



Integrated Specialist Services (Pty) Ltd

**PHASE 1 ARCHAEOLOGICAL AND HERITAGE
IMPACT ASSESSMENT FOR PROSPECTING
RIGHT APPLICATION FOR LITHIUM,
FELDSPAR, TIN, TANTALUM, ZINC, AND
DIMENSION STONE (GENERAL) ON VARIOUS
FARMS, SITUATED IN THE MAGISTERIAL
DISTRICT OF PORT SHEPSTONE, KWAZULU
NATAL PROVINCE**

T Mlilo

DOCUMENT SYNOPSIS (EXECUTIVE SUMMARY)

Item	Description
Proposed development and location	Prospecting Right Application for Lithium, Feldspar, Tin, Tantalum, Zinc, and Dimension Stone (general) on Various Farms, Situated in the Magisterial District of Port Shepstone, Kwazulu Natal Province.
Purpose of the study	Archaeological and Heritage Impact Assessment
1:50 000 Topographic Map	3030CB Port Shepstone and 3030DA Hibberdene
Coordinates	Refer to Figures 1-6
Municipalities	Umdoni Local Municipality of Ugu District Municipality
Predominant land use of surrounding area	Agricultural Area and rural residential
Applicant	AFLI Exploration 2 (Pty) Ltd
DMRE Reference	KZN30/5/1/1/2/11351PR
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Authors	Trust Milo
Date of Report	8 May 2023

This report serves to inform and guide the applicant and contractors about the possible impacts that the proposed prospecting has on heritage resources (if any) located in the study area. In the same light, the document must also inform Amafa aKwaZulu Natal and Research Institute about the presence, absence and significance of heritage resources located within the Umuzumbe Local Municipality in Kwa Zulu Natal earmarked for prospecting. This report is submitted in terms of Section 41 (2) of the Amafa aKwaZulu Natal and Research Institute of 2018 read together with Section 38 (8) of the National Heritage Resources Act 25 of 1999 as part of the proposed 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 exploration for various minerals. In compliance with these laws Joan Projects (Pty) Ltd tasked Integrated Specialist Services (Pty) Ltd to conduct a Phase 1 Archaeological and Heritage Impact Assessment (AIA/HIA) for the Prospecting Right Application in the Umdoni Local Municipality in the Kwa Zulu Natal Province. Desktop studies, drive-throughs and fieldwalking were conducted in order to identify heritage landmarks within the Prospecting Right Application site. The study site is not on pristine ground, having seen significant transformations owing to previous and current land use activities such as sugar cane production and residential developments as well as infrastructure developments. The general area is known for occurrence of archaeological and historical sites. It should be noted that archaeological material and unmarked graves may exist and when encountered during prospecting, work must be stopped forthwith, 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 Amafa aKwaZulu Natal and Research Institute for review.

The report makes the following observations:

- The findings of this report have been informed by desktop data review, field survey and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the Prospecting Right Application
- Most sections of the proposed Prospecting Right site are accessible; the field survey was effective enough to cover significant sections of the project receiving environs.
- The immediate project area is predominantly agricultural and residential.
- Some sections of the proposed Prospecting Right Application site are severely degraded from extensive sugar cane production and residential developments.

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 Amafa aKwaZulu Natal and Research Institute endorse the report as having satisfied the requirements of Section 41(2) of Amafa aKwaZulu Natal and Research Institute Act of 2018 and 38 (8) of the NHRA requirements.
2. It is recommended that Amafa make a decision in terms of Section 38 (4) of the NHRA and Section 41(2) of Amafa aKwaZulu Natal and Research Institute Act of 2018 to approve the Prospecting Right Application on condition that all graves are identified, documented and mapped.
- 3 The planners for the proposed exploration must provide for 100m buffer zone from each burial and historical building recorded in this report.
- 4 Documentation of graves located within homesteads must only be done if full permission is granted by the custodian or affected families.
- 5 Landowners and homeowners must be requested to declare graves located in their properties to ensure that all graves that occur in the project area are documented and mapped before prospecting commences.
- 6 A walk down survey to record graves is required once permission is obtained from the residents and property owners.
- 7 From a heritage perspective supported by the findings of this study, the Proposed Prospecting Right Application is supported. However, the Prospecting Right Application should be approved under observation that the proposed prospecting does not extend beyond the area considered in this report/affect the identified heritage sites.
- 8 should any of the identified historical buildings be on the direct footprint of the proposed exploration footprint, a heritage practitioner must be appointed to assess the buildings in detail and apply for demolition permits from Amafa AkwaZulu Natal and Research Institute.

9 Mitigation on graves must not be done without the involvement and consent from the custodian families.

10 Should chance archaeological materials or human remains be exposed during work to be conducted 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 the prospecting scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.

11 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. The Heritage authority may approve the Prospecting Right Application as planned with special commendations to implement the recommendations made herein.

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 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 Prospecting Right Application 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 Afli Exploration 2 (Pty) Ltd

Signed by



08/ 05/ 2023

ACKNOWLEDGEMENTS

The author acknowledges Joan Projects (Pty) Ltd for their assistance with the project details and responding to technical queries related to the project.

TABLE OF CONTENTS

DOCUMENT SYNOPSIS (EXECUTIVE SUMMARY)	<i>i</i>
ACKNOWLEDGEMENTS	<i>vi</i>
TABLE OF CONTENTS	7
ABBREVIATIONS	- 10 -
KEY CONCEPTS AND TERMS	- 11 -
Periodization	- 11 -
Definitions	- 11 -
Assumptions and disclaimer	- 13 -
1 INTRODUCTION	- 14 -
1.1 Terms of Reference (ToR).....	- 14 -
1.2 Project Location	- 15 -
1.3 PROJECT DESCRIPTION	- 23 -
2 LEGISLATIVE CONTEXT	- 25 -
3 METHODOLOGY	- 32 -
3.1 The Fieldwork survey	- 32 -
3.2 Visibility and Constraints.....	- 33 -
3.3 Consultations.....	- 33 -
4 ARCHAEOLOGICAL CONTEXT	- 41 -
Intangible Heritage	- 43 -
SAHRIS Database and Impact assessment reports in the proposed project area	- 43 -
5 RESULTS OF THE FIELD STUDY	- 44 -
5.1 Archaeology.....	- 44 -
5.2 Burial grounds and Graves.....	- 44 -
5.3 Public Monuments and Memorials.....	- 45 -
5.4 Buildings and Structures	- 45 -
5.5 Impact Statement.....	- 46 -
5.6 Assessment of development impacts	- 47 -
5.7 Cumulative Impacts.....	- 51 -
5.8 Mitigation.....	- 51 -

6	ASSESSING SIGNIFICANCE	52
6.1	Aesthetic Value.....	52
6.2	Historic Value.....	52
6.3	Scientific value	52
6.4	Social Value	52
7	DISCUSSION	53
8	CONCLUSION	54
9	RECOMENDATIONS	55
10	REFERENCES	57
11	APPENDIX 1: CHANCE FIND PROCEDURE FOR PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE	61
11.1	CHANCE FIND PROCEDURE	62
11.1.1	Introduction	62
11.1.2	Definitions	62
11.1.3	Background	62
11.1.4	Purpose.....	63
11.2	GENERAL CHANCE FIND PROCEDURE	64
11.2.1	General	64
11.2.2	Management of chance finds.....	65
12	APPENDIX 2: HERITAGE MANAGEMENT PLAN INPUT INTO THE PROSPECTING RIGHT APPLICATION	67 -
13	APPENDIX 4: LEGAL PRINCIPLES OF HERITAGE RESOURCES MANAGEMENT IN SOUTH AFRICA	68
13.1	Burial grounds and graves	69
13.2	General policy.....	71

TABLE OF PLATES [PHOTOGRAPHS]

Plate 1: showing the Prospecting Right Application site	- 34 -
Plate 2: showing a land mark within the proposed prospecting site.	- 34 -
Plate 3: showing the dense vegetation cover which characterise the entire prospecting site.	- 35 -

Plate 4: showing cane fields within the proposed prospecting site	- 35 -
Plate 5: showing loading site and cane fields in the background.	- 36 -
Plate 6: showing recently harvested cane fields.	- 36 -
Plate 7: showing vast cane plantations within the proposed prospecting site.	- 37 -
Plate 8: showing vast cane plantations within the Prospecting Right Application site.	- 37 -
Plate 9: showing the Prospecting Right Application site.	- 38 -
Plate 10: showing cane fields within the proposed prospecting site.	- 38 -
Plate 11: showing the Prospecting Right Site.	- 39 -
Plate 12: showing a quarry site within the proposed prospecting site	- 39 -
Plate 13: showing the Prospecting Right Applicationsite	- 40 -
Plate 14: showing cane plantation and rural settlement on the background. Note that sugar cane cover impeded the detection of archaeological remains within the proposed prospecting site.	- 40 -
Plate 15: showing the proposed prospecting site	- 41 -

TABLE OF FIGURES

Figure 1: Location of the Prospecting Right Application site (Joan Consulting, 2023)	- 16 -
Figure 2: Location of the Prospecting Site (Joan Projects (Pty) Ltd 2023)	- 17 -
Figure 3: Showing the proposed prospecting site (Joan Projects (Pty) Ltd 2023)	- 18 -
Figure 4: Showing the Prospecting Area (Joan Projects (Pty) Ltd 2022)	- 19 -
Figure 5: Showing identified heritage sites within the proposed Prospecting Right Site (Joan Projects (Pty) Ltd 2022) -	20 -
Figure 6: Recorded heritage sites and 100m Buffer zones within the prospecting area (ISS(Pty) Ltd 2023).....	- 21 -
Figure 7: Showing track logs within the prospecting site (ISS (Pty) Ltd 2023)	- 22 -

LIST OF TABLES

Table 1: Location details	- 15 -
Table 2: Summary of Findings.....	- 45 -
Table 3: Criteria Used for Rating of Impacts.....	- 48 -
Table 4: Criteria for Rating of Classified Impacts	- 49 -
Table 5: Operational Phase.....	- 50 -

ABBREVIATIONS

AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
EIA	Environmental Impact Assessment
EIA	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>)
EIAR	Environmental Impact Assessment Report
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
ICOMOS	International Council of Monuments and Sites
LIA	Late Iron Age
LFC	Late Farming Community
LSA	Late Stone Age
MIA	Middle Iron Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act 107 of 1998
NHRA	National Heritage Resources Act 25 of 1999
PHRA	Provincial Heritage Resource Agency
SAHRA	South African Heritage Resources Agency
ToR	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 retained by Joan Projects (Pty) Ltd to carry out a Phase 1 AIA/ HIA for the Prospecting Right Application in Kwa Zulu Natal Province. This study was conducted to fulfil the requirements of Section 41 (2) of the Amafana aKwaZulu Natal and Research Institute of 2018 read together with 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 Prospecting Right Application 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 Iron Age (LIA) and historical sites. It should be noted that while heritage resources may have been located in the entire study area, subsequent developments such as sugar cane production, residential developments, powerlines, road and boundary fence lines have either obliterated these materials or reduced them to isolated finds that can only be identifiable as chance finds at the site. The Prospecting Right Application may be approved subject to adopting recommendations and mitigation measures proposed in this report. Based on the findings there are 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.

1.1 Terms of Reference (ToR)

The Integrated Specialist Services (Pty) Ltd was requested by Joan Consulting (Pty) Ltd 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 Prospecting Right Application 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 proposed 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 KZN30/5/1/1/2/11351 PR is situated about 5km northwest of Umgai under the Port Shepstone Magisterial District.

Table 1: Location details

DMRE Ref:	KZN30/5/1/2/11352 PR
Farm name:	RE and Portions 1,4,6,7,24,25 of the Farm Cyrilsford 4218 ET Portion 14, 15, 17, 18 of Farm Mgai 16801 ET Remaining Extent of Farm Lot A Ifafa 3833 ET Remaining Extent of Farm Blake 4212 ET Remaining Extent of Farm Deverell's Peak 4214 ET
Application area (Ha):	1 313 ha
Magisterial District:	Port Shepstone Magisterial District
Local Municipality	Umdoni Local Municipality.

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE

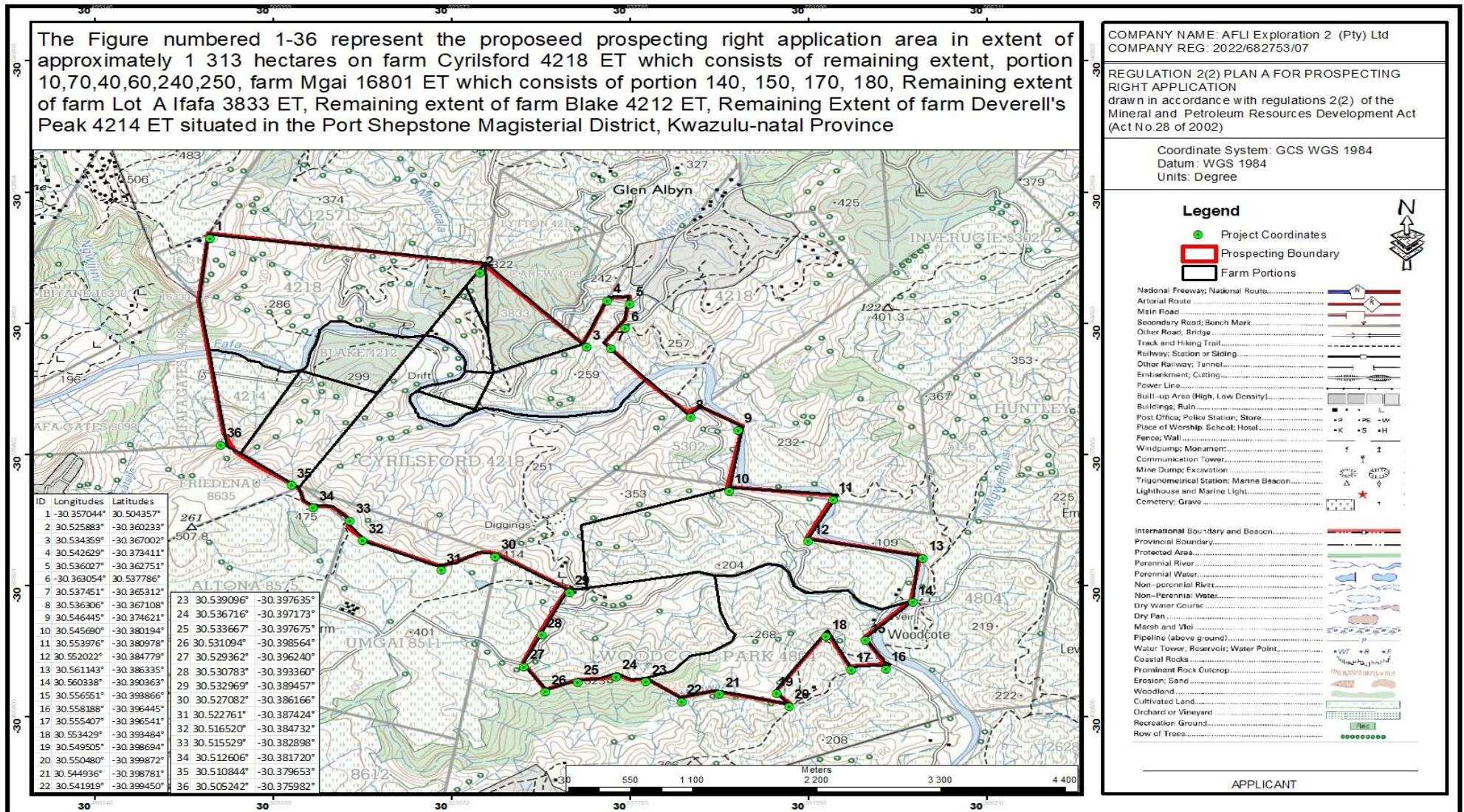


Figure 1: Location of the Prospecting Right Application site (Joan Consulting, 2023)

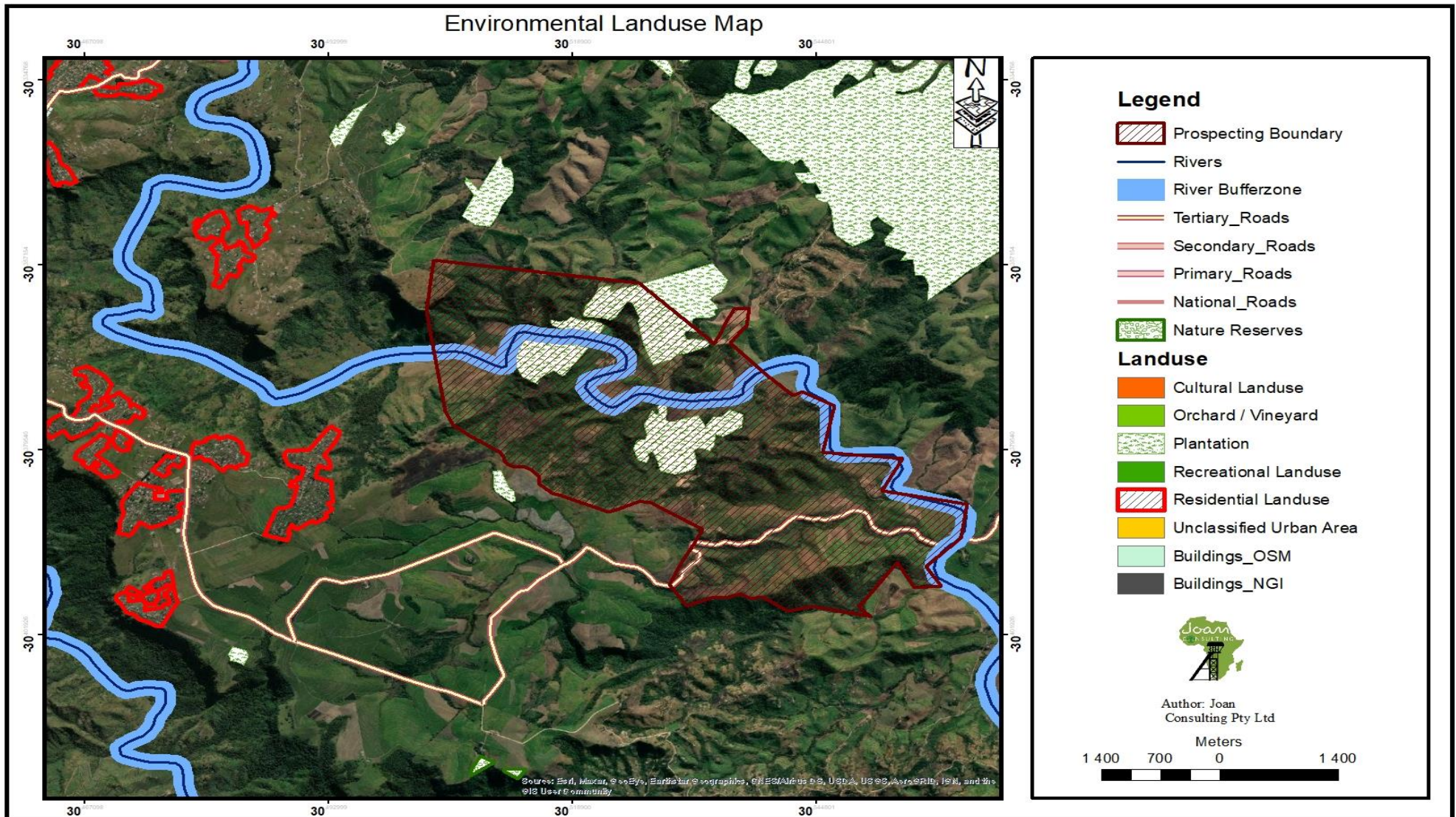


Figure 2: Location of the Prospecting Site (Joan Projects (Pty) Ltd 2023)

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE

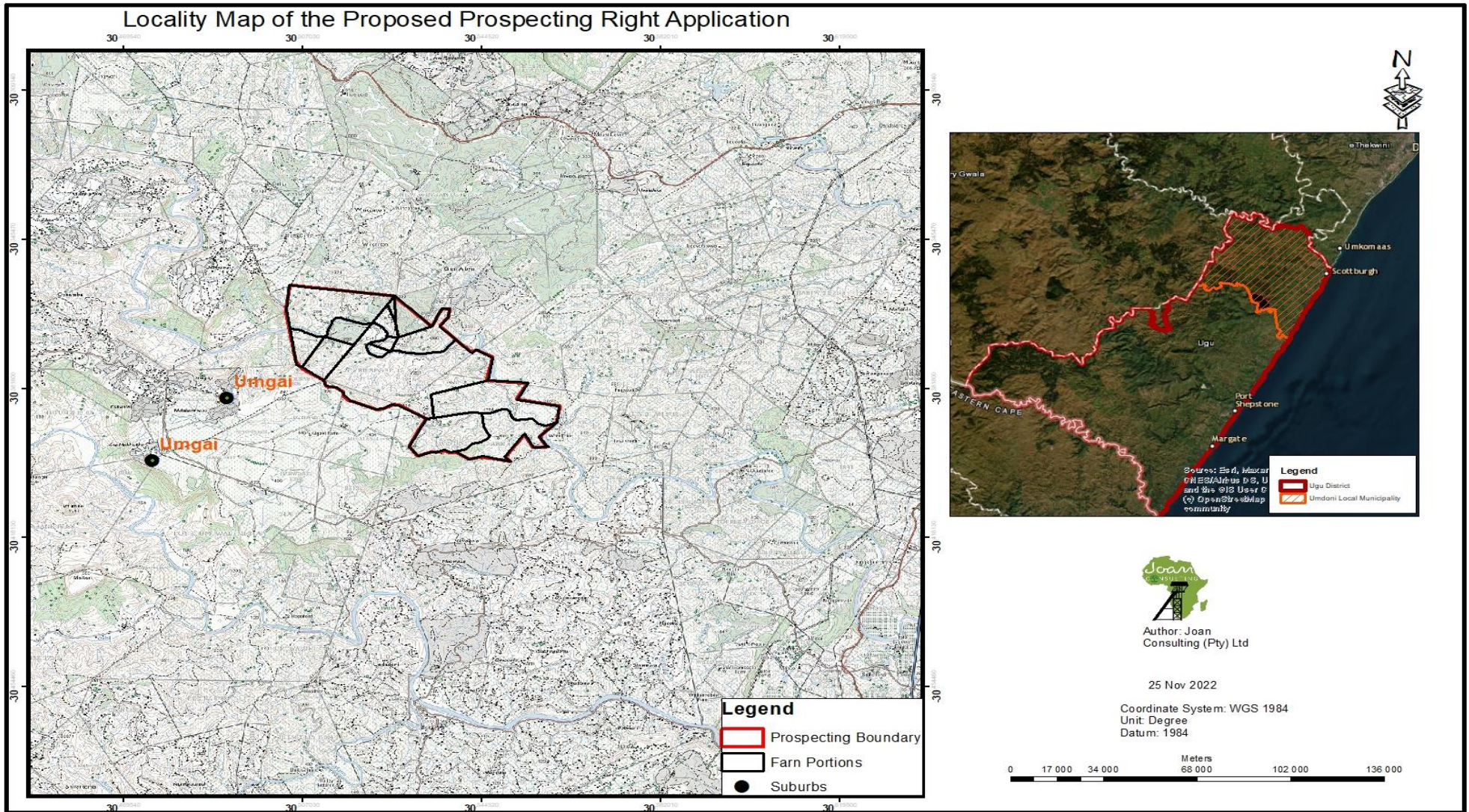


Figure 3: Showing the proposed prospecting site (Joan Projects (Pty) Ltd 2023)

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE

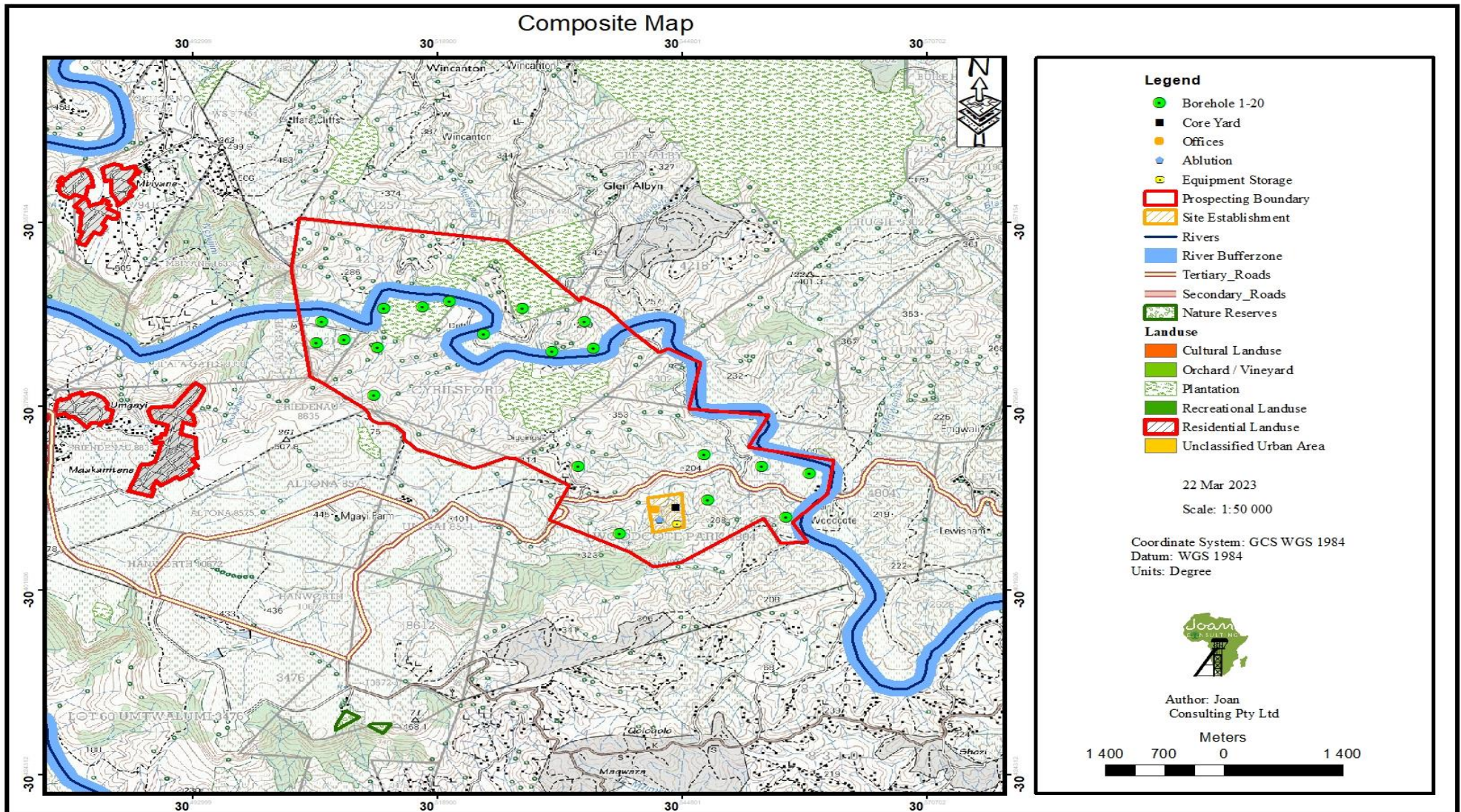


Figure 4: Showing the Prospecting Area (Joan Projects (Pty) Ltd 2022)



Figure 5: Showing identified heritage sites within the proposed Prospecting Right Site (Joan Projects (Pty) Ltd 2022)



Figure 6: Recorded heritage sites and 100m Buffer zones within the prospecting area (ISS(Pty) Ltd 2023)

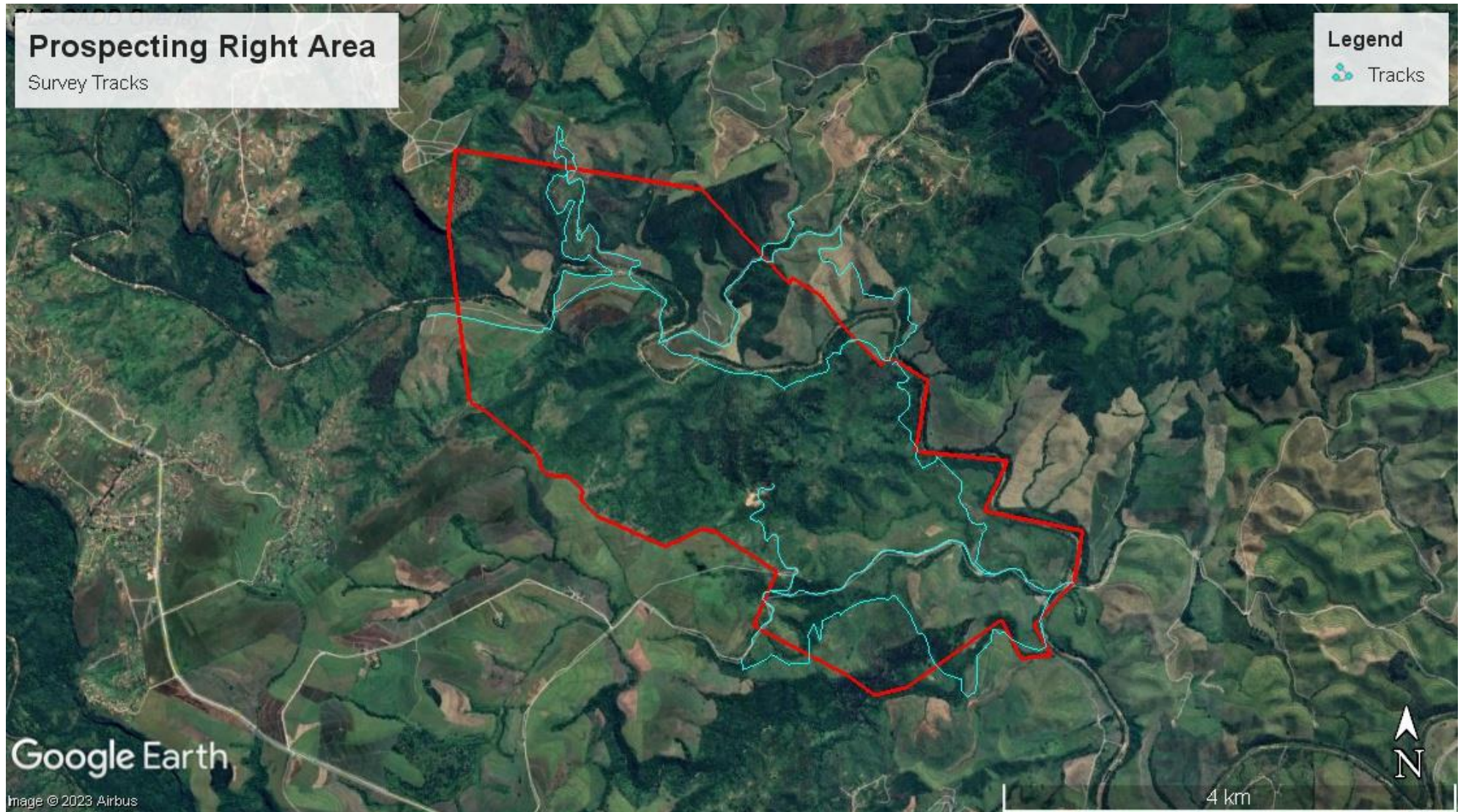


Figure 7: Showing track logs within the prospecting site (ISS (Pty) Ltd 2023)

1.3 PROJECT DESCRIPTION

Phase 1: Site Preparation and Construction

Site Preparation

- Site Preparation will involve infrastructure placement such as an ablution facility (mobile chemical toilet) and waste Bin.
- General waste will be separated from hazardous waste and will be disposed of at a registered landfill site. No buildings will be erected on site.
- The facility or equipment areas used will be less than 1000m² and will be rehabilitated once operation ceases.

Phase 2: Operational.

The operational phase entails the drilling of up to 20 boreholes. The borehole depth will range from 30 to about 150m. A drill rig, lined sump and water cart are the equipment that are normally at a drill site.

LISTED ACTIVITIES TO BE AUTHORISED.

Table 2 below shows the activities to be authorised as part of the prospecting right.

Name of Activity	Aerial extent of the Activity Ha or m ² for each application	Listed Activity	Applicable Listing Notice
Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002),	The applied area for each application	Yes	Activity 20- GNR R327 of 2017
Site Establishment and associated infrastructures	±500 m ²	No	Activities associated with Activity 20
Office/core yard			
Mobile Ablution			
Equipment Storage			
borehole- drill sites- with water sump (The clearance of an area of 1 hectare for drill holes)	2000 m ² (±100m ² X 20 drill sites)		
Access road- the project will use the existing road	–		
Removal of vegetation	<1ha	No	
Total disturbed area for each site	±4500 m ²		

2 LEGISLATIVE CONTEXT

Three main pieces of legislations are relevant to the present study and there are presented here. This study is conducted in terms of KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018) read together with the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended (NEMA), an AIA or HIA is required as a specialist sub-section of the environmental authorisation process. This report is also required in terms of Section 23(a), (b) and (c) of the Minerals and Petroleum Resources Development read together with regulations 11(1) (g) of the Mineral and Petroleum Resources Development Act 28 of 2002).

General protection for Structures,

37.(1)(a) No structure which is, or which may reasonably be expected to be, older than 60 years, may be demolished, altered, or added to without the prior written approval of the Institute having been obtained on written application to the Institute.

(b) Where the Institute does not grant approval, the Institute must consider special protection in terms of sections 44, 45, 46, 47 and 49 of Chapter 9.

(2) The Institute may, by notice in the Gazette, exempt

(a) a defined geographical area; or

(b) defined categories of sites within a defined geographical area,

from the provisions of subsection (1) where the Institute is satisfied that heritage resources falling in the defined geographical area or category have been identified and are adequately protected in terms of sections 44, 45, 46, 47 and 49 of Chapter 9.

(3) A notice referred to in subsection (2) may, by notice in the Gazette, be amended or withdrawn by the Institute.

General protection: Graves of victims of conflict

38. No person may damage, alter, exhume, or remove from its original position

(a) the grave of a victim of conflict.

(b) a cemetery made up of such graves; or

(c) any part of a cemetery containing such graves, without the prior written approval of the Institute having been obtained on written application to the Institute and in terms of the Regulations to this Act

General protection: Graves of victims of conflict

39. (1) No grave or burial ground older than 60 years, or deemed to be of heritage significance by a heritage authority –

(a) not otherwise protected by this Act; and

(b) not located in a formal cemetery managed or administered by a local authority,

may be damaged, altered, exhumed, inundated, removed from its original position, or otherwise disturbed without the prior written approval of the Institute having been obtained on written application to the Institute.

(2) The Institute may only issue written approval once it is satisfied that –

(a) the applicant has provided evidence of efforts to consult with communities or descendants who may have an interest in the grave, using the guidelines and criteria for consultation set out in regulations; and

(b) the applicant and the relevant communities or descendants have reached agreement regarding the grave

General protection: Battlefield sites, archaeological sites, rock art sites, palaeontological sites, historic fortifications, meteorite or meteorite impact sites

40.(1) No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Institute having been obtained on written application to the Institute.

(2) Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Institute without delay.

(3) The Institute may, after consultation with an owner or controlling authority, by way of written notice served on the owner or controlling authority, prohibit any activity considered by the Institute to be inappropriate within 50 metres of a rock art site.

(4) No person may exhume, remove from its original position, or otherwise disturb, damage, destroy, own or collect any object or material associated with any battlefield site, archaeological site, rock art site,

palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Institute having been obtained on written application to the Institute

(5) No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, or meteorite impact site, or use similar detection or excavation equipment for the recovery of meteorites, without the prior written approval of the Institute having been obtained on written application to the Institute.

(6)(a) The ownership of any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site, on discovery, vests in the Provincial Government and the Institute are regarded as the custodian on behalf of the Provincial Government.

(b) The Institute may establish and maintain a provincial repository or repositories for the safekeeping or display of

- (i) archaeological objects;
- (ii) palaeontological material;
- (iii) ecofacts;
- (iv) objects related to battlefield sites;
- (v) material cultural artefacts; or
- (vi) meteorites.

(7) The Institute may, subject to such conditions as the Institute may determine, loan any object or material referred to in subsection (6) to a national or provincial museum or institution.

(8) No person may, without the prior written approval of the Institute having been obtained on written application to the Institute, trade in, export or attempt to export from the province –

- (a) any category of archaeological object;
- (b) any palaeontological material;
- (c) any ecofact;

- (d) any object which may reasonably be regarded as having been recovered from a battlefield site;
- (e) any material cultural artefact; or
- (f) any meteorite.

(9)(a) A person or institution in possession of an object or material, referred to in paragraphs (a) - (f) of subsection (8), must submit full particulars of such object or material, including such information as may be prescribed, to the Institute.

(b) An object or material referred to in paragraph (a) must, subject to paragraph (c) and the directives of the Institute, remain under the control of the person or institution submitting the particulars thereof.

(c) The ownership of any object or material referred to in paragraph (a) vests in the Provincial Government and the Institute is regarded as the custodian on behalf of the Provincial Government.

Heritage resources management

41.(1) Any person who intends to undertake a development categorised as –

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) the construction of a bridge or similar structure exceeding 50 m in length;
- (c) any development or other activity which will change the character of a site –
 - (i) exceeding 5 000 m² in extent;
 - (ii) involving three or more existing erven or subdivisions thereof;
 - (iii) involving three or more erven or divisions thereof, which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations;
- (d) the rezoning of a site exceeding 10 000 m² in extent; or
- (e) any other category of development provided for in regulations,

must, at the very earliest stages of initiating such a development, notify the Institute and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The Institute must, within 14 days of receipt of a notification in terms of subsection (1) –

(a) if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report: Provided that such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the Institute with relevant qualifications and experience and professional standing in heritage resources management; or

(b) notify the person concerned that this section does not apply.

(3) The Institute must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included –

(a) the identification and mapping of all heritage resources in the area affect;

(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations;

(c) an assessment of the impact of the development on such heritage resources;

(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) the consideration of alternatives if heritage resources will be adversely affected by the proposed development; and

(g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

(4) The report must be considered timeously by the Institute which must, after consultation with the person proposing the development, decide –

(a) whether or not the development may proceed;

- (b) any limitations or conditions to be applied to the development;
 - (c) what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
 - (d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of the development; and
 - (e) whether the appointment of specialists is required as a condition of approval of the proposal.
- (5) The Institute must not make any decision under subsection (4), with respect to any development which impacts on a heritage resource protected at national level, unless it has consulted the heritage resources authority.
- (6) The applicant may appeal against the decision of the Institute to the responsible Member of the Executive Council, who –
- (a) must consider the views of both parties; and
 - (b) may, at his or her discretion –
 - (i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the Institute; and
 - (ii) consult the National Heritage Resources Agency; and
 - (c) must uphold, amend or overturn such decision.
- (7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by the National Heritage Resources Agency unless the Institute decides otherwise.
- (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 –
- (a) the evaluation fulfils the requirements of the Institute in terms of subsection (3); and

(b) any comments and recommendations of the Institute with regard to such development have been taken into account prior to the granting of the consent.

(9) The Institute, with the approval of the responsible Member of the Executive Council, may, by notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.

(10) Any person who has complied with the decision of the Institute in subsection (4) or of the responsible Member of the Executive Council in terms of subsection (6) or other requirements referred to in subsection (8), is exempted from compliance with all other protections in terms of this Part, but any existing heritage agreements made in terms of section 42 continue to apply.

3 METHODOLOGY

This document aims at providing an informed heritage-related opinion about the Prospecting Right Application in Kwa Zulu Natal 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 KwaZulu Natal were studied. The study team consulted the SAHRIs Website to identify local, provincial and national heritage sites on the Amafa aKwaZulu Natal site inventory. In addition, the study searched for battlefields in Southern Africa (<http://www.vuvuzela.com/googleearth/monuments.html>) and cemeteries in southern Africa (information obtained from the Genealogical Society of Southern Africa). The 1st and 2nd edition 1:50 000 topographical and 1937 aerial photographs were used to locate and date historical buildings, structures and graves.

The desktop study was followed by field surveys. The field assessment 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. Initially a drive-through was undertaken around the Prospecting Right Application site as a way of acquiring the archaeological impression of the general area. This was then followed by a walk down survey in the study area, with a handheld Global Positioning System (GPS) for recording the location/position of each possible site. Detailed photographic recording was also 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 Prospecting Right Application

3.1 The Fieldwork survey

The fieldwork survey was undertaken on the 3rd to the 6th of May 2023. The focus of the survey involved a pedestrian survey which was conducted within the proposed exploration site. The pedestrian survey focused on parts of the project area where it seemed as if disturbances may have occurred in the past, for example bald spots in the grass veld; stands of grass which are taller than the surrounding grass veld; the presence of exotic trees; evidence of building rubble, existing buildings and ecological indicators such as invader weeds.

The literature survey suggests that prior to the 20th century modern agriculture development; the general area would have been a rewarding region to locate heritage resources related to Iron Age and historical sites (Bergh 1999: 4). However, the situation today is completely different. The study area now lies on a clearly modified landscape that is dominated by commercial farming infrastructure and residential developments (see Figure 1).

3.2 Visibility and Constraints

Most sections of the Prospecting Right Application site were accessible although visibility was compromised in some sections by dense vegetation and sugar cane cover. The study confirmed that graves occur within homesteads but could not be recorded without permissions is required from individual families to access their family graves. This therefore means a walk down survey will be required once permission is obtained from the residents. 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

The Public Participation process is conducted by the EAP. The study team consulted some residence who provided vital information about the heritage character of their area. The study team also consulted homeowners who confirmed that they have family graves located within homesteads. The Public Participation Process will also invite and address comments from the public and any registered heritage bodies on any matter related to the proposed prospecting including heritage concerns that may arise relating to the proposed prospecting activities. The heritage issues and concerns raised by the public will also be included in the environmental impact assessment report.

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



Plate 1: showing the Prospecting Right Application site



Plate 2: showing a land mark within the proposed prospecting site.

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE



Plate 3: showing the dense vegetation cover which characterise the entire prospecting site.



Plate 4: showing cane fields within the proposed prospecting site

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Plate 5: showing loading site and cane fields in the background.



Plate 6: showing recently harvested cane fields.

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Plate 7: showing vast cane plantations within the proposed prospecting site.



Plate 8: showing vast cane plantations within the Prospecting Right Application site.

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE



Plate 9: showing the Prospecting Right Application site.



Plate 10: showing cane fields within the proposed prospecting site.

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Plate 11: showing the Prospecting Right Site.



Plate 12: showing a quarry site within the proposed prospecting site

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE



Plate 13: showing the Prospecting Right Applicationsite



Plate 14: showing cane plantation and rural settlement on the background. Note that sugar cane cover impeded the detection of archaeological remains within the proposed prospecting site.



Plate 15: showing the proposed prospecting site

4 ARCHAEOLOGICAL CONTEXT

The proposed prospecting area is located in the Umdoni Local Municipality of Ugu District Municipality, KwaZulu Natal Province that boasts a rich traditional history of contemporary Zulu (Huffman 2007, Coetzee 2010). Archaeological and heritages studies in the KwaZulu-Natal region indicate that the area is of high pre-historic and heritage significance. It is in fact a cultural landscape where Stone Age, Iron Age and Historical period sites contribute the bulk of the cultural heritage of the region (also Bryant 1965, Maggs 1989, Huffman, 2007). However, the study area has never been systematically surveyed for archaeological sites in the past (Prins 2013, 2016).

Stone Age sites are general identifiable by stone artefacts found scattered on the ground surface, as deposits in caves and rock shelters as well as in eroded gully or river sections. Archaeological sites recorded in the project region confirms the existence of Stone Age sites that conform to the generic SA periodization split into the Early Stone Age (ESA) (2.5 million years ago to 250 000 years ago), the Middle Stone Age (MSA) (250 000 years ago to 22 000 years ago) and the Late Stone Age (LSA) (22 000 years ago to 300 years ago). Stone Age sites in the region are also associated with rock painting sites. Cave sites also exist on the landscape southwest of the project area.

From an archaeological perspective, the south of Durban, like most of KwaZulu Natal region has potential to yield Stone Age period sites (also see Deacon and Deacon, 1997). The greater Port Shepstone area has been surveyed by archaeologists from the then Natal Museum and Natal Parks Board in the 1970's and 1980's (Prins 2013). Further inland the Paddock and greater Oribi Gorge areas have been more systematically surveyed by archaeologists such as J. H. Cable in the early 1980's (Cable 1984) and later by various archaeologists attached to the Natal Museum (Mazel 1989; Mitchell 2005). Literature in the KwaZulu-Natal Museum indicates that the greater Paddock and Port Shepstone areas are rich in archaeological sites covering diverse time-periods and cultural traditions. These include Early, Middle and later Stone Age sites, Early Iron Age sites, Later Iron Age sites, and some historical sites (Prins 2013). Various buildings and farmsteads belonging to the Victorian and Edwardian periods occur in the area especially in the close environs of Paddock (Prins 2016). However, the specific affected project-receiving environment has low potential for Stone Age sites (Prins 2016).

Stone Age sites of all the main periods and cultural traditions occur along the coastal cordon in the immediate vicinity of Port Shepstone closer towards the coast. Most of these occur in open air contexts as exposed by excessive erosion. The occurrence of Early Stone Age tools in the near vicinity of permanent water resources is typical of this tradition. These tools can be attributed to early hominins such as *Homo erectus*. Based on typological criteria they most probably date back to between 300 000 and 1.7 million years ago. A few MSA blades and flakes which date back to between 40 000 and 200 000 years ago are on record in the project area. The later Stone Age flakes and various rock painting sites associated with San are also on record in the general project area (Prins 2013a, 2013b, 2015). These most probably dates back to between 200 and 20 000 years ago. Archaeological sites in the vicinity of the project area include two Middle Stone Age sites and eleven Later Stone Age rock art sites situated within the greater Oribi Gorge and adjacent areas to the immediate east of the study area. The rock art sites form part of the eastern seaboard coastal rock art zone. Most of these occur in sandstone shelters and depict red monochrome paintings.

The Iron Age of the KwaZulu Natal region dates back to the 5th Century AD when the Early Iron Age (EIA) proto-Bantu-speaking farming communities began arriving in this region, which was then occupied by hunter-gatherers. These EIA communities are archaeologically referred to as the Kwale branch of the Urewe EIA Tradition (Huffman, 2007: 127-9). The Iron Age communities occupied the foothills and valley lands introducing settled life, domesticated livestock, crop production and the use of iron (also see Maggs 1984a; 1984b; Huffman 2007). Alongside the Urewe Tradition was the Kalundu Tradition whose EIA archaeological sites have been recorded along the KwaZulu Natal region. From about 15 00 AD the region was occupied by new coming groups of Late Iron Age farmers of the Kalundu Tradition (ibid). The region was the centre of immigration and migration of different African groups some of which are ancestors of the contemporary Zulu predominant in the region. Early

Iron Age sites of Mzuluzi (AD500-700), Ndongondwane (AD 700-800) and Ntshekane (AD 800 -900) were recorded in the Ugu District Municipality (Maggs 1989:31, Huffman 2007:325-462. According to oral tradition the Ugu area was occupied by the Cele Clan (Bryant 1965). It is believed that the Cele Clan arrived in the area around 1828 (Bryant 1965).

Throughout the middle of the 1800s the region witnessed the Mfecane migrations and displacements linked to Tshaka's expansionist policy. The Voortrekkers arrived in Natal regions in the shadow of the weakened African kingdoms and chiefdoms in the aftermath of the Mfecane. This effectively ushered in new era of colonial occupation by succeeding Afrikaans and British colonial administration authorities through the last half of the 1800s and into the last 1900s. By 1850s the region witnessed the influx of more settler communities which triggered settler wars between the African chiefdoms and the incoming Afrikaner settlers. Some of these colonial wars and battles lasted into Anglo-Boer wars of 1899-1902. The later effectively led to complete subjugation of African communities to settler administration starting as part of the Zuid-Afrikaansche Republiek (ZAR) of Transvaal. 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 prospecting footprint because most historical knowledge does not suggest a relationship with the study area per se, even though several other places in the general area.

SAHRIS Database and Impact assessment reports in the proposed project area

Several Phase 1 Heritage Impact Studies were conducted in the general vicinity of the study area. The studies include powerline project completed by Prins (2013). No sites were recorded, but the report mentions that structures older than 60 years occur in the area, Prins (2013a, 2013b, 2013c, 2015a & 2015b, 2016) for a township development survey also recorded no sites. Murimbika and Mlilo (2014) noted graves located within homesteads. Prins (2013a, 2013b, 2013c, 2015) recorded no sites in a project area. The SAHRIS Palaeosensitivity Map indicates that the area has low to medium sensitivities (Van Schalkwyk 2015). Fossil bearing strata may occur in the general area but are unlikely to occur in primary contexts within the Lovu paleo-channel deposits or the tertiary dune cordon.

5 RESULTS OF THE FIELD STUDY

5.1 Archaeology

The Prospecting Right Application site was assessed for archaeological remains. The study confirmed that the KwaZulu-Natal coastal belt is heavily transformed by sugar cane, timber plantations and coastal resorts with interspersed secondary *Aristida* grasslands, thickets and patches of coastal Thornveld (Anderson 2018). The study did not identify any significant archaeological remains during the survey. Road cut sections and eroded sections were assessed for potential archaeological remains that may have been accidentally exposed by erosion and road construction. Based on the field study results and field observations, the receiving environment for the Prospecting Right Application site is low to medium potential to yield previously unidentified archaeological sites. Literature review also revealed that no Stone Age and LIA 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 remains are found during the course of construction 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 observed that local people bury their deceased relatives within homesteads. In essence every homestead has at least one grave or more. At the time of the survey, permission to access burial sites located within homesteads was not yet granted. The study team concluded that graves mainly occur in built up residential areas. However, some unmarked graves may occur within cane fields, these are for people who were removed to make way for the cane fields during the colonial and apartheid eras. Concealed and isolated burial sites can only be identified with the help of local communities. Given the sensitivity of graves located within homesteads, we

recommend that a walk down survey be conducted should the applicant proceed to apply for mining rights. For the purpose of prospecting, local communities will be requested to declare family graves that may not be marked or occur in isolated places. This will be done during public consultation meetings. As such a professional archaeologist must be retained to document and map isolated graves and burial grounds that known by local communities. This process can be done with the help of informants from the local community.

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 Amafa aKwaZulu Natal and Research institute. The possibility of encountering human remains during subsurface earth moving works anywhere on the landscape is ever present. The probability of encountering previously unidentified burial sites is medium to high within the proposed prospecting site, however, should such sites be identified during prospecting, they are still protected by applicable legislations, and they should be protected.

5.3 Public Monuments and Memorials

The study recorded 3 landmarks within the proposed prospecting site. These are protected in terms of Section 27 of the NHRA and must not be tempered with without a permit from Amafa aKwaZulu Natal and Research institute. In terms of SAHRA Regulations of 2020 a 100m buffer zone must be provided for each of the protected sites. In addition, the prospecting team must inform the traditional authorities about the potential impacts of their activities to the protected sites. In essence the prospecting team must seek the help of traditional leaders to delineate the protected heritage sites.

Table 2: Summary of Findings

Site	Coordinates	Description
Site 01	30°22'29.41''S; 30°31'39.60''E	Bhukele Msane Historical Settlement
Site 02	30°22'38.85''S; 30°32'04.75''E.	Msane Historical Settlement
Site 03	30°23'28.24''S, 30°04.50''E.	Msane Historical Settlement

5.4 Buildings and Structures

Heritage buildings are structures that have historic, social and aesthetic value. Such buildings can trigger our memories and emotions, to shape a feeling that we can call cultural importance. Once a heritage building is destroyed, the importance of the place and events connected to it are lost in people's memory (Marquis-Kyle and Walker, 1992). In South Africa, buildings and structures that are older than 60 years are broadly protected in

terms of Section 34 of the National Heritage Resources Act (Act 25 of 199) and Section 37. (1)(a) of the Amafa aKwaZulu Natal and Research Institute Act No. 05 of 2018). The Act stipulates that, no structure which is, or which may reasonably be expected to be, older than 60 years, may be demolished, altered, or added to without the prior written approval of the Institute having been obtained on written application to the Institute.

The study observed several buildings and structures that are likely to be older than 60 years. Further investigations of the buildings will be required if the applicant decides to apply for mining rights, For the purpose of prospecting the occupied buildings will not be affected. In terms of Section 34 of the NHRA the Prospecting Right Application may be approved without any further investigation and mitigation.

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 of boreholes, indirect impacts may occur during movement of prospecting equipment. Any additional excavation for foundations of temporary structures as well as fence line posts 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 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 or concealed by dense vegetation 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 the proposed prospecting by means of mitigation measures (see appended Chance Find Procedure). It is the considered opinion of the author that the chances of recovering significant archaeological materials are low to medium within the Prospecting Right Applicationsite given the destructive nature of cane production. It is estimated that approximately 80% of the Prospecting Right Application is under sugar cane plantation. As such significant archaeological remains might have been destroyed over the past years of cane production and associated infrastructure developments.

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.

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE

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

Table 3: Criteria Used for Rating of Impacts

Nature of the impact (N)		
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.
Magnitude(M)		
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*).
Extent (E)		
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.
Duration (D)		
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.
Probability of occurrence (P)		
Improbable	1	Less than 30% chance of occurrence.
Low	2	Between 30 and 50% chance of occurrence.

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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 4: Criteria for Rating of Classified Impacts

Significance of predicted NEGATIVE impacts		
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.
Significance of predicted POSITIVE impacts		
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 5: Operational Phase

Impacts and Mitigation measures relating to the proposed project during construction Phase														
Activity/Aspect	Impact /	Aspect	Nature	Magnitude	Extent	Duration	Probability	Impact before mitigation	Mitigation measures	Magnitude	Extent	Duration	Probability	Impact after mitigation
Clearing and prospecting	Destruction of archaeological remains	Cultural heritage	-	2	1	1	2	8	<ul style="list-style-type: none"> Use chance find procedure to cater for accidental finds 	2	1	1	2	8
	Disturbance of graves	Cultural heritage	-	8	2	5	3	45	<ul style="list-style-type: none"> Use appended Chance find procedure to cater for accidental finds. Provide for 100m buffer zone from burial sites. Inform affected families about the impacts of the proposed prospecting. Mark all isolated graves occurring within the proposed prospecting site 	2	1	1	1	4
	Disturbance of buildings and structures older than 60 years old	Operational	-	6	2	2	2	20	<ul style="list-style-type: none"> Construction management and workers must be educated about the value of historical buildings and structures. 	2	1	1	1	4
Haulage	Destruction public monuments and plaques	Operational	-	2	1	1	1	4	<ul style="list-style-type: none"> Recorded landmarks are NO GO areas. A 100m buffer zone to me provided for from the recorded monuments. Engage traditional authorities to understand the extent of each protected historical site 	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 when combined with other past, present, and reasonably foreseeable future developments projects. The impacts of the proposed exploration 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 exploration.

The proposed prospecting has limited impacts given that only 20 boreholes will be drilled within the entire prospecting site. Which means at prospecting level the impacts will be minimal and avoidable. However, should the applicant proceed to mining right application, the mining development combined with other proposed development activities will effectively transform the agriculture area. The proposed prospecting will have very low impact from a visual perspective. The frequency of development proposals in the area has a potential of collectively changing the character of the landscape.

5.8 Mitigation

Mitigation is required to protect graves and historical settlements located within the Prospecting Right Application site (see Figure 5&6). Given that graves are located within homestead, permission to record graves must sought to allow the heritage team to document and map the affected graves. The grave documentation and mapping exercise should result in a Status Quo Heritage report that details the description, location, and details of custodians as well as whether or not the site will be affected by the proposed exploration. This exercise can be done with the help of local communities. This exercise will determine the nature of impact and mitigation measures suitable for each site. A management plan must be compiled to ensure appropriate management of burial sites within the context of the proposed prospecting. The Musane Traditional authorities must be engaged to ensure appropriate protection of their recorded historical landmarks.

6 ASSESSING SIGNIFICANCE

The Guidelines to the SAHRA Guidelines and the Burra Charter define the following criterion for the assessment of cultural significance:

6.1 Aesthetic Value

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture, and material of the fabric; sense of place, the smells and sounds associated with the place and its use.

6.2 Historic Value

Historic value encompasses the history of aesthetics, science, and society, and therefore to a large extent underlies all the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase, or activity. It may also have historic value as the site of an important event. For any given place, the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

6.3 Scientific value

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality, or representativeness, and on the degree to which the place may contribute further substantial information. Scientific value is also enshrined in natural resources that have significant social value. For example, pockets of forests and bushvelds have high ethnobotany value.

6.4 Social Value

Social value embraces the qualities for which a place has become a focus of spiritual, religious, political, local, national, or other cultural sentiment to a majority or minority group. Social value also extends to

natural resources such as bushes, trees and herbs that are collected and harvested from nature for herbal and medicinal purposes.

7 DISCUSSION

Various archaeological and heritage specialist studies have been conducted in the general project area since 2002. The current study should be read together with Anderson 2018 report. Other relevant studies in the project area include Beater (2017&2019), Prins (2012, 2014, 2017, 2019) and Mlilo (2018, 2019). These studies recorded sites of varying significance, for example Prins (2012, 2014, 2017, 2019) and Beater (2017, 2019) which testify that the project area is a cultural landscape with medium to high potential to yield significant Iron Age sites. The study noted that the Prospecting Right Application site is located within a degraded area and has reduced sensitivity for the presence of high significance physical cultural site remains on some already disturbed sections. The study also noted that the absence of confirmable and significant archaeological cultural heritage sites is not evidence that such sites did not exist within the Prospecting Right Application site. There is potential of recovering significant archaeological remains beneath the surface. The significance of the sites of Interest is not limited to presence or absence of physical archaeological sites.

The findings by archaeological and heritage specialists attest to the fact that the project area may have been located within a rich LIA landscape. As such there is potential for encountering subsurface LIA remains ranges from low to medium on the proposed development site (See the appended Chance find procedure for handling of chance finds). Visibility was affected during the current survey and is thought to be a result of previous clearance, and erosion that may have destroyed surface remains. In addition, surface visibility was compromised by dense vegetation and cane cover. It should be noted that the significance of the site is not limited to presence or absence of physical archaeological sites. Given that graves are located within homestead, permission to record graves must be sought to allow the heritage team to document and map the affected graves. The grave documentation and mapping exercise should result in a Status Heritage report that details the description, location, and details of custodians as well as whether or not the site will be affected by the proposed prospecting. This exercise can be done with the help of local communities. This exercise will determine the nature of impact and mitigation measures suitable for each site. A management plan must be compiled to ensure appropriate management of burial sites within the context of exploration.

Based on the significance assessment criterion employed for this report, the Prospecting Right Application site was rated **low to medium** 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 exploration (see appended chance find procedure). The absence of significant archaeological remains may be due to the following factors:

1. That the Prospecting Right Application site is located within a heavily degraded sugar plantation area and has reduced sensitivity for the presence of high significance physical cultural site remains due to erosion and powerline development.
2. Limited ground surface visibility on sections of the proposed prospecting site may have impeded the detection of other physical cultural heritage site remains or archaeological signatures within the Prospecting Right Application site. This factor is exacerbated by the fact that the study was limited to general survey without necessarily conducting any detailed inspection of specific locations that will be affected by the proposed exploration.

8 CONCLUSION

Integrated Specialist Services (Pty) Ltd was tasked by Joan Projects (Pty) Ltd to carry out a HIA for the Prospecting Right Application in Uzumbe Local Municipality in Kwa Zulu Natal Province. The study recorded several buildings and structures which may be protected in terms of Section 34 of the NHRA. In addition, the study confirmed that graves occur within homesteads, and they must be documented and mapped as soon as permission is obtained from the local communities. There are 3 historical landmarks within the proposed prospecting site. Desktop research revealed that the project area is rich in LIA archaeological sites and historical sites, however, the study recorded scatters of potsherd mainly within cane plantation. In terms of the archaeology, there are no obvious 'Fatal Flaws' or 'No-Go' areas. In terms of Section 36 of the NHRA, all burial sites located within the Prospecting Right Application site must be treated as NO-GO areas until appropriate mitigation measure are provided. In terms of Section 34 of the NHRA, the recorded buildings must not be destroyed or altered without a permit from Amafa aKwaZulu Natal and Research Institute. The potential of encountering previously unidentified heritage resources is low to medium, the applicant and contractors are therefore urged to be diligent during prospecting. 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 Prospecting Right Application cannot be approved.

9 RECOMENDATIONS

Report makes the following recommendations:

It is recommended that Amafa aKwaZulu Natal and Research Institute endorse the report as having satisfied the requirements of Section 41(2) of Amafa aKwaZulu Natal and Research Institute Act of 2018 and 38 (8) of the NHRA requirements.

1. It is recommended that SAHRA make a decision in terms of Section 38 (4) of the NHRA and Section 41(2) of Amafa aKwaZulu Natal and Research Institute Act of 2018 to approve the Prospecting Right Application on condition that all graves are identified, documented and mapped.

2 The planners for the mine must provide 100m buffer zone from each burial and historical of the three known historical settlements recorded in this report.

3 Documentation of graves located within homesteads must only be done if full permission is granted by the custodian families.

4 Landowners and homeowners must be requested to declare graves located in their properties to ensure that all graves that occur in the project area are documented and mapped before prospecting commences.

5 A walk down survey to record graves is required once permission is obtained from the residents and property owners.

6 From a heritage perspective supported by the findings of this study, the Proposed Prospecting Right Application is supported. However, the Prospecting Right Application should be approved under observation that the proposed prospecting does not extend beyond the area considered in this report/affect the identified heritage sites.

7 should any of the identified historical buildings be on the direct footprint of the proposed mine footprint, a heritage practitioner must be appointed to assess the buildings in detail and apply for demolition permits from Amafa AkwaZulu Natal and Research Institute.

8 Mitigation on graves must not be done without the involvement and consent from the custodian families.

9 Should chance archaeological materials or human remains be exposed during work to be conducted 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 the prospecting scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.

10 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. The Heritage authority may approve the Prospecting Right Application as planned with special commendations to implement the recommendations made herein.

10 REFERENCES

- Anderson, G and Anderson, L. 2005. *The Archaeological Surveys for Shelly Beach Villas, Old Macdonals farm and Horseshoe Farm.*
- Anderson. G. 2019. *Desktop Heritage Survey of the proposed Minzomanzi Mine, Ugu District Municipality, Vezamehlo Local Municipality, KZN.*
- Australia ICOMOS (1999) *The Burra Charter: The Australia ICOMOS charter for places of cultural significance.* Burwood.
- Brousse-James & Associates, 2006. *Environmental Scoping Report for District Road D168. Unpublished Report*
- Bryant, A. T. 1965. *Olden times in Zululand and Natal.* Cape Town: C. Struik.
- Bergh, J.S., (ed.) *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.* Pretoria: J. L. van Schaik Uitgewers. 1999.
- Beater, J. 2016. *Archaeological and Heritage Impact Assessment Report for proposed Kingsburg West Extension Housing Project, Ethekwini Municipality, KwaZulu Natal*
- Bickford, A. and Sullivan, S. 1977. "Assessing the research significance of historic sites" in S Sullivan and S Bowdler (eds) *Site Surveys and Significance assessment in Australian Archaeology.* Canberra: ANU.
- Burke, H. and Smith, C. 2004. *The archaeologist's field handbook.* Australia. Allen and Unwin.
- Cable, J. H. C. 1984. *Economy and technology in the Late Stone Age of southern Natal.* Cambridge monographs in African archaeology, 9 BAR international series, 201. Oxford: *British Archaeological Reports.*
- Cooper, M. A; Firth, A. Carman, J. & Wheatley, D. (eds.) 1995: *Managing Archaeology.* London: Routledge.
- Deacon, H. J. and Deacon J. 1999. *Human beginnings in South Africa.* Cape Town: David Philips Publishers.

Derwent, S 2008. *KwaZulu-Natal Heritage Sites: A Guide to Some Great Places*. David Philip: Pietermaritzburg

Glazewski, J., 2000: *Environmental Law in South Africa*. Durban: Butterworths.

Gess, R. 2011. *Palaeontological Heritage component of FibreCo Telecommunications, basic assessment for the proposed fibre optic data cable project: Route 5: Port Elizabeth to Durban*

Hammond-Tooke, D.1993. *The roots of Black South African*. Johannesburg: WUP.

Huffman, T.N. 2007. *Handbook for the Iron Age*. Pietermaritzburg: UKZN Press.

Hamilton, C. (ed.). 1995. *The Mfecane Aftermath: Reconstructive debates in Southern African History*. Johannesburg: WUP.

Maggs, T. 1989. The Iron Age of Natal. In Duminy, A. and Guest, B. 1989. *Natal and Zululand: from Earliest Times to 1910. A New History*. University of Natal Press. Pietermaritzburg

Maggs, T. 1984a. Ndongondwane: a preliminary report on an Early Iron Age site on the lower Tugela River. *Annals of the Natal Museum* 26: 71-93.

Maggs, T.M., Ward, V. 1984b. Early Iron Age sites in the Muden area of Natal. *Annals of the Natal Museum* 26: 105-140.

Mamoluoane, S. 2013. *Redevelopment and upgrade of the Port Edward Resort, Port Edward, KwaZulu Natal, Phase 1 Cultural Heritage Impact Assessment*.

Marquis-Kyle, P., & Walker, M. (1992). *The Illustrated Burra Charter: Making good decisions about the care of important places*. Australia: ICOMOS Inc with Australian Heritage Commission, Canberra.

Mazel, A., 1989. *The Stone Age peoples of Natal*. In Duminy, A. and Guest, B. 1989. *Natal and Zululand: from Earliest Times to 1910. A New History*. Pg. 28-46. University of Natal Press. Pietermaritzburg.

Mokakabye, J. 2022. *Heritage Impact Studies Report – For the proposed Kama Mining Mineral prospecting rights at Dumisa, on a portion of farm Alexandria Native location No. 2 16458 in uMdoni local Municipality, Ugu District Municipality in the KZN province of South Africa*

Murimbika, M. and Mlilo, T. 2014. *Archaeological and Heritage Impact Assessment Report for proposed construction of Umzumbe Municipal offices within Umzumbe Local Municipality in KZN Province.*

Nemai, 2013. *Phase 1 Heritage Impact Assessment for the proposed new train Repeater High site within the Green Point Lighthouse site in Port Shepstone, KZN Province.*

Prins, F. 2013a. *Heritage Impact Assessment of the proposed Nqabeni/Eros/Oribi 132kv loop in Loop out powerlines, Ugu District Municipality.*

Prins, F. 2013b. *Heritage Impact Assessment of the proposed Mqangqala access routes, Umzumbe Local Municipality.*

Prins, F. 2013. *Heritage Impact Assessment of the Harding Landfill site, Umuziwabantu Municipality, KZN Province*

Prins, F. 2015. *Phase one Heritage Impact Assessment of the proposed upgrade of the P57 Road from Eziqoleni to the Mtamvuma River Bridge within the Enqoleni Local Municipality, Ugu District Municipality.*

Prins, F. 2015. *Cultural heritage impact assessment of the proposed upgrade of the N2 Adams Road interchange at Amanzimtoti, KwaZulu-Natal. Unpublished report*

Prins, F. 2016. *First Phase Heritage Impact Assessment of the proposed upgrade of District Road D168 near Highflats, KwaZulu Natal.*

Rasmussen, R.K. 1978 *Migrant kingdom: Mzilikazi's Ndebele in South Africa.* London: Rex Collings

Ross, R. 1999 *A concise history of South Africa.* Cambridge University Press. Cambridge.

South Africa, 1983. *Human Tissue Act.* Government Gazette.

South Africa 1999. *National Heritage Resources Act (No 25 of 1999),* Government Gazette. Cape Town.

SAHRA APMHOB. 2004. *Policy for the management of Archaeology, Palaeontology, Meteorites and Heritage Object.* SAHRA: Cape Town.

SAHRA APM. 2006. *Guidelines: Minimum standards for the archaeological and palaeontological Component of Impact Assessment Reports.* SAHRA: Cape Town.

SAHRA APMHOB 2002. General Introduction to surveys, impact assessments and management plans.

SAHRA: CT.

SAHRA. 2002. General guidelines to Archaeological Permitting Policy. SAHRA: Cape Town.

SAHRA. 2002. General Introduction to surveys, impact assessments and management plans.

SAHRA. What to do when Graves are uncovered accidentally.

SAHRA Report Mapping Project Version 1.0, 2009

SAHRIS (Cited 16 February 2016)

Tomose, N.G. 2015. *Proposed Ariadne-Eros 400/132kv multicircuit Transmission powerline*

Van Schalkwyk and Wahl, E. 2014. *Phase 1 Heritage Impact Assessment Report: proposed St Faith 400/132kv Substation and associated powerlines, Port Shepstone, Umzumbe, Hibiscus Coast and Ezingoleni Local Municipality, Ugu District Municipality, KZN Province.*

Van Schalkwyk, 2015. *Application for Exemption from a Phase 1 Heritage Impact Assessment Proposed Umgeni Water Desalination Plant and associated infrastructure at Lovu eThekweni Municipality, KwaZulu-Natal*

Whelan, D, 2013. *Heritage Impact Assessment of the resources at the old beachfront facility, Umgababa, KwaZulu-Natal South Coast.*

Whitelaw, G. 1991. Pre-colonial iron production around Durban and in southern Natal. *Natal Museum Journal of Humanities* 3: 29–39.

Whitelaw, G. 1993. Customs and settlement patterns in the first millennium AD: evidence from Nanda, an Early Iron Age site in the Mngeni Valley, Natal. *Natal Museum Journal of Humanities* 5: 47–81.

Wilson, M. 1969. Changes in social structure in southern Africa: the relevance of kinship studies to the historian. In: L. Thompson, ed., *African societies in southern Africa*. London: Heinemann, pp. 71–85.

Wright, J. 2009. The Thuli and Cele paramountancies in the coastlands of Natal, c. 1770–c. 1820. *Southern African Humanities* 21: 177–94.

11 APPENDIX 1: CHANCE FIND PROCEDURE FOR PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROSPECTING RIGHT APPLICATION FOR LITHIUM, FELDSPAR, TIN, TANTALUM, ZINC, AND DIMENSION STONE (GENERAL) ON VARIOUS FARMS, SITUATED IN THE MAGISTERIAL DISTRICT OF PORT SHEPSTONE, KWAZULU NATAL PROVINCE

08 MAY 2023

ACRONYMS

BGG	Burial Grounds and Graves
CFPs	Chance Find Procedures
ECO	Environmental Control Officer
HIA	Heritage Impact Assessment
ICOMOS	International Council on Monuments and Sites
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
SAHRA	South African Heritage Resources Authority
SAPS	South African Police Service
UNESCO	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 and construction. The main purpose of a CFP is to raise awareness of all construction 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 construction 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 construction.

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 Prospecting Right Application is located in Income area within the Jurisdiction of Umdoni Local Municipality, Kwa Zulu Natal Province. The proposed Prospecting Right Application 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 during 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. Mlilo (2022) on the Prospecting Right Application site. The AIA/HIA conducted was very comprehensive, covering the entire site. The current study (Mlilo 2022) did not record any significant heritage site within the proposed Prospecting Right Application 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 Right application 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 construction and movement of construction equipment. The current construction activities have the potential to cause severe impacts on significant tangible and intangible cultural heritage resources buried beneath the surface or concealed by tall 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 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.

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 100m buffer zone from all sides of the find.
- 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 archaeological 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 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 PROSPECTING RIGHT APPLICATION

Objective								
<ul style="list-style-type: none"> Protection of archaeological sites and land considered to be of cultural value. Protection of known physical cultural property sites against vandalism, destruction and theft; and The preservation and appropriate management of new archaeological finds should these be discovered during prospecting. 								
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 exploration, prospecting 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 prospecting 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 Amafa aKwaZulu Natal and Research Institute		When necessary	C CECO	SM	ECO	EA EM PM
		Should any remains be found on site that is potentially human remains, the Amafa aKwaZulu Natal and Research Institute 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.