 years old)

### Definitions

**Definitions** Just like periodization, it is also critical to define key terms employed in this study. Most of these terms derive from South African heritage legislation and its ancillary laws, as well as international regulations and norms of best practice. The following aspects have a direct bearing on the investigation and the resulting report:

**Cultural (heritage) resources** are all non-physical and physical human-made occurrences, and natural features that are associated with human activity. These can be singular or in groups and include significant sites, structures, features, ecofacts and artefacts of importance associated with the history, architecture, or archaeology of human development.

**Cultural significance** is determined by means of aesthetic, historic, scientific, social, or spiritual values for past, present, or future generations.

**Value** is related to concepts such as worth, merit, attraction or appeal, concepts that are associated with the (current) usefulness and condition of a place or an object. Although significance and value are not mutually

exclusive, in some cases the place may have a high level of significance but a lower level of value. Often, the evaluation of any feature is based on a combination or balance between the two.

**Isolated finds** are occurrences of artefacts or other remains that are not in-situ or are located apart from archaeological sites. Although these are noted and recorded, but do not usually constitute the core of an impact assessment, unless if they have intrinsic cultural significance and value.

**In-situ** refers to material culture and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

**Archaeological site/materials** are remains or traces of human activity that are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures. According to the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), no archaeological artefact, assemblage or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorisation from the South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority.

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

**Chance finds** means archaeological artefacts, features, structures or historical remains accidentally found during development.

**A grave** is a place of interment (variably referred to as burial) and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery (contemporary) or burial ground (historic).

**A site** is a distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

**Heritage Impact Assessment (HIA)** refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project which requires authorisation of permission by law, and which may significantly affect the cultural and natural heritage resources. Accordingly, an HIA must include recommendations for appropriate mitigation measures for minimising or circumventing negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

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

**Mitigation** is the implementation of practical measures to reduce and circumvent adverse impacts or enhance beneficial impacts of an action.

**Mining heritage sites** refer to old, abandoned mining activities, underground or on the surface, which may date from the prehistorical, historical or the relatively recent past.

**Study area** or '**project area**' refers to the area where the developer wants to focus its development activities (refer to plan).

**Phase I studies** refer to surveys using various sources of data and limited field walking in order to establish the presence of all possible types of heritage resources in any given area.

#### Assumptions and disclaimer

The investigation has been influenced by the unpredictability of buried archaeological remains (absence of evidence does not mean evidence of absence) and the difficulty in establishing intangible heritage values. It should be remembered that archaeological deposits (including graves and traces of mining heritage) usually occur below the ground level. Should artefacts or skeletal material be exposed during prospecting activities, such activities should be halted immediately, and a competent heritage practitioner and SAHRA must be notified in order for an investigation and evaluation of the find(s) to take place (see NHRA (Act No. 25 of 1999), Section 36 (6). Recommendations contained in this document do not exempt the applicant from complying with any national, provincial, and municipal legislation or other regulatory requirements, including any protection or management or general provision in terms of the NHRA. Integrated Specialist Services (Pty) Ltd assumes no responsibility for compliance with conditions that may be required by SAHRA in terms of this report.

## 1 INTRODUCTION

Integrated Specialist Services (Pty) Ltd was tasked by Vahlangwe Mining Advisory and Consulting on behalf of Mutliva Mining (Pty) Ltd to undertake a Phase 1 AIA/ HIA for the Prospecting Right Application for several minerals on Portions 11,15,16,17, a Portion of Portion 2 and a Portion of Portion 14 of the Farm Onbelend 398 JR and Portions 8,9,13,14,15,17,19 and the Remainder of Portion 3 of the Farm Kameel Zyn Kraal 547 JR Magisterial District of Tshwane, Gauteng Province. This study was conducted to fulfil the requirements of Section 38 (8) of the NHRA. The purpose of this heritage study is to identify and assess any heritage resources that may be located within the proposed prospecting site in order to make recommendations for their appropriate management. To achieve this, we conducted background research of published literature, maps, and databases (desktop studies) which was then followed by ground-truthing by means of drive-through surveys and field walking. Desktop studies revealed that the general project area is rich in Late Stone Age (LSA) and historical sites. It should be noted that while heritage resources may have been located in the entire study area, subsequent developments previous and agriculture, road and boundary fence lines have either obliterated these materials or reduced them to isolated finds that can only be identifiable as chance finds during prospecting. The proposed Prospecting Right Application may be approved subject to adopting recommendations and mitigation measures proposed in this report. Based on the findings, there is no archaeological and heritage reasons why the Prospecting Right Application cannot be approved, taking full cognizance of clear procedures to follow in the event of chance findings. The identified cemetery can be avoided without compromising the prospecting plan.

### 1.1 Terms of Reference (ToR)

The Integrated Specialist Services (Pty) Ltd was requested by Vahlangwe Mining Advisory and Consulting to conduct an AIA/HIA study addressing the following issues:

- Archaeological and heritage potential of the proposed prospecting site including any known data on affected areas.
- Provide details on methods of study; potential and recommendations to guide the SAHRA to make an informed decision in respect of authorisation of the Prospecting Right Application
- Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located within the proposed prospecting site;
- Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;

- Describe the possible impact of the prospecting on these cultural remains, according to a standard set of conventions;
- Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources; and
- Review applicable legislative requirements.

## 1.2 Project Location

The project area is located approximately 20 km south-west from the town Bronkhorstspuit, City of Tshwane. Access to the site is via a gravel (dirt) road connected to the Witpoort Road (M30 extension) approximately 1.2 km east from R25 and M30 road intersection.

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**Table 1: Description of Properties affected by the proposed prospecting Project.**

Purpose	Extent	Farm names	Minerals applied for	Magisterial District	Province
Prospecting Right Application	964,2828 hectares	Portions 11,15,16,17, a Portion of Portion 2 and a Portion of Portion 14 of the Farm Onbelend 398 JR and Portions 8,9,13,14,15,17,19 and the Remainder of Portion 3 of the Farm Kameel zyn Kraal 547 JR	Aggregate, attapulgate/sepiolite (clay), ball clay, bentonite (clay), building sand (silica), clay (general), concrete sand (silica), crusher sand (silica), dimension stone (general), dolomite, filling sand (silica), foundry sand (silica), fuller's earth, glass sand, gravel, gypsum, illitemontmorillonite group (clay), kaolin (clay), marble (dimension stone), nontronite/saponite (clay), one aggregate gravel, refractory clay (flint), sand (general), shale/bricklay, silica sand (general) and silica sand (silica)	Magisterial District of Tshwane	Gauteng

PHASE 1 HIA FOR HIA/ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROSPECTING RIGHT APPLICATION.

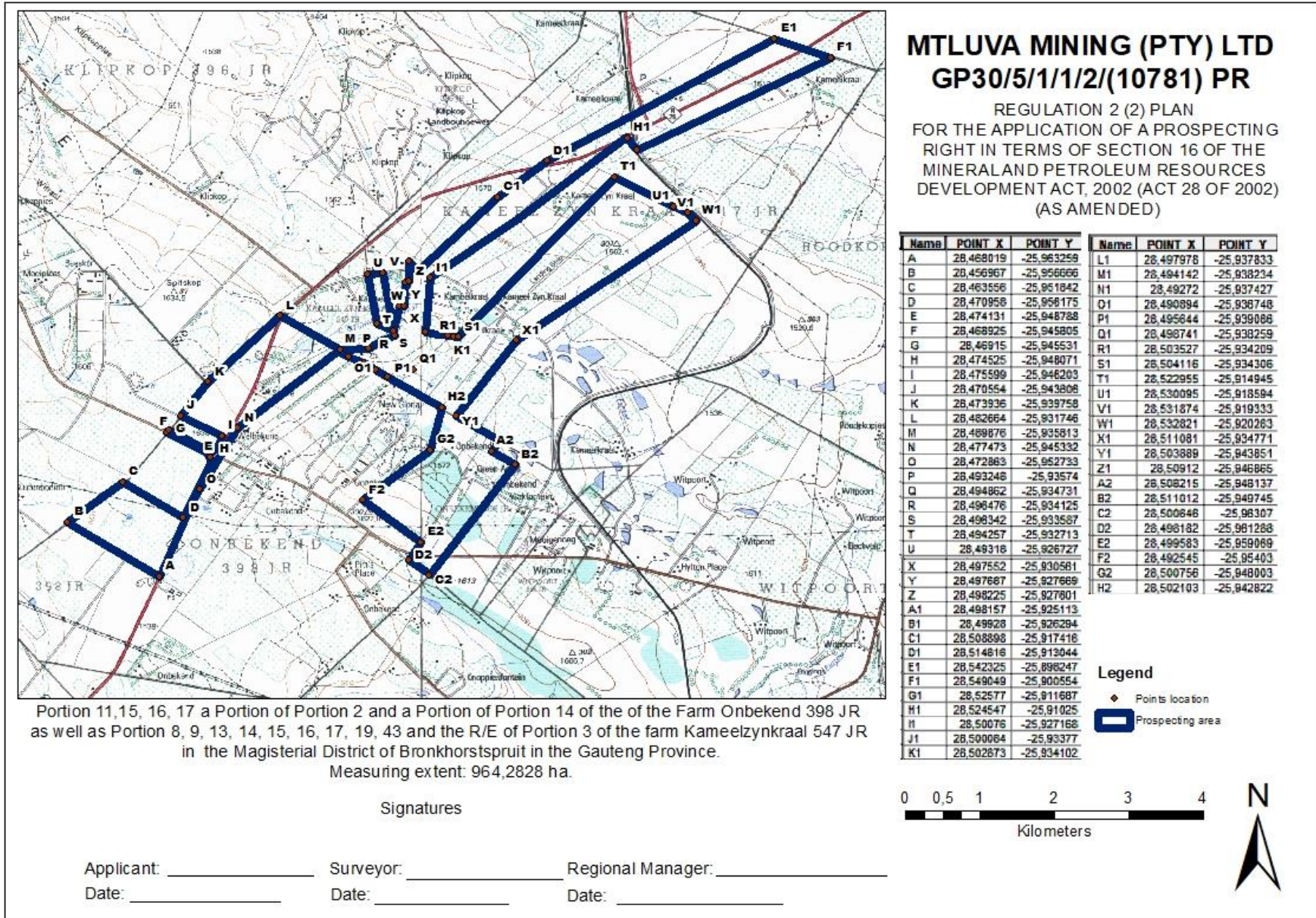


Figure 1: Location of the proposed project site (Vahlengwe Mining Advisory and Consulting, 2023)



Figure 2: Locality map (Vahlangwe Mining Advisory and Consulting, 2023)



Figure 3: Location of the proposed project site (Vahlengwe Mining Advisory and Consulting, 2023)

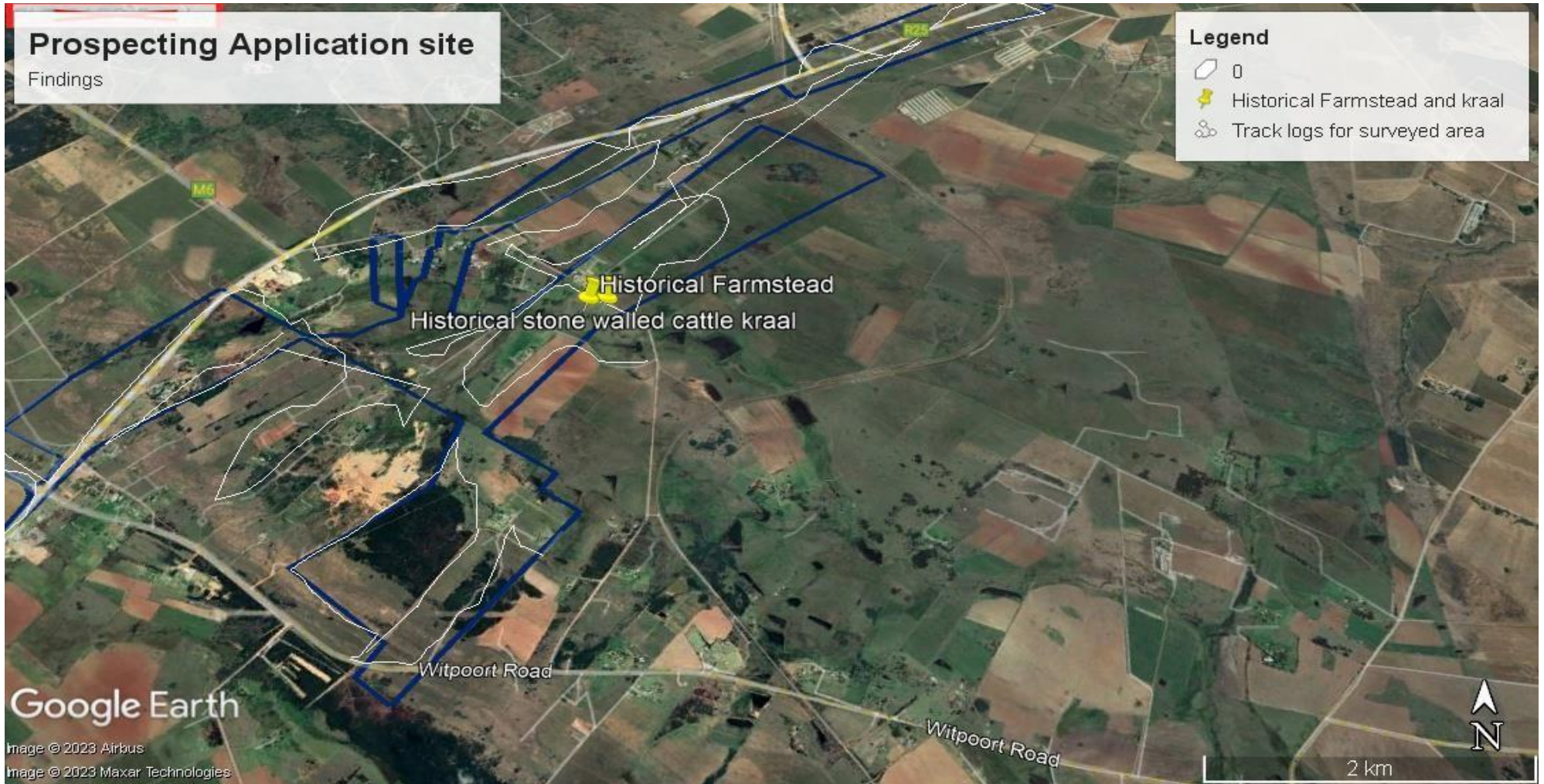


Figure 4: Location of the proposed project site (Vahlengwe Mining Advisory and Consulting, 2023)

### 1.3 Project Description

The extent of the proposed prospecting area is 964,2828 hectares. The project entails the drilling of about 10 boreholes to determine the mineral deposition, quantity, economic viability, and possibilities of the project leading to a viable mine. The prospecting activities will be undertaken for a total duration of 60 months, thus five (5) years subjected to a renewal of further three (3) if required.

## 2 LEGAL FRAMEWORK

Three main pieces of legislations are relevant to the present study. The proposed Prospecting Right Application is submitted in terms of the National Environmental Management Act, 1998 (NEMA) and the 2017 EIA Regulations for activities that trigger the Mineral and Petroleum Resources Development Act, 2002 (MPRDA) (As amended). Therefore, this is in fulfilment of the assessment of the impact to heritage resources as required by section 24(4)(b)(iii) of NEMA and section 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA). An AIA or HIA is required as a specialist sub-section of the Basic Assessment (BA) process. This study was conducted in terms of Section 38(8) as part of environmental authorisation. The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.

Thus, any person undertaking any development in the above categories, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. Section 38 (2) (a) of the same act also requires the submission of a heritage impact assessment report for authorization purposes to the responsible heritage resources agencies (SAHRA/PHRAs). Because the proposed development will change the character of a site exceeding 5000 m<sup>2</sup>, then an HIA is required according to this section of the Act.

Related to Section 38 of the NHRA are Sections 34, 35, 36 and 27. Section 34 stipulates that no person may alter, damage, destroy and relocate any building or structure older than 60 years, without a permit issued by SAHRA or a provincial heritage resources authority. This section may not apply to present study since none were identified. Section 35 (4) of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, excavate, alter, or remove from its original position, or collect, any archaeological material or object. This section may apply to any significant archaeological sites that may be discovered before or during construction. This means that any chance find must be reported to the heritage practitioner or SAHRA/PHRA, who will assist in investigating the extent and significance of the finds and inform the applicant about further actions. Such actions may entail the removal of material after documenting the find site or mapping of larger sections before destruction. Section 36 (3) of the NHRA also stipulates that no person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), destroy, damage, alter, exhume or remove from its original

position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority. This section may apply in case of the discovery of chance burials, which is unlikely. The procedure for reporting chance finds also applies to the unlikely discovery of burials or graves by the applicant or his contractors. Section 27 of the NHRA deals with public monuments and memorials but this may not apply to this study because no protected monument will be physically affected by the proposed prospecting.

In addition, the EIA Regulations of 2014 (as amended in 2017) promulgated in terms of NEMA (Act 107 of 1998) stated that environmental assessment reports will include cultural (heritage) issues. The new regulations in terms of Chapter 5 of the NEMA provide for an assessment of development impacts on the cultural (heritage) and social environment and for Specialist Studies in this regard. The end purpose of such a report is to alert the applicant (Mutluva Mining (Pty) Ltd) SAHRA/ PHRA and interested and affected parties about existing heritage resources that may be affected by the proposed prospecting, and to recommend mitigatory measures aimed at reducing the risks of any adverse impacts on these heritage resources.



Table 2: Evaluation of the proposed development as guided by the criteria in NHRA and NEMA

ACT	Stipulation for developments	Requirement details
NHRA Section 38(8)	The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent	yes
NHRA Section 34	Impacts on buildings and structures older than 60 years	Subject to identification during Phase 1
NHRA Section 35	Impacts on archaeological and palaeontological heritage resources	Subject to identification during Phase 1
NHRA Section 36	Impacts on graves	Subject to identification during Phase 1
NHRA Section 37	Impacts on public monuments	Subject to identification during Phase 1
Chapter 5 (21/04/2006) NEMA	HIA is required as part of an EIA	Yes
Section 39(3)(b) (iii) of the MPRDA	AIA/HIA is required as part of an EIA	Yes

### 3 METHODOLOGY

This document aims at providing an informed heritage-related opinion about the Prospecting Right Application in the Gauteng Province. This is usually achieved through a combination of a review of any existing literature and a site inspection. As part of the desktop study, published literature and cartographic data, as well as archival data on heritage legislation, the history and archaeology of the area were studied. The desktop study was followed by field surveys conducted within the entire site. The study was conducted according to generally accepted AIA/HIA practices and aimed at locating all possible objects, sites, and features of cultural significance on the prospecting footprint. A drive-through was undertaken around the proposed prospecting site as a way of acquiring the archaeological impression of the general area. Photographic recording was undertaken where relevant. The findings were then analysed in view of the Prospecting Right Application in order to make recommendations to the competent authority. The result of this investigation is a report indicating the presence/absence of heritage resources and how to manage them in the context of the proposed prospecting.

#### 3.1 The Fieldwork survey.

The fieldwork survey was undertaken on the 15<sup>th</sup> of June 2023. The field survey was effective because there are farm tracks and public roads that cut across the site. The survey focused on parts of the project site which could be accessed along public roads and farm roads. The literature survey suggests that prior to the 20th century modern agriculture activities, the general area would have been a rewarding region to locate heritage resources related to Stone Age and historical sites (Bergh 1999: 4). However, the study did not identify any significant archaeological sites within the proposed prospecting site.

#### 3.2 Visibility and Constraints

Most sections of the site are accessible, and the study team conducted the field survey with limited constraints. Surface visibility was compromised due to dense grass cover since in some sections. It is conceded that due to the subterranean nature of cultural remains this report should not be construed as a record of all archaeological and historic sites in the area.

#### 3.3 Consultations

Public Participation process is conducted by the EAP. The Public Participation Process will also invite and address comments from the public and any registered heritage bodies on any matter related to the Prospecting Right Application including heritage concerns that may arise relating to the proposed prospecting. The heritage

issues and concerns raised by the public will also be included in the Prospecting Right Application to be submitted to DMRE.

The following photographs illuminate the nature and character of the Project Area.



Plate 1: showing the proposed prospecting site and high voltage powerline in the background.



Plate 2: showing the proposed prospecting site.



Plate 3: showing proposed prospecting site.



Plate 4: showing proposed prospecting site.



Plate 5: showing the site earmarked for prospecting.



Plate 6: showing proposed prospecting site and one of the public roads cutting across the site.



Plate 7: showing the proposed prospecting site.



Plate 8: showing the proposed prospecting site.



Plate 9: showing the proposed prospecting site



Plate 10: showing one of the several farmsteads and farm structures in the prospecting site



Plate 11: showing proposed prospecting site



Plate 12: showing agriculture fields within the proposed prospecting site





Plate 13: showing the proposed prospecting site



Plate 14: showing dug up sections of the proposed prospecting site



Plate 15: showing a public road cutting across the proposed prospecting site



Plate 16: showing the proposed prospecting site



Plate 17: showing the proposed prospecting site



Plate 18: showing farmsteads within the proposed prospecting site

## 4 ARCHAEOLOGICAL CONTEXT

Gauteng area has yielded evidence of human settlement extending into hundreds of thousands of years of prehistory that include the Stone Age, Iron Age, Historical period and contemporary communities. The palaeontological human-evolution record is rich in palaeoanthropological relics that were found in Stekfontein and Maropeng areas that are popularly known as the Cradle of Mankind that is also a World Heritage Site. Although there are no well-known Stone Age sites located in the Gauteng area there is evidence of the use of the larger area by Stone Age communities for example along the Kliprivier where ESA and MSA tools were recorded. LSA material is recorded along ridges to the south of the current study area (Huffman 2008). Petroglyphs occur at Redan as well as along the Vaal River (Berg 1999). Records indicate that stone tools dating to the Early and Middle Stone Age and especially the Later Stone Age occurred all over, for example in the Jukskei River area at Glenferness shelter, excavated by Prof. Revil Mason (1969).

The Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom south of Hartebeespoort Dam dating to AD 470. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area. The occupation of the larger geographical area (including the study area) did not start much before the 1500s. By the 16th century things changed, with the climate becoming warmer and wetter, creating conditions that allowed Late Iron Age (LIA) farmers to occupy areas previously unsuitable, for example the Witwatersrand in the region of Klipriviersberg and the Magaliesberg to the north (Horn 1996).

A distinction between the Iron Age and the LSA is drawn on the basis and on the fact that the Iron Age communities occupied the foothills and valley lands introducing sedentary life, domesticated livestock, crop production and the use of iron (Maggs 1984a; 1984b; Huffman 2007, van Schalkwyk, 2007). Stonewalls are one of the major characteristics of the Iron Age people. Cattle dung, both vitrified and unvitrified, is also one of the Iron Age traits (see Huffman (1982). He also includes pits and burials, with some located inside the cattle kraals. This would have varied from cultures to cultures and traditions to traditions. For example, alongside the Urewe Tradition is the second group called the Kalundu Tradition whose EIA archaeological sites have been recorded in most of South Africa's northern and central regions. These are therefore some of the important Iron Age traditions in the EIA. Iron Age sites associated with the ancestors of the modern Sotho-Tswana and Ndebele speaking communities are widespread in the region. In recent colonial history, the area played host to different competing local settler communities. The area was a scene of series of colonial wars. By the end of the 19th century, the region was placed under British rule and the local people displaced. Today most of the land is used for commercial, mining, agricultural activities and industrial activities. It is within this cultural landscape that the project area is located.

Archaeologically, the Gauteng is associated with Late Iron Age Sotho Tswana communities and has yielded four ceramic sequences of the Urehwe tradition: Ntsuanatsatsi (1450-1650), Olifantspoort (AD 1500 -1700) and Uitkomst (AD 1700-1850) and Buispoort (1700-1840) [Huffman 2007: 443]. This area was historically occupied by predominantly Sotho Tswana -speaking groups before Mzilikazi's Ndebele briefly dominated it during the Mfecane. Around the 1830s, the region also witnessed the massive movements associated with the Mfecane ('wandering hordes'). The causes and consequences of the Mfecane are well documented elsewhere (e.g. Hamilton 1995; Cobbing 1988). The area was partitioned into commercial settler farms during the colonial period.

Melville Koppies is the most well documented site in the project area. The site was excavated by Professor Mason from the Department of Archaeology of WITS in the 1980's. Extensive Stone walled sites are also recorded at Klipriviers Berg Nature reserve belonging to the Late Iron Age period. A large body of research is available in this area. These sites (Taylor's Type N, Mason's Class 2 & 5) are now collectively referred to as Klipriviersberg (Huffman 2007). These settlements are complex in that aggregated settlements are common, the outer wall sometimes includes scallops to mark back courtyards, there are more small stock kraals, and straight walls separate households in the residential zone. These sites date to the 18th and 19th centuries and were built by people in the Fokeng cluster.

In this area the Klipriviersberg walling probably ended around AD 1823, when Mzilikazi entered the area (Rasmussen 1978). This settlement type may have lasted longer in other areas because of the positive interaction between Fokeng and Mzilikazi. Prior to the Gauteng region being incorporated into the colonial administration of the Transvaal, the region experienced several episodes of white settler migration and settler settlements as well as the associated colonial wars such as the Anglo-Boer War, which ended in 1902.

### **Historic Period**

The Late Iron Age Nguni communities engaged in the Indian Ocean Trade exporting ivory and importing consumables such as cloth and glass beads. The exporting point was Delagoa. This brought the Nguni speaking community in touch with the Indo-Asian and first Europeans (Portuguese). It was the arrival of the Dutch and the English traders that opened up Delagoa Bay to more trade did the Nguni engaged in extensive trade with the international traders (Huffman 2007). From the late 1700s, trade in supply of meat to passing ship had increased substantially to an extent that by 1800 meat trade is estimated to have surpassed ivory trade. At the same time the population was booming following the increased food production that came with the introduction of maize that became the staple food. Naturally, there were signs that population groups had to compete for resources especially along the east coastal regions. The KwaZulu Natal coastal region has a special place in the history of the region and country at large. This relates to the most referenced Mfecane (wandering hordes) period of tremendous insecurity and military stress which eventually affected the entire Southern Africa including the modern-day Gauteng area. Around the 1830s, the region also witnessed the massive movements associated with

the Mfecane. The causes and consequences of the Mfecane are well documented elsewhere (e.g. Hamilton 1995; Cobbing 1988). In this context new African kingdoms emerged such as the Zulu Kingdom under Shaka in the second quarter of the 1800s AD. Military pressure from Zululand spilled onto the highveld by at least 1821. Various marauding groups of displaced Sotho-Tswana moved across the plateau in the 1820s. Mzilikazi raided the plateau extensively between 1825 and 1837. And throughout this time settled communities of Tswana people also attacked each other. As a result of this troubled period, Sotho-Tswana people concentrated into large towns for defensive purposes. Their settlements were built of stone because of the lack of trees in the project area. These stone-walled villages were almost always located near cultivatable soil and a source of water. Such sites are known to occur near Kriel (e.g. Pelsler, *et al*/2006).

White settlers moved into the Gauteng area during the first half of the 19th century. Within Gauteng Province and our study area the settlers dated to 1840s. Palestrant (1986) places the date for the Voortrekker's in the Witwatersrand to 1830 and a date of 1842 for one of the earliest established farms which later became Johannesburg: "The part of the Highveld which was eventually to become Johannesburg had at the time few established farms. One of the earliest was situated at Klipriviersdale and belonged to the Meyer's family who had settled there in 1842. Their nearest white neighbours were miles away – the Marais, beyond Heidelberg and the Erasmus and Strydoms families, near Olifantsfontein (Palestrant, 1986: 8). European settlers of Dutch descent – the Afrikaans communities established earliest colonial settlements after they Trekged from the then Cape Colony to avoid British Administration in the 1930s and 19840s. They fall within what was then called the Transvaal - direct translation for "across the Vaal River". During the Great Trek these Afrikaans communities, commonly referred to as the Boers (farmers), who left the British Administration of the Cape Colony (i.e. a former Dutch colony in 1795 and again in 1806) established several republics north and north-west of the British Colonies - these republics included the Boer Republics of the Orange Free State (1845) and the Transvaal across the Vaal River were the study area is located. The Transvaal which had different autonomous and separate states which were later united to form what became known as the Zuid Afrikaanse Republiek (South African Republic) the ZAR (Celliers, 2010).

During the historical period the availability of natural resources also played a pivotal role in the choice of settlement of people, based not only from a subsistence point of view but also driven by commerce or commercial gains resulting from the exploitation of available natural resources such as gold discovered within the Witwatersrand particularly after the discovery of gold in 1884. The founding of Johannesburg (the study area) is a direct consequence of the discovery of gold. The same is true for the establishment and the development of the railway industry within the Witwatersrand, Gauteng Province, South Africa. The settlers were largely self-sufficient, basing their survival on cattle/sheep farming and hunting. They established large farms which were later subdivided into a number of small properties. These units do not have their economic base in traditional

agriculture but are sustained by a variety of land uses and economic activities with strong urban associations. This phenomenon happened in the past thirty years. Therefore, most of the built fabric date from this period. The result was that any historic farmsteads older than 60 years that may have existed have either disappeared or have been 'upgraded'. The oldest physical remains in these areas usually are planted vegetation such as lanes and tall trees in mature gardens, cemeteries, the remains of portions of farm and farmstead walling (dry stacked stone walls erected to demarcate the boundaries of a farmstead, an orchard or cattle kraal) farm roads, weirs (in the river) and water furrows.

The Anglo –Boer wars of 1899-1902 had their footprint in the Gauteng area. (Van der Walt 2015). The later effectively led to complete subjugation of African communities to settler administration starting as part of the ZAR of Transvaal. Most of the mining infrastructure in Gauteng is older than 60 years. They appear on the 1944 version of the 1:50 000 topocadastral map (SAHRIS). There after the region was subsequently annexed by the British and effectively placed the majority of African communities under the Union of South Africa in 1910, which eventually ended with the establishment of the new South Africa in 1994.

### **Intangible Heritage**

As defined in terms of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) intangible heritage includes oral traditions, knowledge and practices concerning nature, traditional craftsmanship and rituals and festive events, as well as the instruments, objects, artefacts and cultural spaces associated with group(s) of people. Thus, intangible heritage is better defined and understood by the particular group of people that uphold it. In the present study area, very little intangible heritage is anticipated on the development footprint because most historical knowledge does not suggest a relationship with the study area per se.

### **SAHRIS Database and Impact assessment reports in the proposed project area**

Several archaeological and heritage studies were conducted within the proposed project area and its vicinity since 2005 and these presents the nature and heritage character of the area. The HIAs conducted in the area also provide some predictive evidence regarding the types and ranges of heritage resources to be expected in the proposed project area: (see reference list for HIA reports). The studies include housing, infrastructure developments, water pipeline and powerline projects completed by Van Schalkwyk (2005, 2007, 2008, 2009, 2010, 2011, 2013, 2014), Kusel 2009, 2010, 2011, 2013, 2014), Tomose 2013, Jaco Van der Walt 2013 and Van Der Ryst MM. No sites were recorded by these studies. Van Schalkwyk and Udo Kusel did extensive work in the project area, mostly for infrastructure developments. The authors note that the entire region was subjected to urbanization and industrial activities, which would have destroyed any pre-colonial or early colonial heritage features that might have occurred in the past, and that the only heritage sites known from the region are a number of historical buildings older than 60 years, municipal cemeteries, which are all located well outside the area of the proposed development. No sites, features or objects of cultural heritage significance have been identified in the

study area.

## 5 RESULTS OF THE FIELD STUDY

### 5.1 Archaeology

The proposed prospecting site did not yield any verifiable archaeological sites or material. The affected landscape is heavily degraded from previous and current land use such as agriculture, bulk water pipelines, powerlines, industrial infrastructure and from farm residential property developments. This limited the chances of encountering significant *in situ* archaeological sites. The proposed prospecting site is located within a heavily disturbed landscape characterised by residential, industrial infrastructures, commercial agricultural fields, grazing land, bulk water pipelines, powerlines, roads and other associated infrastructures across the entire project area. As such the proposed prospecting is not likely to introduce significant impacts to the archaeology of the area. It is the considered opinion of the author that the chances of recovering significant archaeological materials were seriously compromised and limited due to agriculture and other destructive land use patterns such as deep ploughing, bulk water pipeline, road works and residential areas that already exist on the project area.

Based on the field study results and field observations, the author concluded that the receiving environment for the proposed prospecting is low to medium potential to yield previously unidentified archaeological sites during subsurface excavations and construction work associated with the proposed prospecting. This observation is supported by the fact that no Iron Age sites are indicated in a historical atlas around the proposed prospecting area; however, this may be an indication of a lack of research. Literature review also revealed that no Stone Age sites are shown on a map contained in a historical atlas of this area. This however should rather be seen as a lack of research in the area and not as an indication that such features do not occur.

### 5.2 Burial grounds and Graves

Human remains and burials are commonly found close to archaeological sites and abandoned settlements; they may be found in abandoned and neglected burial sites or occur sporadically anywhere because of prehistoric activity, victims of conflict or crime. It is often difficult to detect the presence of archaeological human burials on the landscape as these burials, in most cases, are not marked at the surface and concealed by dense vegetation cover. Human remains are usually identified when they are exposed through erosion, earth moving activities and construction. In some instances, packed stones or bricks may indicate the presence of informal burials. If any human bones are found during the course of prospecting work, then they should be reported to an archaeologist and work in the immediate vicinity should cease until the appropriate actions have been carried out by the archaeologist. Where human remains are part of a burial, they would need to be exhumed under a permit from



either SAHRA (for pre-colonial burials as well as burials later than about AD 1500) or Department of Health for graves younger than 60 years.

The field survey did not identify any burial ground or isolated graves within the proposed prospecting sites. However, it is likely that graves may occur in private farmsteads, and these can only be known through consultations with local residents. Therefore, property owners must be requested to report any graves located within their farms in order for them to be documented and protected during exploration. The possibility of encountering previously unidentified burial sites is low to medium within the proposed prospecting site, however, should such sites be identified during prospecting, they are still protected in terms of Section 36 of NHRA.

### 5.3 Public Monuments and Memorials

The study did not record any public memorials and monuments within the proposed prospecting site. As such the Prospecting Right Application may be approved without any further investigation and mitigation in terms of Section 27 of the NHRA.

### 5.4 Buildings and Structures

In terms of Section 34 of the NHRA which protects buildings and structures older than 60 years, the study identified one historical farmstead associated with a large stone walled cattle kraal. The study recorded wind pumps which are also likely to be older than 60 years, however the existing farm dwellings are fairly recent. Based on the satellite imagery and historical maps, the farm dwellings are likely to be younger than 60 years old. As such, in terms of Section 34 of the NHRA the recorded historical farmstead must be treated as a NO GO Area.



Plate 19: showing farm roads cutting across the propped prospecting site



Plate 20: showing an abandoned historical farmstead within the propped prospecting site



Plate 21: showing farm structures that are likely to be over 60 years



Plate 22: showing an old farm within the proposed prospecting site

## 5.5 Impact Statement

The main cause of impacts to archaeological sites is direct, physical disturbance of the archaeological remains themselves and their contexts. It is important to note that the heritage and scientific potential of an archaeological site is highly dependent on its geological and spatial context. This means that even though, for example a deep excavation may expose buried archaeological sites and artefacts, the artefacts are relatively meaningless once removed from their original position. The primary impacts are likely to occur during clearance and drilling, indirect impacts may occur during movement of heavy prospecting vehicles. Any additional excavation for foundations temporary camp sites will result in the relocation or destruction of all existing surface heritage material (if any are present).

Similarly, the clearing of access roads will impact on material that lies buried in the topsoil. Since heritage sites, including archaeological sites, are non-renewable, it is important that they are identified, and their significance assessed prior to prospecting. It is important to note that due to the localised nature of archaeological resources, that individual archaeological sites could be missed during the survey, although the probability of this is very low within the proposed prospecting site. Further, archaeological sites and unmarked graves may be buried beneath the surface and may only be exposed during surface clearance. The purpose of the AIA is to assess the sensitivity of the area in terms of archaeology and to avoid or reduce the potential impacts of prospecting by means of mitigation measures (see appended Chance Find Procedure). There is still a possibility of finding archaeological remains buried beneath the ground. It is the considered opinion of the author that the chances of recovering significant archaeological materials is present within the prospecting site.

Table 3: Summary of Findings

No	Site Name	Site	Description	Co-ordinates	Mitigation measure
1	<b>Old wind pump</b>	Old Wind Pump	Historic wind pump at the farm	25°55'37.3"S 28°30'11.5"E	No-go area. Provide 100m buffer zone.
2	<b>HF1</b>	Historical Farmstead	Historical farmstead and associated structures	25°56'10"S 28°30'15.0"E	No-go area. Provide 100m buffer zone.

## 5.6 Assessment of development impacts

An impact can be defined as any change in the physical-chemical, biological, cultural, and/or socio-economic environmental system that can be attributed to human activities related to the project site under study for meeting a project need. The significance of the impacts of the process will be rated by using a matrix derived from Plomp

(2004) and adapted to some extent to fit this process. These matrixes use the consequence and the likelihood of the different aspects and associated impacts to determine the significance of the impacts.

The significance of the impacts will be assessed considering the following descriptors:

Table 4: Criteria Used for Rating of Impacts

<b>Nature of the impact (N)</b>		
Positive	+	Impact will be beneficial to the environment (a benefit).
Negative	-	Impact will not be beneficial to the environment (a cost).
Neutral	0	Where a negative impact is offset by a positive impact, or mitigation measures, to have no overall effect.
<b>Magnitude(M)</b>		
Minor	2	Negligible effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been altered significantly and have little to no conservation importance (negligible sensitivity*).
Low	4	Minimal effects on biophysical or social functions / processes. Includes areas / environmental aspects which have been largely modified, and / or have a low conservation importance (low sensitivity*).
Moderate	6	Notable effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been moderately modified and have a medium conservation importance (medium sensitivity*).
High	8	Considerable effects on biophysical or social functions / processes. Includes areas / environmental aspects which have been slightly modified and have a high conservation importance (high sensitivity*).
Very high	10	Severe effects on biophysical or social functions / processes. Includes areas / environmental aspects which have not previously been impacted upon and are pristine, thus of very high conservation importance (very high sensitivity*).
<b>Extent (E)</b>		
Site only	1	Effect limited to the site and its immediate surroundings.
Local	2	Effect limited to within 3-5 km of the site.
Regional	3	Activity will have an impact on a regional scale.
National	4	Activity will have an impact on a national scale.
International	5	Activity will have an impact on an international scale.
<b>Duration (D)</b>		
Immediate	1	Effect occurs periodically throughout the life of the activity.
Short term	2	Effect lasts for a period 0 to 5 years.
Medium term	3	Effect continues for a period between 5 and 15 years.
Long term	4	Effect will cease after the operational life of the activity either because of natural process or by human intervention.
Permanent	5	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
<b>Probability of occurrence (P)</b>		
Improbable	1	Less than 30% chance of occurrence.

Low	2	Between 30 and 50% chance of occurrence.
Medium	3	Between 50 and 70% chance of occurrence.
High	4	Greater than 70% chance of occurrence.
Definite	5	Will occur, or where applicable has occurred, regardless or in spite of any mitigation measures.

Once the impact criteria have been ranked for each impact, the significance of the impacts will be calculated using the following formula:

$$\text{Significance Points (SP)} = (\text{Magnitude} + \text{Duration} + \text{Extent}) \times \text{Probability}$$

The significance of the ecological impact is therefore calculated by multiplying the severity rating with the probability rating. The maximum value that can be reached through this impact evaluation process is 100 SP (points). The significance for each impact is rated as High (SP≥60), Medium (SP = 31-60) and Low (SP<30) significance as shown in the below.

Table 5: Criteria for Rating of Classified Impacts

<b>Significance of predicted NEGATIVE impacts</b>		
Low	0-30	Where the impact will have a relatively small effect on the environment and will require minimum or no mitigation and as such have a limited influence on the decision
Medium	31-60	Where the impact can have an influence on the environment and should be mitigated and as such could have an influence on the decision unless it is mitigated.
High	61-100	Where the impact will definitely have an influence on the environment and must be mitigated, where possible. This impact will influence the decision regardless of any possible mitigation.
<b>Significance of predicted POSITIVE impacts</b>		
Low	0-30	Where the impact will have a relatively small positive effect on the environment.
Medium	31-60	Where the positive impact will counteract an existing negative impact and result in an overall neutral effect on the environment.
High	61-100	Where the positive impact will improve the environment relative to baseline conditions.

Table 6: Operational Phase

Impacts and Mitigation measures relating to the proposed project during Prospecting Phase														
Activity/Aspect	Impact /	Aspect	Nature	Magnitude	Extent	Duration	Probability	Impact before mitigation	Mitigation measures	Magnitude	Extent	Duration	Probability	Impact after mitigation
Clearing and mining	Destruction of archaeological remains	Cultural heritage	-	2	1	1	2	8	<ul style="list-style-type: none"> <li>Use chance find procedure to cater for accidental finds</li> </ul>	2	1	1	2	8
	Disturbance of graves	Cultural heritage	-	6	2	4	2	24	<ul style="list-style-type: none"> <li>Use appended Chance find procedure to cater for accidental finds.</li> </ul>	2	1	1	1	4
	Disturbance of buildings and structures older than 60 years old	Operational	-	6	2	4	2	24	<ul style="list-style-type: none"> <li>No go area. Provide 100m buffer zone.</li> <li>Use appended Chance find procedure to cater for accidental finds.</li> <li>Mark position of burial site on the prospecting map</li> </ul>	2	1	1	1	4
Haulage	Destruction public monuments and plaques	Operational	-	2	1	1	1	4	<ul style="list-style-type: none"> <li>Mitigation is not required because there are no public monuments within the project site</li> </ul>	2	1	1	1	4



## 5.7 Cumulative Impacts

Cumulative impacts are defined as impacts that result from incremental changes caused by other past, present, or reasonably foreseeable actions together with the project. Therefore, the assessment of cumulative impacts for the proposed prospecting is considered the total impact associated with the proposed project when combined with other past, present, and reasonably foreseeable future developments projects. The impacts of the proposed prospecting were assessed by comparing the post-project situation to a pre-existing baseline. This section considers the cumulative impacts that would result from the combination of the proposed prospecting.

This proposed prospecting combined with other proposed project activities will eventually transform the landscape should the proposed prospecting proceed to mining phase. The cumulative impact will negatively affect the landscape quality of the area which are ordinarily considered to be source. The frequency of development proposals in the area has a potential of collectively changing the character of the landscape. The once isolated landscape will see volumes of people establishing low settlement or enlarging the existing ones. In the long run the accumulative impact will be of high significance in terms of its potential to change the characteristics and quality of the landscape in the long run. The field survey focused on potential of LIA occurrences that are known to occur in the study area.

## 5.8 Mitigation

Mitigation for the proposed prospecting site is required to protect the recorded historical farmstead and associated structures. The prospecting planners must provide for a 100m buffer zone from the site. The site must be mapped on the prospecting plan to avoid any accidental damage. A copy of the appended chance finds procedure must be kept at the site office to ensure appropriate management of any accidental finds during prospecting.

## 6 ASSESSING SIGNIFICANCE

The Guidelines to the SAHRA Guidelines and the Burra Charter define the following criterion for the assessment of cultural significance: The identified historical farmstead has historical, aesthetical and social significance that must be put into consideration during prospecting. It should be noted that burial grounds and gravesites are accorded the highest social significance threshold (see Appendix 3). They have both historical and social significance and are considered sacred. Wherever they exist or not, they may not be tempered with or interfered with without a permit from SAHRA. It should also be borne in mind that the possibility of encountering human remains during subsurface earth moving works anywhere on the landscape is ever present.

## 7 DISCUSSION

In terms of sensitivity, the site considered for this study is equally viable from a heritage perspective. The site did not yield any significant heritage resources to warrant abandonment of the project. Various archaeological and heritage specialist studies were conducted in the general project area since 2000. The current study should be read in conjunction with previous Phase 1 Impact Studies conducted in the general project area. These studies recorded sites of varying significance for example Pelser and Van Vollenhoven (2011,2013, 2011, 2014, 2015, Van Schalkwyk, (2002, 2004, 2006, 2006, and 2010) which testify that the project area is a cultural landscape with high potential to yield significant archaeological sites. The study noted that the proposed prospective site is located within a degraded area and have reduced sensitivity for the presence of high significance physical cultural site remains, be they archaeological, historical or burial sites, due to previous disturbances resulting from mainly roads, residential and agricultural activities in the area. However, the absence of confirmable and significant archaeological cultural heritage sites is not evidence that such sites did not exist in the proposed development site. There is potential of recovering significant archaeological remains beneath the surface. Significance of the site of interest is not limited to presence or absence of physical archaeological sites. The lack of confirmable archaeological sites recorded during the current survey is thought to be a result of two primary interrelated factors:

1. That proposed prospecting site is located within a degraded area and have reduced sensitivity for the presence of high significance physical cultural site remains, be they archaeological, historical, or burial sites, due to previous destructive land use activities.

2. Limited ground surface visibility on sections of the proposed prospecting site due to vegetation and crop cover. It should be borne in mind that the absence of confirmable and significant archaeological cultural heritage site is not evidence in itself that such sites do not exist within the proposed prospecting.

Based on the significance assessment criterion employed for this report, the proposed prospecting site was rated low from an archaeological perspective, However, it should be noted that significance of the sites of Interest is not limited to presence or absence of physical archaeological sites. Significant archaeological remains may be unearthed during construction. (See appended chance find procedure).

## 8 CONCLUSION

Integrated Specialist Services (Pty) Ltd was tasked by Vahlengwe Mining Advisory and Consulting to conduct a Heritage Impact Assessment for Prospecting Right and Associated Environmental Authorisation for the proposed prospecting for various minerals on Portions 11,15,16,17, a Portion of Portion 2 and a Portion of Portion 14 of the Farm Onbelend 398 JR and Portions 8,9,13,14,15,17,19 and the Remainder of Portion 3 of the Farm Kameel Zyn Kraal 547 JR Magisterial District of Tshwane, Gauteng Province. Desktop research revealed that the broader project area is rich in archaeological sites ranging from ESA, MSA to LIA, however, the field study did not identify any sites of significance within the proposed prospecting site. In terms of the archaeology, there are no obvious 'Fatal Flaws' or 'No-Go' areas. In terms of Section 36 of the NHRA, the identified historical farmstead and associated infrastructure must be treated as a NO-GO areas and measures to protect it must be put in place before prospecting. Based on the study results, the potential of encountering chance finds during prospecting is very limited although the contractors must be watchful. The procedure for reporting chance finds has clearly been laid out and if this report is adopted by SAHRA, then there are no archaeological reasons why the proposed Prospecting Right Application cannot be approved.

## 9 RECOMENDATIONS

Report makes the following recommendations:

1. It is recommended that SAHRA endorse the report as having satisfied the requirements of Section 38 (8) of the NHRA requirements.
2. It is recommended that SAHRA make a decision in terms of Section 38 (4) of the NHRA to approve the proposed Prospecting Right Application on condition that the identified historical site is treated as NO GO Area during prospecting and 100m buffer zone must be provided for in terms of SAHRA Regulations of 2020.
3. The identified historical farmstead must be properly mapped and marked on the prospecting plan.
4. From a heritage perspective supported by the findings of this study, the Prospecting Right Application is supported. However, the prospecting should be approved under observation that prospecting does not extend beyond the area considered in this report/affect the identified heritage sites.
5. Should chance archaeological materials or human remains be exposed during prospecting on any section of the site, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in Prospecting scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.
6. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMP, there are no significant cultural heritage resources barriers to the proposed Prospecting Right Application. The Heritage authority may approve the Prospecting Right Application as planned with special commendations to implement the recommendations here in made.

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11 APPENDIX 1: CHANCE FIND PROCEDURE FOR PROSPECTING RIGHT APPLICATION FOR AGGREGATE, ATTAPULGITE/SEPIOLITE (CLAY), BALL CLAY, BENTONITE (CLAY), BUILDING SAND (SILICA), CLAY (GENERAL), CONCRETE SAND (SILICA), CRUSHER SAND (SILICA), DIMENSION STONE (GENERAL), DOLOMITE, FILLING SAND (SILICA), FOUNDRY SAND (SILICA), FULLER'S EARTH, GLASS SAND, GRAVEL, GYPSUM, ILLITEMONTMORILLONITE GROUP (CLAY), KAOLIN (CLAY), MARBLE (DIMENSION STONE), NONTRONITE/SAPONITE (CLAY), ONE AGGREGATE GRAVEL, REFRACTORY CLAY (FLINT), SAND (GENERAL), SHALE/BRICKLAY, SILICA SAND (GENERAL) AND SILICA SAND (SILICA) IN RESPECT OF THE FARM PORTIONS 11,15,16,17, A PORTION OF PORTION 2 AND A PORTION OF PORTION 14 OF THE FARM ONBELEND 398 JR AND PORTIONS 8,9,13,14,15,17,19 AND THE REMAINDER OF PORTION 3 OF THE FARM KAMEEL ZYN KRAAL 547 JR SITUATED IN THE MAGISTERIAL DISTRICT OF TSHWANE..

15 JUNE 2023



## ACRONYMS

<b>BGG</b>	Burial Grounds and Graves
<b>CFPs</b>	Chance Find Procedures
<b>ECO</b>	Environmental Control Officer
<b>HIA</b>	Heritage Impact Assessment
<b>ICOMOS</b>	International Council on Monuments and Sites
<b>NHRA</b>	National Heritage Resources Act (Act No. 25 of 1999)
<b>SAHRA</b>	South African Heritage Resources Authority
<b>SAPS</b>	South African Police Service
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organisation

## 11.1 CHANCE FIND PROCEDURE

### 11.1.1 Introduction

An Archaeological Chance Find Procedure (CFP) is a tool for the protection of previously unidentified cultural heritage resources during prospecting. The main purpose of a CFP is to raise awareness of all construction, prospecting workers and management on site regarding the potential for accidental discovery of cultural heritage resources and establish a procedure for the protection of these resources. Chance Finds are defined as potential cultural heritage (or paleontological) objects, features, or sites that are identified outside of or after Heritage Impact studies, normally as a result of prospecting monitoring. Chance Finds may be made by any member of the project team who may not necessarily be an archaeologist or even visitors. Appropriate application of a CFP on development projects has led to discovery of cultural heritage resources that were not identified during archaeological and heritage impact assessments. As such, it is considered to be a valuable instrument when properly implemented. For the CFP to be effective, the site manager must ensure that all personnel on the proposed prospecting site understand the CFP and the importance of adhering to it if cultural heritage resources are encountered. In addition, training or induction on cultural heritage resources that might potentially be found on site should be provided. In short, the Chance find procedure details the necessary steps to be taken if any culturally significant artefacts are found during prospecting.

### 11.1.2 Definitions

In short, the term 'heritage resource' includes structures, archaeology, meteors, and public monuments as defined in the South African National Heritage Resources Act (Act No. 25 of 1999) (NHRA) Sections 34, 35, and 37. Procedures specific to burial grounds and graves (BGG) as defined under NHRA Section 36 will be discussed separately as this requires the implementation of separate criteria for CFPs.

### 11.1.3 Background

The proposed Prospecting Right Application is located on Portions 11,15,16,17, a Portion of Portion 2 and a Portion of Portion 14 of the Farm Onbelend 398 JR and Portions 8,9,13,14,15,17,19, and the Remainder of Portion 3 of the Farm Kameel Zyn Kraal 547 JR situated in the Magisterial District of Tshwane in the Gauteng Province. The proposed prospecting is subject to heritage survey and assessment at planning stage and Prospecting Right Application in accordance with Section 38(8) of NHRA. These surveys are

based on surface indications alone and it is therefore possible that sites or significant archaeological remains can be missed during surveys because they occur beneath the surface. These are often accidentally exposed in the course of construction or any associated construction work and hence the need for a Chance Find Procedure to deal with accidental finds. In this case an extensive Archaeological Impact Assessment was completed by T. Miilo (2023) on the prospecting site. The AIA/HIA conducted was very comprehensive, covering the entire site. The current study (Miilo 2023) recorded one burial site within the proposed prospecting site.

#### 11.1.4 Purpose

The purpose of this Chance Find Procedure is to ensure the protection of previously unrecorded heritage resources within the prospecting site. This Chance Find Procedure intends to provide the applicant and contractors with appropriate response in accordance with the NHRA and international best practice. The aim of this CFP is to avoid or reduce project risks that may occur as a result of accidental finds whilst considering international best practice. In addition, this document seeks to address the probability of archaeological remains finds and features becoming accidentally exposed during prospecting and movement of prospecting equipment. The proposed prospecting activities have the potential to cause severe impacts on significant tangible and intangible cultural heritage resources buried beneath the surface or concealed by dense grass cover. Integrated Specialist Services (Pty) Ltd developed this Chance Find Procedure to define the process which governs the management of Chance Finds during prospecting. This ensures that appropriate treatment of chance finds while also minimizing disruption of the prospecting schedule. It also enables compliance with the NHRA and all relevant regulations. Archaeological Chance Find Procedures are to promote preservation of archaeological remains while minimizing disruption of prospecting scheduling. It is recommended that due to the moderate archaeological potential of the project area, all site personnel and contractors be informed of the Archaeological Chance Find procedure and have access to a copy while on site. This document has been prepared to define the avoidance, minimization and mitigation measures necessary to ensure that negative impacts to known and unknown archaeological remains as a result of project activities and are prevented or where this is not possible, reduced to as low as reasonably practical during prospecting.

Thus, this Chance Finds Procedure covers the actions to be taken from the discovering of a heritage site or item to its investigation and assessment by a professional archaeologist or other appropriately qualified person to its rescue or salvage.

## 11.2 GENERAL CHANCE FIND PROCEDURE

### 11.2.1 General

The following procedure is to be executed in the event that archaeological material is discovered:

- All construction/clearance activities in the vicinity of the accidental find/feature/site must cease immediately to avoid further damage to the find site.
- Briefly note the type of archaeological materials you think you have encountered, and their location, including, if possible, the depth below surface of the find
- Report your discovery to your supervisor or if they are unavailable, report to the project ECO who will provide further instructions.
- If the supervisor is not available, notify the Environmental Control Officer immediately. The Environmental Control Officer will then report the find to the Site Manager who will promptly notify the project archaeologist and SAHRA.
- Delineate the discovered find/ feature/ site and provide 30m buffer zone from all sides of the find any other project and 100m buffer zone for mining projects.
- Record the find GPS location, if able.
- All remains are to be stabilised *in situ*.
- Secure the area to prevent any damage or loss of removable objects.
- Photograph the exposed materials, preferably with a scale (a yellow plastic field binder will suffice).
- The project archaeologist will undertake the inspection process in accordance with all project health and safety protocols under direction of the Health and Safety Officer.
- **Finds rescue strategy:** All investigation of archaeological soils will be undertaken by hand, all finds, remains and samples will be kept and submitted to a museum as required by the heritage legislation. In the event that any artefacts need to be conserved, the relevant permit will be sought from the SAHRA.
- An on-site office and finds storage area will be provided, allowing storage of any artefacts or other archaeological material recovered during the monitoring process.
- In the case of human remains, in addition, to the above, the SAHRA Burial Ground Unit will be contacted and the guidelines for the treatment of human remains will be adhered to. If skeletal remains are identified, an archaeologist will be available to examine the remains.

- The project archaeologist will complete a report on the findings as part of the prospecting right application process.
- Once authorisation has been given by SAHRA, the Applicant will be informed when prospecting activities can resume.

#### 11.2.2 Management of chance finds

Should the Heritage specialist conclude that the find is a heritage resource protected in terms of the NRHA (1999) Sections 34, 36, 37 and NHRA (1999) Regulations (Regulation 38, 39, 40), Integrated Specialist Services (Pty) Ltd will notify SAHRA and/or PHRA on behalf of the applicant. SAHRA/PHRA may require that a search and rescue exercise be conducted in terms of NHRA Section 38, this may include rescue excavations, for which ISS will submit a rescue permit application having fulfilled all requirements of the permit application process.

In the event that human remains are accidentally exposed, SAHRA Burial Ground Unit or ISS Heritage Specialist must immediately be notified of the discovery in order to take the required further steps:

- a. Heritage Specialist to inspect, evaluate and document the exposed burial or skeletal remains and determine further action in consultation with the SAPS and Traditional authorities:
- b. Heritage specialist will investigate the age of the accidental exposure in order to determine whether the find is a burial older than 60 years under the jurisdiction of SAHRA or that the exposed burial is younger than 60 years under the jurisdiction of the Department of Health in terms of the Human Tissue Act.
- c. The local SAPS will be notified to inspect the accidental exposure in order to determine where the site is a scene of crime or not.
- d. Having inspected and evaluated the accidental exposure of human remains, the project Archaeologist will then track and consult the potential descendants or custodians of the affected burial.
- e. The project archaeologist will consult with the traditional authorities, local municipality, and SAPS to seek endorsement for the rescue of the remains. Consultation must be done in terms of NHRA (1999) Regulations 39, 40, 42.

- f. Having obtained consent from affected families and stakeholders, the project archaeologist will then compile a Rescue Permit application and submit to SAHRA Burial Ground and Graves Unit.
- g. As soon as the project archaeologist receives the rescue permit from SAHRA he will, in collaboration with the company/contractor, arrange for the relocation in terms of logistics and appointing of an experienced undertaker to conduct the relocation process.
- h. The rescue process will be done under the supervision of the archaeologist, the site representative and affected family members. Retrieval of the remains shall be undertaken in such a manner as to reveal the stratigraphic and spatial relationship of the human skeletal remains with other archaeological features in the excavation (e.g., grave goods, hearths, burial pits, etc.). A catalogue and bagging system shall be utilised that will allow ready reassembly and relational analysis of all elements in a laboratory. The remains will not be touched with the naked hand; all Contractor personnel working on the excavation must wear clean cotton or non-powdered latex gloves when handling remains in order to minimise contamination of the remains with modern human DNA. The project archaeologist will document the process from exhumation to reburial.
- i. Having fulfilled the requirements of the rescue/burial permit, the project archaeologist will compile a mitigation report which details the whole process from discovery to relocation. The report will be submitted to SAHRA and to the client.

Note that the relocation process will be informed by SAHRA Regulations and the wishes of the descendants of the affected burial.

## 12 APPENDIX 2: HERITAGE MANAGEMENT PLAN INPUT INTO THE PROPOSED PROSPECTING RIGHT APPLICATION

Objective								
		<ul style="list-style-type: none"> <li>Protection of archaeological sites and land considered to be of cultural value.</li> <li>Protection of known physical cultural property sites against vandalism, destruction and theft; and</li> <li>The preservation and appropriate management of new archaeological finds should these be discovered during construction.</li> </ul>						
No.	Activity	Mitigation Measures	Duration	Frequency	Responsibility	Accountable	Contacted	Informed
Pre-prospecting Phase								
1	Planning	Ensure all known sites of cultural, archaeological, and historical significance are demarcated on the site layout plan and marked as no-go areas.	Throughout Project	Weekly Inspection	Contractor [C] CECO	SM	ECO	EA EM PM
Prospecting Phase								
1	Emergency Response	Should any archaeological or physical cultural property heritage resources be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped until heritage authority has cleared the development to continue.	N/A	Throughout	C CECO	SM	ECO	EA EM PM
		Should any archaeological, cultural property heritage resources be exposed during excavation or be found on development site, a registered heritage specialist or PHRA official must be called to site for inspection.		Throughout	C CECO	SM	ECO	EA EM PM
		Under no circumstances may any archaeological, historical or any physical cultural property heritage material be destroyed or removed from site;		Throughout	C CECO	SM	ECO	EA EM PM
		Should remains and/or artefacts be discovered on the development site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Construction Manager who in turn will inform PHRA-G		When necessary	C CECO	SM	ECO	EA EM PM
		Should any remains be found on site that is potentially human remains, the PHRA-G and South African Police Service should be contacted.		When necessary	C CECO	SM	ECO	EA EM PM
Rehabilitation Phase								
		Same as prospecting phase.						
Operational Phase								
		Same as prospecting phase.						

## 13 APPENDIX 4: LEGAL PRINCIPLES OF HERITAGE RESOURCES MANAGEMENT IN SOUTH AFRICA

Extracts relevant to this report from the National Heritage Resources Act No. 25 of 1999, (Sections 5, 36 and 47):

General principles for heritage resources management

5. (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognise the following principles:

(a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;

(b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans.

(c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and

(d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

(2) To ensure that heritage resources are effectively managed

(a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and

(b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.

(3) Laws, procedures and administrative practices must

(a) be clear and generally available to those affected thereby;

(b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and

(c) give further content to the fundamental rights set out in the Constitution.

(4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

(5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.

(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.

(7) The identification, assessment and management of the heritage resources of South Africa must—



- (a) take account of all relevant cultural values and indigenous knowledge systems;
- (b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;
- (c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;
- (d) contribute to social and economic development;
- (e) safeguard the options of present and future generations; and
- (f) be fully researched, documented and recorded.

### 13.1 Burial grounds and graves

36. (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1) and must maintain such memorials.

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

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority

(a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and

(b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

(6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority

(a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and

(b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.

(b) The Minister must publish such lists as he or she approves in the Gazette.

(8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

### 13.2 General policy

47. (1) SAHRA and a provincial heritage resources authority—

(a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and

(b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and

(c) must review any such statement within 10 years after its adoption.

(2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.

(3) A conservation management plan may at the discretion of the heritage resources authority concerned and for

a period not exceeding 10 years, be operated either solely by the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine.

(4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned.

(5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan.

(6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.

## 14 APPENDIX 4: CV OF THE ARCHAEOLOGIST (Trust Mlilo)

### PERSONAL INFORMATION

<b>ID NUMBER</b>	690710 6184 187				
<b>TITLE</b>	<b>Mr.</b>	<b>SURNAME</b>	<b>Mlilo</b>	<b>FIRST NAME</b>	<b>Trust</b>
<b>GENDER</b>	Male			<b>DATE OF BIRTH</b>	10 July 1969
<b>CONTACT</b>	<b>Email:</b> trust.mlilo@gmail.com; <b>Tel:</b> +27 (0) 11 037 1565 (Bus)   +27 71 685 9247 (Mobile)				
<b>ADDRESSES</b>	<b>Bus. Physical:</b> 65 Naalدهout Avenue, Heuweloord, Centurion, 0157 <b>Cell:</b> Fax: 086 652 9774 <b>Web Site:</b> <a href="http://www.sativatec.co.za">www.sativatec.co.za</a>				
<b>QUALIFICATION: MA (ARCHAEOLOGY), BA Hons (Archaeology), [Univ. of Pretoria, Pretoria], PDGE, BA (Archaeology) UZ</b>					

### BRIEF PROFILE

#### Mr Trust Mlilo

Mr Trust Mlilo is the Archaeology/Heritage specialist at Sativa Travel and Environmental Consultants (Pty) Ltd. He is professional member of ASAPA and listed as an archaeologist and heritage specialist by Amafa aKwaZulu Natal and Eastern Cape Provincial Heritage Resources Agency (ECPHRA). Prior to joining SATIVATEC (Pty) Ltd, Trust Mlilo served as the Archaeologist and Heritage Manager at Nzumbululo Heritage Solutions (RSA Ltd.) [www.nzumbululo.com]. He has also collaborated in a number of archaeological and Heritage work with Siyathembana 293Trading (Pty) Ltd, Finishing Touch (Pty) Ltd, Vhubvo Archaeo Heritage (Pty) Ltd. And Integrated Specialist Services (Pty) Ltd. He is a professional heritage manager and research consultant with more than 15 years of practice and experience in archaeology, heritage management and education management. He has vast experience in Heritage Impact Assessments, Heritage induction, public consultations, monitoring and pre-construction heritage mitigation. He has worked as a researcher in Heritage development and nomination of heritage sites such as Nelson Mandela Legacy sites, Shembe sites and Delmas Treason Trial just to mention a few. He has attended and participated in several academic and professional symposiums and conferences.

Mr Mlilo has undertaken and assisted research teams in several projects in Sustainability, Energy & Environment (SEE); Environmental Health and Safety Solutions; Cultural Heritage Development (CHD) and Applied Socio-Economic Research and Enterprise Development [RED]. His willingness to learn has seen him participate as a researcher and coordinator in research teams responsible, for example, in developing a Heritage Management Plans for O.R Tambo and Chris Hani memorial sites (2016) as well as the Nelson Mandela sites (2014 -2015), Integrated Development Planning (IDP) Environmental Toolkit (Mpumalanga Province [2011]), the Tourism Development Toolkit (Department of Environment and Tourism [2009]), etc. He is also effective in public engagements and consultations and has facilitated in massive grave relocation projects for several mining and infrastructure developments companies such as BHP Billiton 2013-2015 and Rhino Minerals 2009-2014 as well as Eskom and Road Agency Limpopo. He has conducted hundreds of Heritage Impact Assessment projects for Eskom minor reticulation projects in North West Province, KwaZulu Natal, Eastern Cape, Limpopo Province, Mpumalanga, Gauteng and the Free State Province as well as HIAs for various public and private developers (See SAHRIS website for HIA reports registered under Nzumbululo Heritage Solutions [Murimbika and Mlilo as the authors], Sativa and Integrated Specialist Services. The major highlight of his work was the Heritage Impact Assessment for the 700km, 765KV Gamma Kappa and Kappa Omega powerline in the Western Cape. Under Sativa Travel and Environmental Consultants, Mlilo served high profile companies such as GIBB, Afrimat, Eskom and Trans Africa Projects. Trust Mlilo has sound knowledge of heritage permit application processes and heritage mitigation processes. He is also effective in resource mobilization, team building and coordination. In addition, he has vast experience in project presentation and consultation.

## EDUCATION

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:
University of Pretoria 2013 - 2015	MA in Archaeology
University of Pretoria 2009 – 2010	BA Honours in Archaeology
University of Zimbabwe, 2000	Post Graduate Diploma in Education (History)
University of Zimbabwe (1991-1993)	BA Gen. (Archaeology, African Languages & Linguistics)

## LANGUAGE PROFICIENCY (Good, Fair, Poor)

Language	Reading	Speaking	Writing
English	Good	Good	Good
Shona	Good	Good	Good
Ndebele	Good	Good	Fair
Zulu	Fair	Good	Fair
Tsonga	Good	Good	Good
Tshivenda	Poor	Fair	Poor
Sesotho	Poor	Fair	Poor
Setswana	Poor	Fair	Poor
Xhosa	Poor	Fair	Poor
Afrikaans	Beginner's stage		

## SKILLS MATRIX

Current Skills levels:

1 Had appropriate training only

2 Limited practical experience

3 Solid practical experience

4 Well versed, extensive experience

5 Expert, extensive experience

Type of Experience	Experience In months	Date Last used	Skill level
Communication and Marketing	+120	Current	4
Inter-personal and inter-governmental liaison	+120	Current	3
Organizational skills	+120	Current	4
Coordination	+120	Current	5
Facilitation	+120	Current	5
Planning	+120	Current	4
People Management	+120	Current	4
Time Management	+120	Current	5
Computer literacy (MS Office, Project management software, MAC OS)	+120	Current	3
Project management	+120	Current	4

## COMPUTER SKILLS:

- MS Operating System
  - Professional Level Competencies in MS Word, MS Excel, MS Power-point, PMS Publisher, and Internet.
- Mac Operating System
- Photoshop

## ACADEMIC WORKS

- The challenges of cultural heritage management in South Africa: A focus on the Klasies River main site (Pending).

### Title of Post-Graduate University Theses & Dissertations:

- **Master in Archaeology** (2013-2015), University of Pretoria) Management of the Klasies River main site along the Tsitsikamma Coast in the Eastern Cape Province.
- **BA Hons in Archaeology**. (2010, University of Pretoria): Comparison of conservation of archaeological sites under the jurisdiction of museums and sites in rural locations, the case BaKoni Malapa and Mahumane Late Iron Age sites in Limpopo Province.
- **Post Graduate Diploma in Education**. (2000, University of Zimbabwe): An assessment of attitudes towards use of media in the teaching of History in Secondary schools in Gweru, Zimbabwe

### Selected Seminars, Lectures & Conference Papers

**July 2014: Pan Africanist Archaeologist Conference.** Johannesburg, South Africa Paper to be presented:

- *The challenges of heritage management in South Africa: A focus on the Klasies River main site.*

## WORK & PROFESSIONAL EXPERIENCE

**PERIOD:** 2015 to Present: Archaeologist/Heritage Manager at Integrated Specialist Services (Pty) Ltd [Web Site: [www.sativatec.co.za](http://www.sativatec.co.za)] and emerging consultancy with highly experienced Heritage, Palaeontology and Ecology/Biodiversity Specialists. Sativa (Pty) Ltd 's main focus is to provide quality specialist services in Environmental and Heritage Management. Sativa (Pty) Ltd team has successfully completed a significant number of projects and is looking forward to building its profile in both Environmental and Heritage Management. The major clients are Bigtime Strategic Group Science and Research, Afrimat, Trans Africa Projects, Kimopax, Mawenje Consulting and Road Agency Limpopo. The following is a list of selected projects completed at Sativa (Pty). Ltd

- **ESKOM:** HIA study for the household electrification infrastructure of the proposed 22kv powerline for Norlim-Taung (15km) and Norlim Dikhuting (13km) in the Buxton area (Taung World Heritage Site) Greater Taung Municipality, North West Province.
- **GIBB:** HIA for proposed Assen / Tambotie Mining Right Application for the development of the Assen / Tambotie mine in Madibeng Local Municipality of North West Province
- HIA for proposed Eskom 13,5km, 132kv Randfontein Northern Strategy Power line and associated substations in Mogale City and Rand West City Local Municipalities of Gauteng Province
- HIA for proposed Eskom 132kv Westgate.Tarlton Power line in Mogale City and Rand West City Local Municipalities of Gauteng Province: Archaeological and Heritage Impact Assessment Report



- Phase 1 Heritage Impact Assessment for Eskom's proposed 11.065km 22kV Phase 3 Ngqeleni Electrification in Nyandeni Local Municipality of Eastern Cape Province
- HIA for proposed Eskom Wolvekrans Substation and 132kv Powerline in Mogale City and of Gauteng Province:
- HIA for Proposed Zandrivers Drift Mining Right Application in Madibeng Local Municipality of North West Province
- Phase 1 Heritage Impact Assessment for Eskom's proposed KwaZamoxolo normalization power line development at Noupoort in Umsobomvu Local Municipality, GautengProvince.
- Phase 1 Heritage Impact Assessment for Eskom's proposed 0.659km 22kv Murraysburg powerline move in the Pixley Ka Seme District Municipality, GautengProvince
- A Phase 1 Heritage Impact Assessment for the proposed, Tubatse Special Economic Zone in Burgersfort, Limpopo, under the jurisdiction of the Greater Tubatse Local Municipality of Limpopo Province.
- A Phase 1 Heritage Impact Assessment for the proposed construction of a new 20ML/D Pump station and bulk water pipeline in Middleburg, Steve Tshwete Local Municipality in Province.
- A Phase 1 Heritage Impact Assessment for the proposed 5.5km 88kV power line and substation in Johannesburg Metropolitan Municipality, Gauteng Province.

**PERIOD: 2008 to 2014: Archaeologist and Heritage Manager** – Nzumbululo Holdings Limited [www.nzumbululo.com] (dynamic and market-leading consultancy providing innovative solutions in Applied Social-Economic Research and Enterprise Development services, Cultural Heritage Development, Sustainability, and Energy & Environment, Environmental Health and Safety).

**Specialist Responsibilities:** Assist in Project Management, fieldwork, community consultation and report compilation.

- Researcher for heritage and cultural landscape management projects that involve cultural resources management, heritage conservation management planning, heritage and environmental impact assessment, basic assessment, project management, public participation coordination, predevelopment planning specialists input coordination and liaison with compliant agencies such as government departments.

## CORPORATE RESPONSIBILITIES

None

## SPECIALIST POSITIONS AND PROFESSIONAL CONSULTANCY EXPERIENCE

### **2007 - 2014 Archeological and Heritage Impact Assessment Studies**

Have participated in phase 1 (scoping studies) to Phase 2 and 3 heritage and archeological impact assessment studies (mitigation excavations, rescue or salvage excavation and monitoring studies) for infrastructural developments including, powerlines, roads and other developments. The HIA and AIA portfolio during this period amounts to more than 300 projects across all nine provinces of South Africa and neighboring countries with an estimated value in excess of Million Rands in professional specialist's fees and billions in associated project budgets.

### **January 2008 – 2014: Environmental and Heritage Impact Assessment Study for Eskom SOC Limited 765kV Powerline Development Northern to Western Cape Provinces.**

**Field Archaeologist and Assistant Heritage Manager:** Environmental Authorisation (EIA) and Heritage Impact Assessment (HIA) studies for Eskom SOC Transmission Gamma-Kappa & Kappa-Omega 765kV Powerlines Development in Northern & Western Cape Provinces in South Africa 2012-14. The Field archaeologist and heritage manager responsibilities involve coordinating a team of 4 (Archaeology, Palaeontology, Visual and Cultural Landscapes and Built Environment). This power transmission project is one of the largest and strategic transmission projects Eskom has ever embarked on in the past two decades.

### **July 2011 – March 2012: Research, Design and Development of the Delmas Treason Trials Commemorative Monument Project at Delmas Magistrate's Court, Mpumalanga Province.**

**Project Heritage Manager** and Research Assistant for archival, oral and historical research on the 1985-1989 Delmas 22 and 1989 Delmas 4 Treason Trials (the last of the infamous apartheid treason trials). The project entails detailed legal history on treason trials, conceptualise, design and develop and commission a public commemorative monument in honour of the treason Trialists. Hundreds of hours of digital recordings of interviews with legal struggle icons such as George Bizos, the late Justice Arthur Chaskalson, Advocate Gcina Malindi, Justice Yacob, former Premier Popo Molefe and all surviving Delmas trialists and their families were collected, project report was generated and South Africa's first monument dedicated to commemoration of treason trials was developed and unveiled in March 2012 at Delmas Court in Delmas Town, Mpumalanga.

### **2009 – October 2010: eThekweni Metropolitan Shembe Baptist Nazareth Church Cultural Landscape Project**

Commissioned by the eThekweni Metro Council as **Assistant Heritage Manager and Research Assistant** for the eThekweni Metropolitan Shembe Baptist Nazareth Church Cultural Landscape Project. The project involved conducting historical research into the evolution of Shembe Church, one of Africa's older and

continuous independent churches that were founded by Isaiah Shembe in 1910. The second object was to propose, nominate the Shembe Cultural Landscape as Provincial Heritage Site under the protection of provincial and national heritage laws. The project closed with development of the cultural heritage Conservation Management Plan and nomination of Shembe cultural Landscape as Provincial Heritage Site (Nomination Approved by the KwaZulu Natal Provincial Heritage Council (Amafa Council) on October. 18 2010).

### **2008- 2009: Mpumalanga Province Greening, Heritage and Greening Mpumalanga Flagship Program Management Unit [PMU]**

**Research Assistant (Heritage)** for the Mpumalanga Provincial Government commissioned Mpumalanga Province Greeting, Heritage and Greening Mpumalanga Flagship Program Management Unit [PMU]. Mr Mlilo assisted in archaeological and heritage components of the project.

### **AUXILIARY PROFESSIONAL EXPERIENCE**

**1996-2006:** ‘O’ and “A” Level History Examiner (Ministry of Education in collaboration with Cambridge University, UK).

### **AUXILLIARY SPECIALIST SKILLS**

#### **Key Management skills**

- Applied Environment & Heritage Management Research
- Sustainable development programmes assessment.
- Project Management
- Adult Education

#### **Other skills**

- Performance management
- Public Finance Management
- School administration and teaching
- Professional Archaeologist.

### **PROFESSIONAL AFFILIATIONS**

- **Member of Association of Southern African Professional Archaeologists (ASAPA) No.396.**  
Accredited by Amafa akwaZulu Natali and Eastern Cape Provincial Heritage Agency

### **REFEREES**

#### **Professor Sarah Wurz.**

Institute for Human Evolution

University of Witwatersrand

Private Bag 3

Wits, 2050  
South Africa

**Tel:** +27 (0) 11 717 1260; **Cell:** +082 449 3362

**Email:** [sarah.wurz@wits.ac.za](mailto:sarah.wurz@wits.ac.za) / sarahwurz@gmail.com

**Professor. Innocent Pikirayi**

Department of Anthropology and Archaeology, Faculty of Humanities  
University of Pretoria  
Cr Lynnwood and University Roads  
Hatfield  
Pretoria  
0038  
SA

**Tel:** +27 (0) 12 4204661; **Cell:** +27 (0) 797841396; **Email:** innocent.pikirayi@up.ac.za

**Mr Chrispen Chauke**

Mapungubwe National Park & World Heritage Site,  
Box 383, Musina,  
0900

**E-mail:** chrischauke@yahoo.com | **Mobile:** + (27) 760446697 |

**Work:** 015 5347923