

# **MITIGATION PERMIT – INTERIM REPORT**

906 Bergarend Streets Waverley, Pretoria, South Africa

Phase 2 archaeological mitigation on sites NKM21/3, NKM21/4 NKM21/7, NKM21/10, NKM21/11, NKM21/15, NKM21/16, NKM21/18 and NKM21/24 (Project Phase 1) for the Nkomati Anthracite Mine, Nkomazi Local Municipality, in the Ehlanzeni District Municipality, Mpumalanga Province

SAHRA Permit	SAHRA Case	Document Number	Revision	Date
3926	19691	642HMGR-002	1.0	15/09/2023



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	ii

#### **Declaration of Independence**

- I, Henk Steyn, declare that -
- I act as the independent heritage practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting archaeological monitoring, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will take into account, to the extent possible, the matters listed in sections 38 and 35 of the NHRA when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my
  possession that reasonably has or may have the potential of influencing any decision to be taken
  with respect to the application by the competent authority; and the objectivity of any report, plan or
  document to be prepared by myself for submission to the competent authority;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- All the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected from a heritage practitioner in terms of the Act and the constitutions of my affiliated professional bodies; and

#### **Disclosure of Vested Interest**

 I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

## HERITAGE CONSULTANT: CONTACT PERSON:

PGS Heritage (Pty) Ltd Henk Steyn - Archaeologist Tel: +27 (0) 12 332 5305 Email: henk@pgsheritage.com

SIGNATURE:

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	iii

## ACKNOWLEDGEMENT OF RECEIPT

Report Title	MITIGATION PERMIT – INTERIM REPORT Phase 2 archaeological mitigation on sites NKM21/3, NKM21/4, NKM21/7, NKM21/10, NKM21/11, NKM21/15, NKM21/16, NKM21/18 and NKM21/24 for the Nkomati Anthracite Mine, Nkomazi Local Municipality, in the Ehlanzeni District Municipality, Mpumalanga Province				
Control	Name	Signature	Designation		
Author	Henk Steyn	JA.	Senior Archaeologist		
	Marko Hutten	Muthe	Senior Archaeologist		
	Nicholas Fletcher	nyletter	Archaeologist		
	Lauren Solomon	L.	Archaeologist		
Reviewed	Wouter Fourie	ALC	Senior Archaeologist		

CLIENT:

Nkomati Anthracite Mine (Pty) Ltd

CONTACT PERSON:

Mr Willem Hatting willem.hatting@afrimat.co.za

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	iv

#### **EXECUTIVE SUMMARY**

PGS Heritage (Pty) Ltd (PGS) was appointed by the Nkomati Anthracite Mine to manage the Phase 2 archaeological mitigation work required for the mitigation of several identified archaeological sites and to investigate features that may be graves. The planned expansion of mining activities in the area known as "Block L" will affect these archaeological sites and features.

PGS obtained an excavation permit from the SAHRA to undertake archaeological mitigation, test excavations, and ground penetrating radar scans to excavate the archaeological sites and features extensively and to collect representative samples of the archaeological material for analysis to determine the temporal localisation, cultural affiliation, and possible social structure and layout of the settlements. The mitigation work must also identify unmarked burials and ensure, as far as possible, that no unmarked burials are left in the area after the completion of the mitigation work.

Representative samples were recovered from the cultural deposits present at Project Phase 1 sites NKM21/3, NKM21/4 (including site NKM21/15), and NKM21/7 (including site NKM21/16). The material recovered included a wide range of archaeological artefacts consisting of decorated ceramics, clay smoking pipes and figurines, metal weaponry and tool fragments, faunal material (including worked bone), numerous glass and ostrich eggshell beads and charcoal for possible radiocarbon dating. This material is being processed at the PGS laboratory, after which it will be submitted to the University of Pretoria for curation.

Test excavations at sites NKM21/10, NKM21/18, and NKM21/24 showed that the archaeological deposits were very shallow and did not yield any significant value or interest. The test excavation at site NKM21/11 uncovered the burial of an adult, therefore justifying the execution of these test excavations on this and similar identified features.

Fifty-five human burials were identified during the excavations of the mentioned sites. Nineteen burials were identified from the excavated kraal deposits and associated middens at sites NKM21/3 and 21/7, and sixteen burials at site NKM21/4. A single burial was identified at site NKM21/11. These burials were mostly very shallow and were covered and protected with sandbags and then marked with mounds of soil. They will be left *in situ* and removed only after an amendment to the excavation permit has been approved.

Owing to the extent of the volume of post-processing of excavated material, this interim report is submitted as backing for the destruction application to be submitted by Nkomati Anthracite Mine to

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	V

ensure that mining activities can continue. It is our opinion that the destruction process can continue with the backing of a SAHRA permit and the implementation of the recommendation below:

The following recommendations are made:

- 1. That the sites described in this interim report, to wit, NKM21/3, NKM21/4, NKM21/7, NKM21/10, NKM21/11, NKM21/15, NKM21/16, NKM21/18, and NKM21/24 be destroyed following the methodology set out in section 10.2, below.
- 2. That the destruction permit makes provision for the relocation of the human remains from the burials found at sites NKM21/3, NKM21/4, NKM21/7, and NKM21/11 after it have been documented and described by a physical anthropologist.
- 3. That any other human remains of archaeological origin that may be uncovered during the destruction of the sites located in Phase 1 of the project, to wit, NKM21/3, NKM21/4, NKM21/7, NKM21/10, NKM21/11, NKM21/15, NKM21/16, NKM21/18, and NKM21/24, or in areas situated within the general area of Phase 1 of the project be relocated as stated in Recommendation 2 above.
- 4. That any archaeological material uncovered during the destruction process be documented and collected as set out in the methodology in this report.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	vi

### TABLE OF CONTENT

1	INTRODUCTION							
2	AIMS	AND OBJECTIVES	3					
3	LOCA	TION	3					
4	ВАСК	BACKGROUND5						
5	METHODOLOGY 1							
5.1	Specialist Qualifications							
5.2	Ground Penetrating Radar Methodology							
5.3	Excav	Excavation Methodology 1						
6	GPR S	SURVEY OF SITES NKM21/3 AND NKM21/4	17					
6.1	GPR	Scan of site NKM21/3	17					
6.2	GPR	Scan of site NKM21/4	17					
6.3								
	6.3.1	Detecting Kraal and Cultural Deposit	18 <i>19</i>					
	6.3.2	Detecting Burials	20					
	6.3.3	Examples of Burials at site NKM21/3	21					
	6.3.4	Discussion/Conclusion	22					
7	EXCA	VATIONS	23					
7.1	Site N	IKM21/3 (S -25.793569°; E 31.804809°)	23					
	7.1.1	Site Description	23					
	7.1.2	Mitigation Recommendations (2022 HIA)	23					
	7.1.3	Excavation Description	26					
	7.1.4	Discussion/Conclusion	31					
7.2	Site N	IKM21/4 (S -25.793737°; E 31.803902°)	34					
	7.2.1	Site Description	34					
	7.2.2	Mitigation Recommendations (2022 HIA)	34					
	7.2.3	Excavation Description	36					
	7.2.4	Discussion/Conclusion	40					
7.3	Site N	IKM21/7 (S -25.793396°; E 31.803371°)	44					
	7.3.1	Site Description	44					
	7.3.2	Mitigation Recommendations (2022 HIA)	44					
	7.3.3	Excavation Description	46					
	7.3.4	Discussion/Conclusion	50					
7.4	Site NKM21/10 (S -25.793953°; E 31.805046°)							

SA		ermit	SAHRA Case	Document	Revision	Date	Page
-	3926		19691	642HMGR-002	1.0	15/09/2023	vii
L	7.4.1	Mitiaa	tion Recommendatior	as (2022 HIA)			54
	7.4.2	-	ation Description	13 (2022 1117)			54
	7.4.3		ssion/Conclusion				55
7.5	-		11 (S -25.794007°;	E 31.804403°)			56
	7.5.1		escription	,			56
	7.5.2		tion Recommendatior	าร			56
	7.5.3	-	ation Description				56
	7.5.4	Discus	ssion/Conclusion				57
7.6	Site N	KM21/ <sup>-</sup>	15 (S -25.793412°;	E 31.804170°)			58
	7.6.1	Site D	escription				58
	7.6.2	Mitiga	tion Recommendatior	ns (2022 HIA)			58
	7.6.3	Excav	ation Description				58
	7.6.4	Discus	ssion/Conclusion				59
7.7	Site N	KM21/ <sup>.</sup>	18 (S -25.793996°;	E 31.803207°)			60
	7.7.1	Site D	escription				60
	7.7.2	Mitiga	tion Recommendatior	ns (2022 HIA)			60
	7.7.3	Excav	ation Description				60
	7.7.4	Discus	ssion/Conclusion				61
7.8	Site N	KM21/2	24 (S -25.793626°;	E 31.802446°)			62
	7.8.1	Site D	escription				62
	7.8.2	Mitiga	tion Recommendatior	ns (2022 HIA)			62
	7.8.3	Excav	ation Description				62
	7.8.4	Discus	ssion/Conclusion				64
8	MATE	RIAL A	NALYSIS				65
8.1	Curati	on					65
8.2	Ceran	nic Ana	lysis				67
	8.2.1	On Sit	te Analysis				68
	8.2.2	Ceran	nic Typology				68
	8.2.3	Labora	atory Methods				69
	8.2.4	Stylist	ic Analysis				69
	8.2.5	Profile	9				69
	8.2.6	Motif					69
	8.2.7		Placement				71
9	BURIA	LS AN	D STAKEHOLDER	RENGAGEMENT			74

SA	HRA Pe	ermit	SAHRA Case Document Revision Date			Date	Page
	3926		19691	642HMGR-002	1.0	15/09/2023	viii
9.1	Proposed Mitigation of burials						74
	9.1.1	Docun	Documentation and anatomical description of the remains				75
	9.1.2	Stakel	Stakeholder Engagement				75
	9.1.3	Site - a	- and newspaper notices				76
10	CONC	LUSIO	USION AND RECOMMENDATIONS				
10.1	Recon	nmenda	ations				77
10.2	Destru	uction methodology				78	
11	REFEF	FERENCES					79

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	ix

## List of Figures

Figure 1 – Map indicating the planned Project phases. This report deals with Phase 1
Figure 2 – Regional Locality Map showing the proposed Block L expansion area (Google Earth
image)
Figure 3 – Google Earth image showing the local context of the proposed Madadeni Opencast Mine
Block L (Red block at top)5
Figure 4 – Aerial image indicating the distribution of the sites to be mitigated. Red polygons – sites
with middens/kraals, red waypoints – sites with archaeological material to be excavated and green
waypoints – possible grave sites to be tested
Figure 5 – Distribution of Tribes in the Barberton District in 1949 – (Myburgh, 1949)
Figure 6 – Scattering of pottery on the surface at site NKM/21/1
Figure 7 – Cultural material slag9
Figure 8 - A smoothing stone (bottom) were identified at Site NKM/21/3
Figure 9 – Handle from clay pot found on the site
Figure 10 – Undecorated potsherds found on the site at NKM/21/3 10
Figure 11 – Glass bead
Figure 12 - Close up of yellow glass bead. The scale is in 1mm increments
Figure 13 – Cultural material on the surface of the midden at site NKM/21/4
Figure 14 – Fine broken potsherds, likely from one pot 10
Figure 15 – Unfinished ostrich eggshell bead 11
Figure 16 - Image showing the GPR profiles (blue) and the extent of the completed excavation
(red). The smaller area to the left (black rectangle) was surveyed in August 2023 in very dry
conditions and was not included in the time slice analyses of the larger area. The red dots indicate
burials
Figure 17 - Image showing the GPR profiles (blue) and the extent of the completed excavation
(red). The red dots indicate burials
Figure 18 - Radargram of profile 110 from site NKM21/3. The reflection marked by the rectangle
seemingly indicates the bottom of the kraal or is at least associated with it
Figure 19 - Slice at 0.55m below the surface. The area of higher amplitude seems to correlate with
the extent of the kraal deposit (Fig. 20). This was also the depth at which the deposit was found
during the excavation to transition to being culturally sterile. The lower amplitude areas within the
kraal areas correlate with sections robbed of deposit, presumably for agricultural use
Figure 20 - Image showing the excavation. The grey/white area is the last remnant of the kraal
depasit Compared with the image in Figure 10, it scenes to correlate with the grass of higher
deposit. Compared with the image in Figure 19, it seems to correlate with the areas of higher
amplitude

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	Х

Figure 21 - Slice at 0m (surface). Yellow denotes areas of low amplitude, and other col	ours of
higher amplitude	20
Figure 22 - Slice at 1.3m below the surface. No cultural material is present at this depth, a	and the
kraal deposit is no longer visible	20
Figure 23 - Radargram of profile 123. The area of lower amplitude above the white dot may	v be the
remnants of the burial pit	21
Figure 24 - Radargram of profile 77. A bright reflection depicts the burial. A less obvious re	flection
above that may be the remnants of the burial pit backfill	21
Figure 25 - Radargram of profile 126. A break in the stratigraphy depicts the burial position	22
Figure 26 - Radargram of profile 98. A bright reflection depicts the burial	22
Figure 27 – Site excavation map of site NKM21/3	25
Figure 28 – Initial trench (W), grid blocks 1 -30.	27
Figure 29 – Grid block <b>U11</b> - <b>15</b> ; Layer 2	27
Figure 30 – Pot recovered from square <b>W5</b>	28
Figure 31 – Pot burial in square <b>V6</b>	28
Figure 32 – Adult burial in square K24. Note that all burials were only opened to cont	irm the
presence of human remains and will be fully documented upon excavation	28
Figure 33 – Adult burial in square <b>Z7.</b>	29
Figure 34 – Adult burial in square <b>Y16</b>	29
Figure 35 – Western extent of kraal dung deposit (layer CO2) in square HH12. Note when	e white
dung ends (from left to right) near the centre of the profile	30
Figure 36 – Intact clay smoking pipe	30
Figure 37 – Worked bone with carved tooth	30
Figure 38 – Metal spearheads recovered from context CO5	31
Figure 39 – Hippo tooth from square <b>CC9</b>	31
Figure 40 – Child burial in square <b>GG3</b>	31
Figure 41 – Infant burial in square <b>GG5</b> .	31
Figure 42 – Western section of NKM21/3 after completion	32
Figure 43 – Site excavation map of site NKM21/4	35
Figure 44 – Initial trench ( <b>T</b> ), grid blocks <b>-10 to 30</b>	36
Figure 45 – Grid block <b>U1 - 5</b> ; Layer 1	36
Figure 46 – Sub-adult burial in square <b>S (–1)</b>	37
Figure 47 – Adult burial in square <b>S6</b>	37
Figure 48 – Square <b>W11-15</b> Surface	38
Figure 49 – Square <b>W11-15</b> Layer 1	38

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	xi
Figure 50 – Square	<b>W11-15</b>   aver 2				38
	-	<b>)2</b> in square <b>AA28</b> .			
-				-	
	-	pots in squares <b>YY</b>			
		7/18			
0		3			
-	-	h of stratigraphic lay			
		d in square <b>GG</b> 10 n			
Figure 57 – Comple	eted excavations at	site NKM21/4 on 18	8/08/2023		42
Figure 58 – Small c	ceramic cup				42
Figure 59 – Clay sr	noking pipe fragme	nts			42
Figure 60 – Carveo	l and decorared bor	ne plug			43
Figure 61 – Worked	d ceramic disk				43
Figure 62 – Whet s	tone				43
Figure 63 – Worked	d bone				43
Figure 64 – Site ex	cavation map of site	ə NKM21/7			45
Figure 65 – Initial S	Figure 65 – Initial <b>SS</b> -trench, grid blocks <b>-15 to 15</b>				
Figure 66 – Grid ble	ock <b>PP6 -10</b> ; Layer	1			47
Figure 67 – Child b	urial in square <b>SS -</b>	-6			48
Figure 68 – Two ac	dult burials in square	ə <b>PP4</b>			48
Figure 69 – Child b	urial in square <b>LL1</b> .				48
Figure 70 – Infant p	oot burial in square	ММЗ			48
Figure 71 – Child b	urial in square <b>KK8</b>				49
Figure 72 – Anothe	er Infant pot burial in	square <b>KK12</b>			49
Figure 73 – Child b	urial in square <b>YY -</b>	9			49
Figure 74 – Series	of pots found in squ	ıares <b>VV/WW -9</b>			50
Figure 75 – A smal	l pot buried within a	bigger pot in squar	es <b>VV/WW -9</b>		50
Figure 76 – Comple	eted excavations at	site NKM21/7 on 30	0/06/2023		52
Figure 77 – Metal b	pangle				52
Figure 78 – Marine	cowrie shell				53
Figure 79 – Rolled	metal tubes				52
-					
Figure 81 – Glass b	beads				53
-					
-					
Figure 84 – Test ex	cavation at site NK	M21/10			54

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	xii	
Figure 85 – Surface	e feature at site NK	M21/11			56	
Figure 86 – Burial i	dentified at site NK	M21/11			56	
Figure 87 – Locatic	on of site NKM21/15	5			59	
Figure 88 – Test ex	cavation at site NK	M21/15			59	
Figure 89 – Locatic	on of site NKM21/18	3			61	
Figure 90 – Test ex	cavation at site NK	M21/18			61	
Figure 91 – Locatio	on of site NKM21/24	test excavation 1			63	
Figure 92 – Test ex	cavation 1 at site N	IKM21/24			63	
Figure 93 – Locatio	on of site NKM21/24	test excavation 2			64	
Figure 94 – Test ex	cavation 1 at site N	IKM21/24			64	
Figure 95 - Glass b	Figure 95 - Glass beads located in site NKM21/7					
Figure 96 - OES be	eads located in site	NKM21/7			66	
Figure 97 - Small	finds found through	out sites NKM21/3	, NKM21/4 ai	nd NKM21/7. (I	From left to	
right) Spear heads	s, Pipe bowls, I	Hippopotamus tusk	with grind r	narks, Worked	bone with	
decoration, worked	bone with decorati	on, Pipe bowl			67	
Figure 98 - Image o	of incisions on cerai	mic sherd for site NI	KM21/7		70	
Figure 99 - Cerami	c sherd from site NI	KM21/7 showing sta	mping		70	
Figure 100 - Recor	nstructed pot from N	IKM21/7 showing m	otif placemen	t	71	
Figure 101 – Small	fragmented ceram	ic cup			72	
Figure 102 – Uniqu	le incised and frame	ed pattern			72	
Figure 103 – Multiple band incised herringbone pattern72						
Figure 104 – Anoth	er multiple band ind	cised herringbone p	attern		72	
Figure 105 – Multip	ole comb-stamped p	oarallelogram/lozeng	ges pattern		73	
Figure 106 – Slight	ly oblique multiple b	oand incised pattern			73	
Figure 107 - Distrib	oution of burials in P	hase 1			74	
Figure 108 - Memb	ers of the communi	ity during SE efforts	on 2022/09/0	1	76	

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	xiii

#### **List of Tables**

Table 1 – List of abbreviations used in this report	xvi
Table 2 – Grave Register for site NKM21/3	. 32
Table 3 – Grave Register for site NKM21/4	. 41
Table 4 – Grave Register for site NKM21/7	51
Table 5 – Grave Register for site NKM21/11	. 57
Table 6 – Table showing the contents of each grid block in Trench FF of site NKM21/3	. 65
Table 7 - Table showing the digitized ceramic recording form for each Grid block of trench UU	l for
site NKM21/7	. 68

#### List of Appendices

- Appendix A Landowner Letter
- Appendix B SAHRA Permit
- Appendix C UP Curation Letter
- Appendix D Site Notices (2022 & 2023)
- Appendix E Newspaper Notice (2022 & 2023)
- Appendix F Stakeholder Engagement Documents
- Appendix G Attendance Registers
- Appendix H GPR Data sheets

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	xiv

#### **TERMINOLOGY AND ABBREVIATIONS**

#### Archaeological resources

This includes:

- material remains resulting from human activity which 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;
- rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

### **Cultural significance**

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

#### Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- carrying out any works on or over or under a place;
- subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- constructing or putting up for display signs or boards;
- any change to the natural or existing condition or topography of land; and
- any removal or destruction of trees, or removal of vegetation or topsoil

## Early Stone Age

The archaeology of the Stone Age between 700 000 and 3 300 000 years ago.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	XV

#### Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

#### Heritage resources

This means any place or object of cultural significance and can include (but not limited to) as stated under Section 3 of the NHRA,

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, and
- sites of significance relating to the history of slavery in South Africa;

#### Holocene

The most recent geological time period which commenced 10 000 years ago.

#### Late Stone Age

The archaeology of the last 30 000 years associated with fully modern people.

### Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's, associated with iron-working and farming activities such as herding and agriculture.

#### Middle Stone Age

The archaeology of the Stone Age between 30 000-300 000 years ago, associated with early modern humans.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	xvi

Table 1 – List of abbreviations used in this report

	Table 1 – List of abbreviations used in this report
Abbreviations	Description
AIA	Archaeological Impact Assessment
AMP	Archaeological Monitoring Program
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
GPS	Global Positioning System
HIA	Heritage Impact Assessment
LSA	Late Stone Age
MSA	Middle Stone Age
NHRA	National Heritage Resources Act
PGS	PGS Heritage Pty Ltd
SAHRA	South African Heritage Resources Agency

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	1

## **1 INTRODUCTION**

Nkomati Anthracite Mine appointed PGS Heritage (Pty) Ltd (PGS) to manage the Phase 2 archaeological mitigation work required on several identified archaeological sites and to investigate features that may be graves by using test excavations and ground penetrating radar (GPR) surveys (where possible). The planned expansion of mining activities in the area known as "Block L" will affect these archaeological sites and features.

The archaeological sites were identified by PGS in an updated Heritage Impact Assessment (HIA) in 2021 (Steyn & De Jager 2022) as part of the mine's expansion application.

PGS submitted a permit application to the South African Heritage Resources Agency (SAHRA) to undertake archaeological mitigation, test excavations and ground penetrating radar within the identified archaeological sites and features in Block L of the proposed mining expansion area and to identify unmarked burials within the targeted areas for possible future relocation before the planned mining activities can continue. The pre-disturbance excavation permit was issued to PGS on 10 February 2023 with **Permit ID – 3926**.

Due to the large number of sites to be mitigated, the project was divided into four phases, with a destruction permit application to be submitted after the completion of the fieldwork of each phase. This interim report describes the fieldwork completed for Phase 1 (Refer to *Figure 1*).

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	2

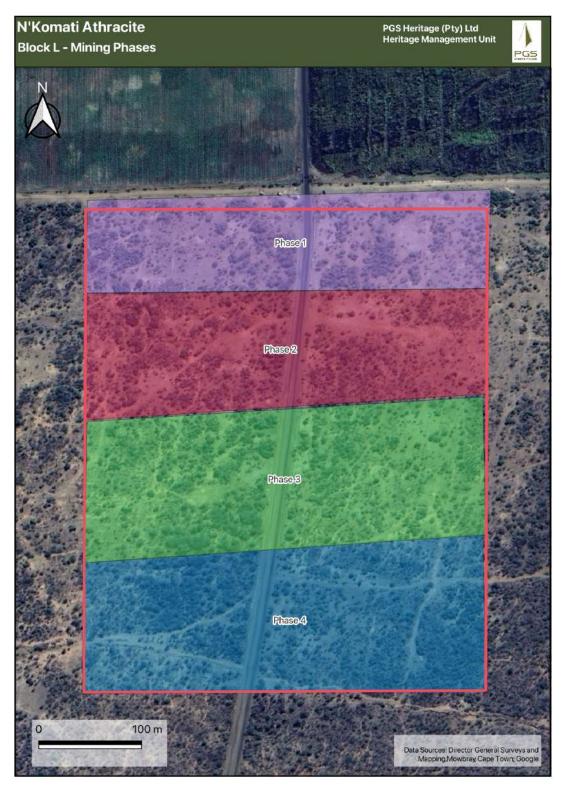


Figure 1 – Map indicating the planned Project phases. This report deals with Phase 1.

This document provides a summary of the mitigation work completed thus far (Project Phase 1 of 4), with the aim of assisting Nkomati Anthracite Mine to apply for a destruction permit for the

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	3

archaeological sites NKM21/3; NKM21/4; NKM21/7; NKM21/10; NKM21/11; NKM21/15; NK 21/16; NKM21/18 and NKM21/24.

## 2 AIMS AND OBJECTIVES

Upon evaluation of the required submitted HIA (Steyn & De Jager 2022) for the mine expansion, the following mitigation activities were recommended:

- A permit in terms of section 35(4) to undertake archaeological excavations of sites NKM21/6, NKM/21/15, NKM/21/2, NKM/21/4, NKM/21/6, NKM/21/16, NKM/21/18, NKM/21/20, NKM.21/21, NKM/21/24, NKM/21/31, NKM/21/1, NKM/21/3, NKM/21/5, NKM/21/8, and NKM/21/12 must be obtained from SAHRA.
- Once these sites are sufficiently mitigated to the satisfaction of SAHRA, the applicant may apply for a destruction permit in terms of section 35(4) of the NHRA.
- A section 35 excavation permit must be applied for to determine if there are graves present at sites NKM/21/9, NKM/21/10, NKM/21/11, NKM/21/19, NKM/21/23 and NKM/21/20.
- If graves are uncovered during the mitigation process, the graves relocation permit must be amended to include the additional graves.

A permit was issued by SAHRA to this effect on 10/02/2023 (PermitID:3926)

The aim of the mitigation work is thus firstly, to extensively excavate the identified archaeological sites and features and to collect a representative sample of the archaeological material on-site for analysis to determine temporal localisation, cultural affiliation, and possible social structure and layout of the settlements.

The second aim is to identify unmarked burials and to ensure, as far as possible, that no unmarked burials are left in the area after completion of the mitigation work.

## 3 LOCATION

The Nkomati Anthracite Mine is situated in the Kangwane coalfield in the far east of the Mpumalanga province of South Africa near the Mozambican border, approximately 50km south of Komatipoort Town and Borderpost and 75km east of Barberton *Figure 2* and *Figure 3*.

Most of the proposed area for further development falls within the Zululand Lowveld Vegetation Type, of which an isolated patch is found on the Swaziland–Mpumalanga border. It consists mainly of extensive flat or only slightly undulating landscapes, supporting a complex of various bushveld

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	4

units ranging from dense thickets of *Dichrostachys cinerea* and *Acacia* species through park-like savanna with flat-topped *A. tortilis* to tree-dominated woodland with broad-leaved open bushveld with *Sclerocarya birrea* subsp. *caffra* and *A. nigrescens*. Tall grassveld types with sparsely scattered solitary trees and shrubs form a mosaic with the typical savanna thornveld, bushveld and thicket patches (Mucina & Rutherford, 2006). Most of the described vegetation type has disappeared from the study area due to previous and recent overgrazing and/or replaced by commercial sugarcane fields. The area's original vegetation type could have easily supported previous farming communities.

The mine can be accessed via the R571 road, which runs south-north through the property and intersects the N4 highway at Komatipoort. The mine is also traversed by several secondary and tarred roads that provide reasonable access from Komatipoort and Malelane, with reasonable gravel roads to the mine. A railway line from Swaziland to Komatipoort traverses the mine lease area from south to north, to the east of the current operations. The mine operates under the Environmental Authorisation as issued by the Department of Minerals and Energy on 27 November 2020 (**Document loaded on SAHRIS and available under CASEID 14506**).

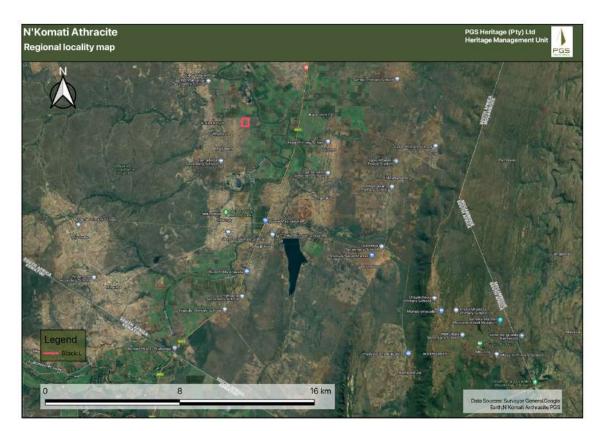


Figure 2 – Regional Locality Map showing the proposed Block L expansion area (Google Earth image).

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	5



Figure 3 – Google Earth image showing the local context of the proposed Madadeni Opencast Mine Block L (Red block at top)

### 4 BACKGROUND

A Heritage Impact Assessment (HIA) conducted by PGS in 2020 (Steyn & Kitto, 2020) recorded six heritage resource sites in total, one of which had been recorded by Van Vollenhoven and Radford in 2011. These sites were identified in the Northern Extension area approximately 1.2km south of the current application area, Block L.

PGS submitted a permit application to SAHRA to excavate, document and collect a representative sample of the cultural material associated with the archaeological site at NKMA005 identified during the 2020 HIA.

The subsequent excavations of 2021 yielded a large number of ceramic shards that are currently being analysed for stylistic affinities before delivery to the Lydenburg Museum for curation.

The HIA (Steyn & De Jager, 2022) conducted for the prospective mining activities in the area referred to as Block L recorded 23 heritage resources, 16 of which are archaeological sites, one a confirmed grave and six that may be graves. Two of the sites (**NKM21/31**, an archaeological site and **NKM21/33**, a confirmed grave) are not affected by the Block L development but fall under another extension that will not be mined in the foreseeable future.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	6

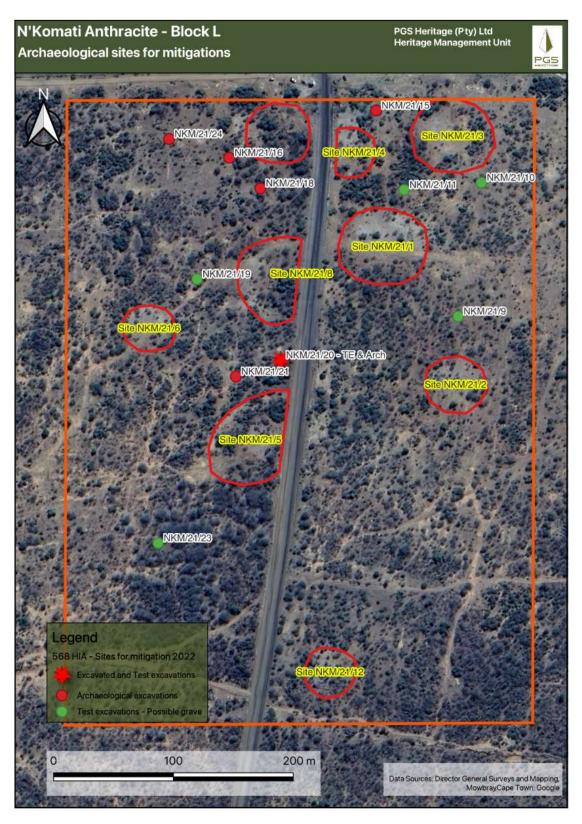


Figure 4 – Aerial image indicating the distribution of the sites to be mitigated. Red polygons – sites with middens/kraals, red waypoints – sites with archaeological material to be excavated and green waypoints – possible grave sites to be tested.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	7

The following sites need to be mitigated as per the HIA and SAHRA's comments:

- Two (2) sites (NKM21/6 and NKM/21/15) consist of only archaeological midden deposits.
- Nine (9) sites (NKM/21/2, NKM/21/4, NKM/21/6, NKM/21/16, NKM/21/18, NKM/21/20, NKM21/21 and NKM/21/24) consist of sites characterised by cattle kraal/midden deposit.
- Five (5) sites (NKM/21/1, NKM/21/3, NKM/21/5, NKM/21/8, and NKM/21/12) consist of cattle kraal/midden deposits with a very high probability of unmarked graves.
- Six (6) sites (NKM/21/9, NKM/21/10, NKM/21/11, NKM/21/19, NKM/21/23 and NKM/21/20) consist of features indicative of possible graves.

Important to note is the prevalence of unmarked burials in similar sites mitigated (in 2021) in the first phase of the mine's expansion (Section 36 – Permit ID: 3230 [CaseID: 17686] and Section 35 - PermitID: 3264 [CaseID: 16286]). An unusually large number of very shallow burials occurred on these sites, which will impact the proposed methodology for the mitigation of the sites discussed in this report. Also, ceramic analysis has shown that the decorative motifs, such as red burnishing, double herringbone banding, as well as single multiple banding below the lip, show corresponding affinity with Tsonga groupings on the Mozambican/Swaziland/South African border (Ohinata, 2002). According to Meyer (1986), these ceramics relate to the Ngwenya facies and are characterised by flat bottom pots with red ochre and herringbone motifs or incisions of a similar nature.

Engagements with the local community revealed that the project area was occupied since the mid-1800s by groups who migrated from the KZN area. The prevalence of late Tsonga cultural material on the archaeological sites may indicate a multi-phase occupation of the area.

According to the ethnohistorical traditions, the area's indigenous populations are related to the Hlanganu (Nguni) from Natal or the Ngomane (originally Sotho) from the eastern Transvaal. According to oral tradition, both these groups arrived in the area in approximately 1700, and are currently classified as Nh-nganu Tsonga (Meyer 1986).

The Ngomane, classified by Van Warmelo (1935) as Chungana Tsonga, broke away from the Sotho stem in the 18th century and resided around Lugogodo in the Nsikazi valley. The tribal chief Ngomane lived close to the Umlumati River. His successor, Simuhulu, settled around the Crocodile Bridge area in approximately 1750. Their arrival in the area brought unrest, leading to the displacement of the Nhlanganau and Bapae. After this, they moved to Middleburg, where they split into three groups: the Ngomane of Hoyi, Siboshwa, and Lagedlane. The Ngomane then moved back to the region of the Crocodile and Komati rivers.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	8

Hoyi was born in 1850, and his people could be found in the region between Skukuza on the Sabie River and Mnondos River in the north and the Crocodile River in the south, with them currently residing near Komati Poort. The Ngomane of Lugedlane broke away in approximately 1800 and moved to the area that is now the southern part of Kruger Park. In 1840, they moved into Mozambique and returned some years later to the Crocodile River near Hectorspruit. After that, they lost their cultural identity and started to speak Tsonga and Swazi.

The Ngomane of Siboshwa broke away from the main group by 1800. Their history is unknown until the middle of the 19th century, when they established themselves in Komatipoort on the Mozambican border. They speak Swazi and have a similar material culture to the Swazi and Changana.

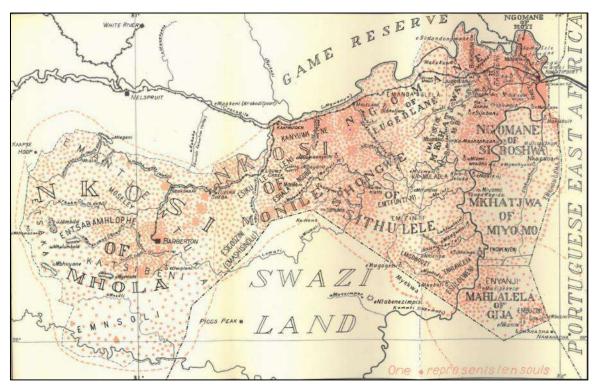


Figure 5 – Distribution of Tribes in the Barberton District in 1949 – (Myburgh, 1949)

The field assessments of 2022 not only identified a large number of sites but also showed that the sites had a wealth of different artefacts and some of them are displayed below (*Figure 6 to Figure 15*). More artefacts within their archaeological context have been recovered during the excavations of the sites. Structures identified during the field assessment were possible hut floors and grain bin platforms; this will be confirmed during the excavations.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	9



Figure 6 – Scattering of pottery on the surface at site NKM/21/1.



Figure 7 – Cultural material slag



Figure 8 - A smoothing stone (bottom) were identified at Site NKM/21/3.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	10



Figure 9 – Handle from clay pot found on the site.



Figure 10 – Undecorated potsherds found on the site at NKM/21/3.



Figure 13 – Cultural material on the surface of the midden at site NKM/21/4.



Figure 14 – Fine broken potsherds, likely from one pot.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	11



Figure 11 – Glass bead.



Figure 15 – Unfinished ostrich eggshell bead.



Figure 12 - Close up of yellow glass bead. The scale is in 1mm increments.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	12

## 5 METHODOLOGY

To accomplish the best results and to complete the required tasks within the given parameters, the following qualified people were appointed to perform each task according to its set methodology.

## 5.1 Specialist Qualifications

This interim report was compiled by PGS personnel who were selected to complete the various tasks.

The staff at PGS has a combined experience of nearly 90 years in the heritage consulting industry. PGS and its staff have extensive experience in managing mitigation processes. PGS will only undertake heritage assessment work where they have the relevant expertise and experience to undertake that work competently.

The field team consisted of:

Henk Steyn, the Project Coordinator and principal archaeologist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is accredited as a Principal Investigator. He has an Honours degree in Archaeology and has been practicing as a heritage specialist for the last 25 years.

Wouter Fourie, Assistant Project Coordinator and principal archaeologist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is accredited as a Principal Investigator; he is further an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners (APHP). He has an Honours degree in Archaeology and has been practicing as a heritage specialist for the last 23 years.

Marko Hutten, senior archaeologist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is accredited as a Field Director. He has an Honours degree in Archaeology and has been practicing as a heritage specialist for the last 25 years.

Nicholas Fletcher, archaeologist, he holds a MA in Archaeology and has significant experience in Iron Age archaeology.

Lauren Solomon, archaeologist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist. She holds an MSc in Archaeology.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	13

## 5.2 Ground Penetrating Radar Methodology

Ground Penetrating Radar (GPR) is frequently used in several fields: civil, military, archaeological and forensic. The detection of utilities (buried infrastructure) is currently the most common use of GPR, and it is also this industry that predominantly drives the development of GPR systems. During the last three decades, GPR has been increasingly used in the detection of clandestine graves and unmarked cemetery graves.

GPR generates a data set of reflections of specific materials along with the interfaces between units in the ground. Radar travel time is measured precisely, and the measurement can be converted to depth, yielding an often-complex three-dimensional data set of reflection amplitudes over a surveyed area (Conyers, 2016). It is, therefore, essential that the GPR data be collected in a controlled and well-documented manner. A grid system is used for collection and ample notes and photographs must be taken to ensure that the images can be correctly interpreted in postprocessing. GPR is not an ideal "real-time" technique for archaeological, cemetery and forensic surveys since GPR field data are inherently full of external interference and soil-related issues (Leach, 2021).

GPR Surveys were conducted on sites NKM21/3 and NKM21/4 after the various sites were cleared for excavation. The aim of the GPR survey is and was to establish if any information could be gleaned from such a survey and, specifically, if it can be used for:

- Determining the stratigraphy of the sites,
- Determining the thickness of individual layers and,
- Determining the position of burials.

This mitigation project provides a rare opportunity for the extensive collection of GPR data that can be fully ground-truthed through excavation. As such, an effort is made to collect as much data as possible and in variable conditions.

This interim report will summarise the work completed during this phase, and some preliminary results from site NKM21/3 will be shared. A detailed explanation of the science and terminology used in GPR technology is beyond the scope of this report and will be addressed in the final report.

Two main types of reflections are visible for interpretation on a radargram: point origin reflections (visible as a hyperbola) and the reflection of boundaries in the soil due to the variable Relative Dielectric Permittivity (RDP) of the various layers (visible as planar reflections).

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	14

As the radar wave is transmitted and reflected to the antenna, the two-way travel time of the waves are recorded. Using the reflection information, a radargram is produced to visually represent the data.

Individual radargrams are used to compile 2D (top-view) and pseudo-3D images of the radar data. The result of the 2D view is time/depth slices at set intervals (depths). In archaeology, these slices can be used to look for patterns depicting buried features (foundations, hut floors, burials, etc.) and stratigraphic changes (ground conditions permitting). It is important to remember that the depth shown on the slices is dependent on the RDP of the undelaying material and is, therefore, an approximation if the velocity cannot be precisely determined; this can be accurately done by hyperbolic fitting should suitable hyperbola be present in the radargrams. Since this was not the case at site NKM21/3, the RDP was set to 8 (a velocity of 0.106 m/ns), which suited the perceived soil conditions. This value can be changed in post-processing.

Radar data were collected with a GSSI UtilityScan with a 350Mhz antenna. Positioning data was collected with an antenna-mounted differential EOS Arrow Gold GPS. Positioning accuracy was approximately 4cm. To ensure positioning redundancy, data was collected within a surveyed grid. The field data collection methodology is discussed below in Section 6.1

The radar data were analysed using Geolitix. The final report will describe the data analysis process in detail; in the interim, a Post Processing Data Sheet is attached as APPENDIX H.

## 5.3 Excavation Methodology

As stated earlier, the aim was firstly to extensively excavate the identified archaeological sites and features and to collect a representative sample of the archaeological material on-site for analysis to determine temporal localisation, cultural affiliation, and possible social structure and layout of the settlement and secondly to ensure that no unmarked burials are left in the area after completion of the mitigation.

The following methodology was followed during the excavations of the three sites:

- Vegetation was cleared, where necessary, to expose the extent of the settlements.
- High-resolution aerial photography was used to identify and define the precise extent of each site. The five larger sites are visible on currently available imagery.
- A ground-penetrating radar (GPR) survey of the sites was conducted where possible (also refer to GPR Methodology in section 5.2):

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	15

- Determine the presence of subsurface structures such as hut structures and grain pits,
- Look for any burial pits,
- Determine the depth and volume of any archaeological and cultural deposit.
- Such structures and burial pits were investigated through excavations conforming to archaeological techniques as described in the ASAPA Constitution – Appendix C Minimum Standards for Practice;
  - The documentation and excavation techniques focused on recording, describing and mapping the cultural remains present on the site as per SAHRA Permitting Policy;
  - Visible surface structures were documented through plan sketches using PGS Quality Management System (QMS) standard forms for context and stratigraphic recording.
  - A datum point was utilised for each site to ensure detailed surveying of all structures and excavations for plan and layout sketches.
  - A grid sequence was utilised for referencing and localisation of all excavated squares;
  - A standard grid size of 1mx1m was used for excavations, and where required, smaller grid sizes were incorporated into the 1x1m standard size;
  - Grid coordinates and site features were recorded using a differential GPS and,
  - Excavations were started on 10cm spits on the vertical but reverted to excavation by cultural layer and structure when identified (horizontal);
- Depending on the size of each site, a minimum of three (smaller sites) and ten (large sites) excavation squares were set out and excavated in the sites containing middens and or kraal deposits.
- Photos were taken before the excavation of the trench and after each layer had been excavated.
- The trenches were excavated according to layers, which followed the varying contexts of the site.
- All the layers had an allocated locus form, which was used to record the excavation process.
- The depth of each layer within the trench was recorded using a line level and a tape measure.
- A combination of a shovel and trowel was used to excavate the deposits; brushes, scoops and buckets were used to remove the deposit from the trenches.
- The excavated material was then sieved, and artefacts were removed.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	16

- All the artefacts were put in bags with tags corresponding to the site name, location, layer, context, and artefact type.
- All the trench co-ordinates were taken from the southeast corner of the trenches.
- Once these blocks have been excavated, the whole midden area on each site was
  excavated in 10cm spits to ensure no burials were overlooked. While time consuming and
  resource intensive, this methodology will ensure that any human remains are found before
  heavy machinery is used in the area.
- All excavations and test pits were surveyed and geolocated with a differential GPS;
- All excavations will be backfilled after completion of the fieldwork;
- Where possible, samples for C14 dating were collected and, on completion of the excavations, sent for C14 dating at a South African Facility or International facility, depending on the availability of resources;
- All artefacts and material collected were marked, labelled and packed for transportation to our laboratory at the University of Pretoria;
- The material will be cleaned, analysed and finally accessioned for storage;
- The material will then be submitted to the University of Pretoria's Archaeology Department for curation after completion of the field report (Refer to Museum Letter as loaded on SAHRIS);
- PGS will submit a final excavation report on the SAHRIS case for the closing of the permit.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	17

## 6 GPR SURVEY OF SITES NKM21/3 AND NKM21/4

Two sites, NKM21/3 and NKM21/4, were surveyed as part of Phase 1 of the project (Site NKM21/7 (21/16) was not surveyed due to logistical constraints):

### 6.1 GPR Scan of site NKM21/3

In total, 151 profiles were collected, resulting in the coverage of almost the entire site; only a small portion on the western side was not covered. The profiles were, on average, 30m long and spaced 0.25 m apart. Collection was done unidirectionally (north to south), and all profiles were started on the same baseline. Most profiles (130) were collected in March 2023, just after the rainy season and an additional 21 profiles in August 2023, in the dry season (*Figure 16*). The ground conditions during collection are worth mentioning, as moisture content plays a significant role in the propagation of electromagnetic waves.

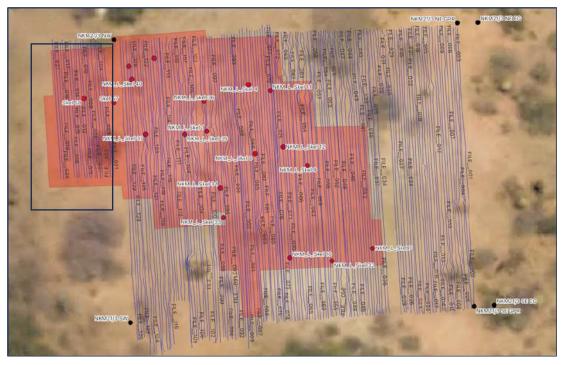


Figure 16 - Image showing the GPR profiles (blue) and the extent of the completed excavation (red). The smaller area to the left (black rectangle) was surveyed in August 2023 in very dry conditions and was not included in the time slice analyses of the larger area. The red dots indicate burials.

## 6.2 GPR Scan of site NKM21/4

In total, 181 profiles were collected, resulting in the coverage of approximately 60% of the site. The less-than-ideal coverage results from vegetation coverage and the fact that the site extent was not clearly defined on the surface. The profiles were, on average, 10m long and spaced 0.25 m apart.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	18

Collection was bidirectional (east/west) (*Figure 17*). Two baselines were used (east and west). The profiles were collected in May 2023, at the start of the dry season.

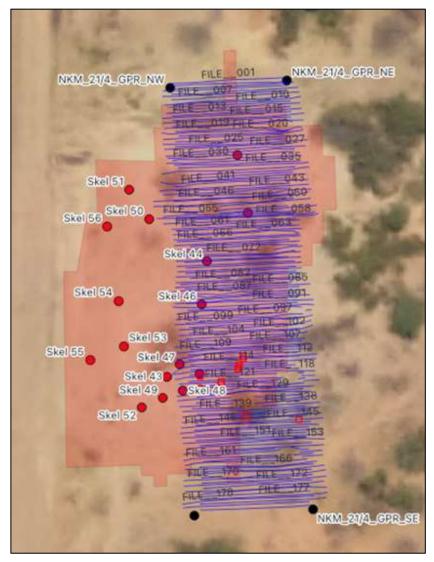


Figure 17 - Image showing the GPR profiles (blue) and the extent of the completed excavation (red). The red dots indicate burials.

## 6.3 Preliminary Results

At the time of writing this interim report, only the GPR data from site NKM21/3 has been postprocessed to a level where preliminary interpretation is possible. Only this site will, therefore, be discussed in this report.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	19

#### 6.3.1 Detecting Kraal and Cultural Deposit

As mentioned above, site NKM21/3 was scanned almost in its entirety. Due to vegetation cover at the time, the extent of the archaeological deposit was somewhat indistinct on the surface. Preliminary assessments, founded upon evaluating processed radar imagery and corresponding time slices, suggest the plausible identification of the kraal area within the radar data. For instance, within the radargram of profile 110, this discernible feature manifests itself as a planar reflection, as illustrated in *Figure 18*.

It is at this stage not entirely clear if this reflection indicates the top or bottom of the deposit, although the working hypothesis is the latter. Going forward, the remaining sites will be subjected to GPR surveys to substantiate this hypothesis.

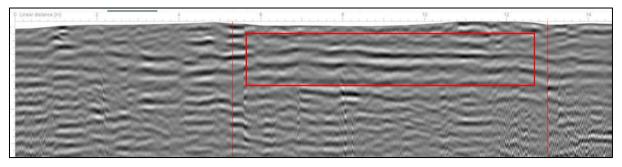


Figure 18 - Radargram of profile 110 from site NKM21/3. The reflection marked by the rectangle seemingly indicates the bottom of the kraal or is at least associated with it.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	20

Figure 19 - Slice at 0.55m below the surface. The area of higher amplitude seems to correlate with the extent of the kraal deposit (Fig. 20). This was also the depth at which the deposit was found during the excavation to transition to being culturally sterile. The lower amplitude areas within the kraal areas correlate with sections robbed of deposit, presumably for agricultural use.

Figure 20 - Image showing the excavation. The grey/white area is the last remnant of the kraal deposit. Compared with the image in Figure 19, it seems to correlate with the areas of higher amplitude.

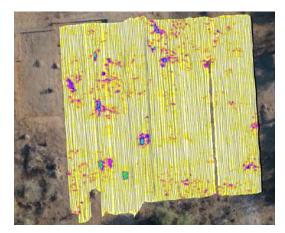


Figure 21 - Slice at 0m (surface). Yellow denotes areas of low amplitude, and other colours of higher amplitude

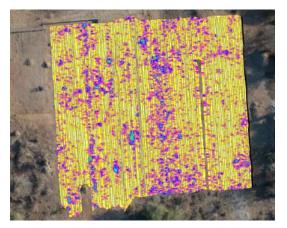


Figure 22 - Slice at 1.3m below the surface. No cultural material is present at this depth, and the kraal deposit is no longer visible.

### 6.3.2 Detecting Burials

During the analyses, it became immediately apparent that the many burials occurring on the site are, at first glance at least, not easily discernible on the radargrams. The reasons for this can be manifold:

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	21

- The burials are very old (approximately 150-200 years) and consist only of degraded skeletal remains.
- The "footprint" of the burials, especially the child burials, is minimal; the deceased were frequently buried in a sitting "sleeping" position.
- It is possible that the frequency of the antenna is too low and that a higher frequency antenna (>500Mhz) will give better results.
- The most probable cause is the lack of variability of the subsurface matrix's RDP and the burials backfill, as well as the lack of stratigraphic variability in the deposit. As mentioned elsewhere, with GPR and in the archaeological context, burials are rarely found through detecting human remains. Instead, it is found by detecting the burial pit's backfill or hard boundary. In some cases, where there is clear stratigraphy, the area where the burial pit is dug can be seen where it cuts through this layering. The excavation data shows that the burials at site NKM21/3 and site NKM21/4 were primarily located under, or close to the bottom of, the kraal or midden deposit, which exhibits a uniform stratigraphy throughout.

#### 6.3.3 Examples of Burials at site NKM21/3

Below are radargrams from some of the profiles where burials were found and marked during the excavation. In each instance, the burial positions on the radargrams are indicated by a white dot and a red rectangle. The position of these was recorded by DGPS after the surrounding material was removed. The radargrams were then analysed to determine the visibility of the burial in the image. At the time of writing, the burials were still *in situ*, to be relocated later.

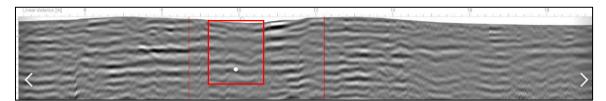


Figure 23 - Radargram of profile 123. The area of lower amplitude above the white dot may be the remnants of the burial pit.

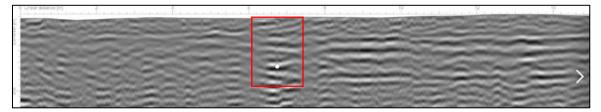


Figure 24 - Radargram of profile 77. A bright reflection depicts the burial. A less obvious reflection above that may be the remnants of the burial pit backfill.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	22

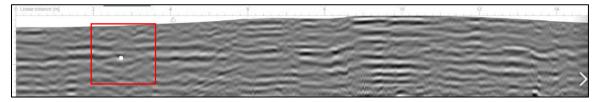


Figure 25 - Radargram of profile 126. A break in the stratigraphy depicts the burial position.

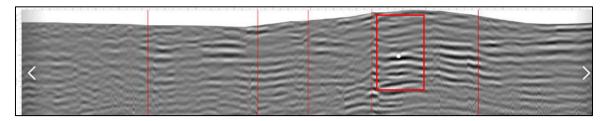


Figure 26 - Radargram of profile 98. A bright reflection depicts the burial.

As can be seen, it is challenging to detect such small anomalies in a large body of radargrams, even with a keen eye. The anomalies manifest in various shapes and sizes, making its immediate identification as a burial difficult.

#### 6.3.4 Discussion/Conclusion

The main aim of future GPR surveys on the project is to analyse the data from as many sites as possible to determine the feasibility of identifying burials and archaeological deposits on similar sites and in variable conditions.

To this end, a 10m x 25m area at NKM21/1 has been earmarked to be surveyed in dry and wet conditions. The wet/dry data will subsequently be compared to ascertain the impact of ground moisture on identifying archaeological features through GPR. This test area was surveyed under very dry soil conditions at the end of August 2023 and will be resurveyed during the rainy season.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	23

# 7 EXCAVATIONS

**NOTE:** Upon clearing of the multiple sites to be excavated, it was noted that sites NKM21/16 and NKM21/7 were one site with most of the archaeological deposit occurring at NKM21/7. Both sites were therefore excavated as site NKM21/7, and any reference to site NKM21/7 in this report refers to BOTH sites NKM21/16 and NKM21/7.

Excavations and mitigation were conducted between 03 May and 30 August 2023. The following is a description of the excavations at each site:

# 7.1 Site NKM21/3 (S -25.793569°; E 31.804809°)

#### 7.1.1 Site Description

The site was described in the HIA (Steyn & De Jager, 2022) as a settlement with a large cattle kraal/midden area. It measured approximately 30m x 30m in size. The following were found on the site during the field assessment:

- Exposed human remains were found during the survey. These appear to have been dug out of the cultural deposit.
- A lot of cultural material, including undecorated pottery, a clay pot handle, and a piece of iron slag were found on the site and surrounding area.
- Potsherds were found scattered on the surface.
- A small cluster of stones was identified, this could possibly be a grave.
- A half buried lower grinding stone was identified and this could also possibly be a grave.

### 7.1.2 Mitigation Recommendations (2022 HIA)

The following was recommended for site NKM21/3:

- Vegetation clearing of site. Recording of the site i.e. (a) map indicating the position and footprint of all features (b) photographic recording of all features (c) measured drawings of the site.
- Mitigation by means of full-scale archaeological excavation (permit application for this measure is needed and should be included in the timeline). The chance of finding human remains in the kraal/midden areas is very high. Similar sites in the mining area have yielded human remains.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	24

 In addition, an archaeologist should be on-site at all times when any mining related work is undertaken until the mitigation has been completed and a destruction permit issued by SAHRA.

It is also recommended that for the identified features at site NKM21/3:

- Apply for test excavation and/or GPR permit to determine if the features are graves.
- If human remains are discovered a grave relocation process is recommended as a mitigation and management measure. This will involve the necessary social consultation and public participation.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	25

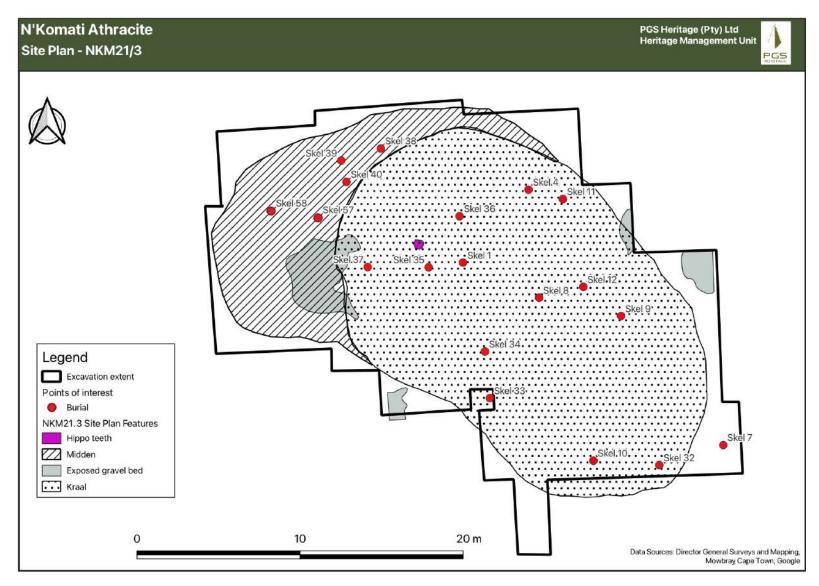


Figure 27 – Site excavation map of site NKM21/3.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	26

### 7.1.3 Excavation Description

The extent of the kraal/midden area was determined visually on foot and the area was bush cleared for GPR surveys and extensive excavations.

A block grid system was placed across the cleared area over the kraal and middens. The grid was roughly orientated from north to south. The squares were alphabetically labelled from east to west and numbered from north to south.

A 1m x 30m trench (orientated north to south) was laid out along **Trench W** approximately across the middle of the kraal. This trench (*Figure 28*) was excavated as a unit to determine the northern and southern ends of the kraal and to establish the average depth of the kraal and associated midden deposits. Excavations were expanded to the east of the initial trench and conducted in 1m x 5m trenches according to the identified contexts and layers (*Figure 29*). The 5m trench length was chosen to control and record the number of buckets excavated and to record the relative location of recovered artefacts. The excavations continued until the end of the kraal/midden was reached on the eastern side, and archaeological sterile or poor soil layers were encountered. Different layers and different contexts were recorded as the excavations were extended.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	27





Figure 28 – Initial trench (W), grid blocks 1 -30.

Figure 29 – Grid block U11- 15; Layer 2.

The topsoil across the area of the excavation formed the first stratigraphic layer of most of the excavated trenches. This layer formed the first context (CO1) and it consisted of a mixture of trampled livestock dung, fine sandy soil and ash. This mixed top layer was mostly disturbed due to surface activities (people and animals crossing it), plant roots, insects such as ants and animals burrowing into this layer. CO1 covered/overlaid the main kraal deposit (livestock dung) and midden deposits (situated on the edges of the kraal area). It was for the most part greyish light brown in colour due to the soil and ash content. It varied in thickness across the excavation and measured at its thickest ≤20cm in the central parts of the kraal and ≥5cm on the edges of the kraal. The layer contained a variety of artefacts which included mostly ceramics, animal bone fragments, glass and ostrich eggshell beads.

The excavations were first extended to the east and two upside-down ceramic pots (*Figure 30 & Figure 31*) were found within the second layer. One of the pots had the remains of an infant in it. This pot was left *in-situ* and was recorded as a pot burial which is a rare phenomenon in Southern African archaeology.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	28



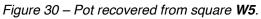




Figure 31 – Pot burial in square V6.

Another pot burial was found in square S12.

These pots and burials were identified within the second layer which formed the second context (CO2) and was the kraal deposit consisting mainly of compacted livestock dung mixed with a little bit of fine sandy soil and some ash. It was a pinkish white colour and varied in thickness across the excavation. It was up to 35cm thick in the central parts of the kraal and it became thinner towards the edges of the kraal where it measured 5cm - 10cm thick. The layer was soft to excavate and contained loose rocks, ceramics, animal bone fragments, glass and ostrich eggshell beads. Several more burials were identified within and underneath this layer as excavations continued.

The eastern edge/end of the kraal was found within the **K**- and **L**-squares of the excavations. The curving northern and southern extents of the kraal were also documented as the excavations progressed eastwards. CO1 is all that is present in these most eastern squares. One adult burial was found underneath this layer on the far eastern end of the excavation (*Figure 32*).



Figure 32 – Adult burial in square **K24**. Note that all burials were only opened to confirm the presence of human remains and will be fully documented upon excavation.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	29

At the southern edge of the kraal and beyond it in squares **W26-W28** no more dung (compacted or trampled) was present in the deposit. This indicated the southern end of the kraal and was named context CO3. This layer consisted of reddish brown fine sandy soil and was formed by natural processes. The layer was archaeologically sterile, and it was hard to excavate and measured between 10cm and 20cm thick.

The excavations returned to the **W**-trench after the eastern extent of the kraal was established. It was decided to excavate the western half of the identified kraal deposit. More burials were discovered as the excavation of the kraal was expanded to the west (see *Figure 27*). Most of these burials were found underneath the kraal dung deposit (see Table 2) within an archaeological sterile layer which formed another context (CO4). This archaeological sterile layer underlain the extent of the excavated site and was a natural layer with river gravels and pebbles occurring at different depths across the site.

The remains of two adult individuals were found in squares **Z7** and **Y16** (*Figure 33 & Figure 34*). Both burials were found within CO2 and were shallow.



Figure 33 – Adult burial in square **Z7**.



Figure 34 – Adult burial in square **Y16**.

Human remains were identified on the surface during the HIA in an area where some of the kraal deposit was removed, possibly to be used for agricultural purposes. During the excavation, disarticulated human remains were found in the same area (squares **Y8-11** up to squares **BB8-11**). It was decided to leave the excavation of these squares until an exhumation permit is in place. More burials were found directly to the north and west of the disturbed area, but these were situated underneath CO2, within CO4 and were not disturbed. Two hippo teeth were also recovered directly west of the disturbed area.

The western extent of the kraal was located within trench HH (Figure 35).

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	30



Figure 35 – Western extent of kraal dung deposit (layer CO2) in square **HH12**. Note where white dung ends (from left to right) near the centre of the profile.

The northern end of the kraal dung deposit curved from square **Z1** down to square **HH8** on the western side. The kraal dung deposit did not extend beyond this, but an extensive midden deposit continued slightly further north and significantly further west. This midden deposit was devoid of dung and consisted of fine sandy soils and ash and was a greyish light brown in colour (CO5). It measured approximately 40cm thick right next to the kraal but thinned as it extends away from the kraal. Large quantities of ceramics, animal bone fragments and glass beads were recovered from CO5. Several unique finds, such as clay pipes (*Figure 36*), metal spearheads (*Figure 38*), worked bone (*Figure 37*), hippo teeth (*Figure 39*) and clay figurines were recovered from this context.



Figure 36 – Intact clay smoking pipe.



Figure 37 – Worked bone with carved tooth.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	31





Figure 38 – Metal spearheads recovered from context CO5.

Figure 39 – Hippo tooth from square CC9.

Five child and infant burials were found within the midden deposits on the northern and western sides of the kraal (*Figure 40 & Figure* 41), which is consistent with previous excavations in the area. The excavations at site NKM21/3 were concluded when the midden deposits petered out at squares **OO** on the western end of the site.



Figure 40 – Child burial in square GG3.



Figure 41 – Infant burial in square GG5.

#### 7.1.4 Discussion/Conclusion

The excavation revealed an oval shaped kraal area measuring approximately 25m from north to south and 23m from east to west. Two pot burials and two adult burials were found in the deposit in the south-western side of the kraal. Nine burials were found underneath the kraal deposit and several previously disturbed burials was recorded in the central parts of the kraal. In total, 19 confirmed burials were recorded within site NKM21/3. All the remains were left *in-situ* and will only be exhumed when the relevant permits are in place.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	32

					Project	t: N'Koma	ti 642HMGR	· · · · · · · · · · · · · · · · · · ·
					NKM_I	21/3 Gra	ave Register	
Grave No	Square	Context	Layer	Pit / Pot	A/C/I	Date ID	GPS Coordinates	Comments
SKEL1	Y-AA 8-11	1	1	Pit	Adults		-25.793577° 31.804677°	Four sets of remains, comingled.
SKEL4	V6	2	2	Pot	Infant	15.05.23	-25.793533° 31.804717°	Intact pot placed upside-down.
SKEL7	K24	4	1	Pit	Adult	04.07.23	-25.793542° 31.804754°	Remains laying on side.
SKEL8	V13	4	2	Pit	Adult	16.05.23	-25.793599° 31.804724°	Possible sitting position.
SKEL9	Q15	4	2	Pit	Child	26.05.23	-25.793610° 31.804774°	Possible sitting position.
SKEL10	S24	4	2	Pit	Child	23.05.23	-25.793698° 31.804757°	Sitting position.
SKEL11	Т6	4	2	Pit	Child	23.05.23	-25.793539° 31.804738°	
SKEL12	S12	4	2	Pot	Infant	24.05.23	-25.793592° 31.804751°	Intact pot placed upside-down.
SKEL32	025	4	2	Pit	Child	29.05.23	-25.793701° 31.804797°	Sitting position.
SKEL33	X19/20	2	1	Pit	Adult	05.07.23	-25.793660° 31.804694°	Remains laying on side.
SKEL34	Y16	2	1	Pit	Adult	05.07.23	-25.793632° 31.804691°	Possibly disturbed remains.
SKEL35	BB11	4	1	Pit	Adult	07.07.23	-25.793580° 31.804656°	
SKEL36	Z7	4	1	Pit	Adult	06.07.23	-25.793549° 31.804675°	
SKEL37	FF11	4	3	Pit	Adult	14.07.23	-25.793580° 31.804619°	Well preserved.
SKEL38	EE3	4	2	Pit	Child	14.07.23	-25.793508° 31.804627°	Well preserved.
SKEL39	GG3	4	3	Pit	Child	18.07.23	-25.793515° 31.804603°	Lying on left side
SKEL40	GG5	2	2	Pit	Infant	18.07.23	-25.793528° 31.804606°	Fragmented remains
SKEL57	117	1	1	Pit	Infant	24.08,23	-25,793550° 31,804588°	Poor preservation, Lying on back
SKEL58	KK/LL6	1	1	Pit	Child	28.08.23	-25,793545° 31,804559°	Lying on left hand side

Table 2 – Grave Register for site NKM21/3.

A total of 601 squares were excavated to varying depths. The kraal comprised approximately 80% of these squares, with the remaining being midden deposits adjacent to and bordering the kraal.



Figure 42 – Western section of NKM21/3 after completion.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	33

Many ceramics and animal bone fragments were recovered from the excavations. These will be analysed at the University of Pretoria as soon as most of the basic field analyses and artefact curation are completed.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	34

# 7.2 Site NKM21/4 (S -25.793737°; E 31.803902°)

### 7.2.1 Site Description

The site was described in the HIA (Steyn & De Jager, 2022) and it measured approximately 20m x 10m in size and is comprised of the following:

- A small cattle kraal/midden located next to the road containing very few potsherds.
- Cultural materials were identified on the surface at this midden included a yellow glass bead, decorated ceramics and a small piece of possible iron slag.

### 7.2.2 Mitigation Recommendations (2022 HIA)

The following mitigation measures were recommended for the site:

- Vegetation clearing of site.
- Recording of the site i.e. (a) map indicating the position and footprint of all features, (b) photographic recording of all features, (c) measured drawings of the site.
- Mitigation by means of full-scale archaeological excavation. The chance of finding human remains in the kraal/midden areas is very high. Similar sites in the mining area have yielded human remains.
- In addition, an archaeologist should be always on site when any mining-related work is undertaken until the mitigation has been completed and a destruction permit issued by SAHRA.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	35

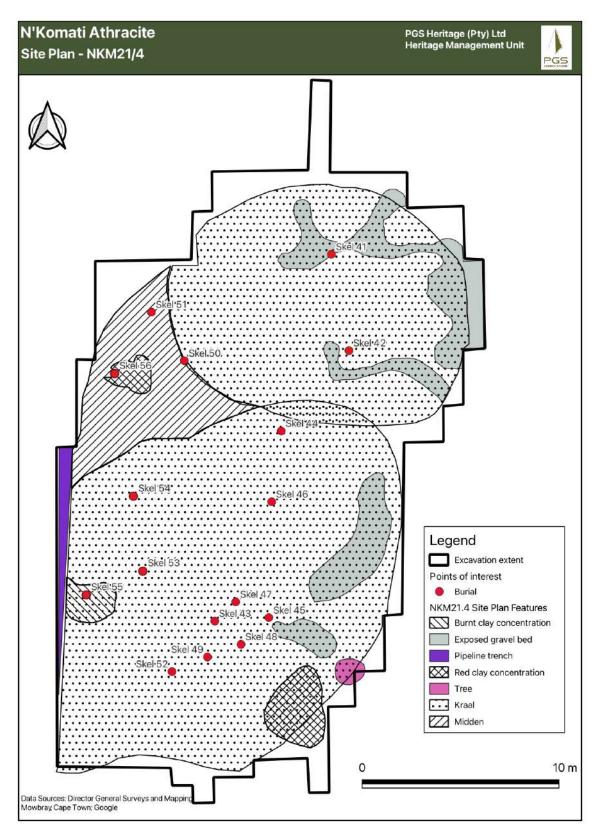


Figure 43 – Site excavation map of site NKM21/4.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	36

#### 7.2.3 Excavation Description

After the extent of the kraal/midden area was determined, the area was cleared of vegetation. A grid was placed across the cleared area to cover the visible kraal and midden. The grid was orientated roughly from north to south. The squares were alphabetically labelled from east to west and numbered from north to south. This grid block was aligned with the grid blocks at sites NKM21/3 and NKM21/7. This meant that some of the northern squares ran into negative numbering e.g. square U - (1-5).

A 1m x 30m trench (north to south) was laid out along **Trench T** of the grid, across the perceived middle of the kraal (*Figure 44*). This trench was excavated as a unit to determine the northern and southern ends of the kraal and to establish the average depth of the deposit. Excavations were initially expanded to the east of the first trench and conducted in 1m x 5m trenches according to the identified contexts and layers (*Figure 45*). The 5m trench length was chosen to control and record the number of buckets excavated and to record the location of recovered artefacts. The excavations continued until the extent of the kraal/midden deposit was determined on the eastern side and archaeological sterile or poor soil layers were encountered. Different layers and different contexts were recorded as the excavations were extended.



Figure 44 – Initial trench (**T**), grid blocks **-10 to 30**.

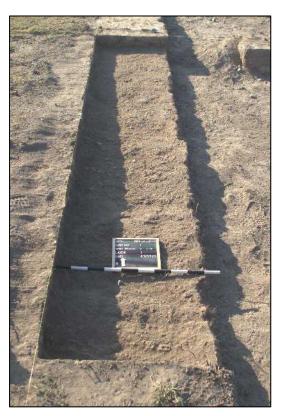


Figure 45 – Grid block **U1 - 5**; Layer 1.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	37

The topsoil across the excavated area formed the first stratigraphic layer of most of the excavated trenches. This layer formed the first context (CO1) and it consisted of a mixture of trampled livestock dung, fine sandy soil and ash. This mixed top layer was mostly disturbed due to surface activities (people and animals crossing it), plant roots, insects such as ants and animals burrowing into this layer. It covered/overlay the main kraal deposit (livestock dung) and midden deposits on the edges of the kraal and was for a greyish light brown colour due to its soil and ash content. Its thickness varied across the excavation and measured between 20cm in the central parts of the kraal to ~5cm at the edges of the kraal. CO1 contained a variety of artefacts which included ceramics, animal bone fragments, glass and ostrich eggshell beads.

The remains of a sub-adult (*Figure 46*) were found in square **S** (-1) and the remains of an adult (*Figure 47*) were found in square **S6** after the excavation was extended east from **Trench T**.





Figure 46 – Sub-adult burial in square **S** (–1). Figure 47 – Adult burial in square **S6**.

These burials were identified underneath the second layer (context **CO2**) which consisted mainly of compacted livestock dung mixed with a little bit of fine sandy soil and some ash. It was a pinkish white colour and varied in thickness across the excavation; it measured 40cm thick in the central parts of the kraal and it became thinner towards the edges of the kraal where it decreased to a thickness of 5cm – 10cm (*Figure 48*, *Figure 49* & *Figure 50*). The layer was soft to excavate and contained loose rocks, ceramics, animal bone fragments, glass and ostrich eggshell beads. Several more burials were found within and underneath this layer.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	38



Figure 48 – Square W11-15Figure 49 – Square W11-15Figure 50 – Square W11-15Surface.Layer 1.Layer 2.

The eastern edge/end of the kraal was reached in **Trench L** on the northern side of the excavations and the eastern end of the kraal dung deposit was reached in **Trench P** of the southern parts of the excavations. The northern and southern extents of the kraal were curved and was reached as the excavations progressed eastwards. Only context **CO1** is present in these most eastern squares.

No more dung (compacted or trampled) was present within the deposit at the southern edge of the kraal beyond and including squares **W26-W28**. The matrix beyond this point consisted of naturally occurring (and culturally sterile) reddish brown fine sandy soil and was excavated as context **CO3**. It measured between 10cm and 20cm thick.

A concentration of broken pots was identified at the southern end of the kraal (*Figure 52*). These pots were found in transitional deposits between **CO2** and **CO3**. This layer was also reddish-brown and didn't contain any dung. It did however contain archaeological material and was excavated as context **CO6**. This context followed the southern edge of the kraal to the west.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	39





Figure 51 – Termination of context **CO2** in square **AA28**. Note where white dung ends (from right to left) near the centre of the profile.

Figure 52 – A concentration of broken pots in squares **YY27-29**.

The excavations returned to **Trench T** after the eastern extent of the kraal was established. It was decided to excavate the western half of the kraal in the same way as the eastern half. More burials were discovered as the excavation of the kraal continued to the west (see *Figure 43*). Most of these burials (*Figure 53 & Figure 54*) were found underneath the dung deposit (context **CO2**) (see Table 3) within an undelaying archaeologically sterile layer (context CO4) consisting of river gravels and pebbles. Context **CO4** occurred at different depths across the site.



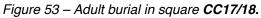




Figure 54 – Adult burial in square DD13.

It was noted from the excavations of trenches **Y** and **Z** that there was a break or gap occurring within context **CO2** (the dung layer). This break seemed to become wider as the excavations progressed westwards. It was concluded that this indicates the boundary between two adjacent kraals.

The mixed deposit on the western side of the two kraals was given a new context (**CO5**). It was a mixture of livestock dung, fine sandy soils, and ash, but had a significant amount of midden material

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	40

in it. Many ceramics, animal bone fragments, glass and ostrich eggshell beads and other artefacts were recovered; another three burials were also found within this context.

The kraal dung deposit of the northern, smaller kraal ended in trench **AA** with midden deposits (**CO5**) continuing further westwards. The kraal dung deposit of the southern and larger kraal (**CO2**) continued and measured up to 35cm (*Figure 55*). It was overlain by context CO1 which measured 20cm in this section of the site.

The excavations encountered a disturbance within **Trench GG** right next to the haul road (*Figure 56*). Some of the excavators recalled that mine laid a pipeline along the haul road. The disturbance fitted the description of an excavated and re-filled trench for a pipeline. The pipeline trench was dug through the kraal dung and other deposits. The excavations were stopped at this point as we did not want to open mine infrastructure and did not want to excavate within the haul road. The western extent of the kraal was at the haul road.



Figure 55 – Control block to view depth Figure 56 – Excavated trench identified in square of stratigraphic layers in square **EE**13. **GG**10 northern profile.

#### 7.2.4 Discussion/Conclusion

Two possible kraals were identified right next to each other. It is also possible that the two kraals might have slightly overlapped each other.

The smaller, northern kraal was roughly circular in shape and measured approximately 15m in diameter. The kraal dung deposit measured approximately 20cm thick at its thickest and was overlain with a mixed layer of approximately 10cm - 15cm thick. There was no distinctive layering between the two layers and consisted of the same materials. Only the percentages of dung and

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	41

ash/soil differed across the extent of the kraal. Several loose rocks, ceramics, animal bone fragment, glass and ostrich eggshell beads and a few other artefacts were recovered from this end of the excavations. Only two burials were found underneath the dung layer of this kraal.

The second kraal was a bit bigger and irregularly shaped and situated to the south-west of the first kraal. It measured approximately 20m from north to south and about 18m from east to west where the excavations ended up against a pipeline trench and a haul road. The kraal dung deposit measured 35cm - 40cm at its thickest and was overlain with a mixed layer which measured approximately 10cm - 15cm thick in places.

A cluster of six burials was identified near the central parts of the kraal and another 5 burials were found randomly across the remainder of the kraal. Most of the burials were found underneath the kraal dung deposit layer, with a few infants buried within it. Three more burials were identified within the mixed midden deposit that was identified on the north-western side between the two kraals, which brought the number of identified burials at site NKM21/4 to sixteen.

					Project:	N'Komati	642HMGR	·
							ve Register	
Grave No	Square	Context	Layer	Pit / Pot	A/C/I	Date ID	GPS Coordinates	Comments
SKEL41	S-T (-1)	4	1	Pit	Sub-adult	24.07.23	-25.793519° 31.803940°	Lying on left side
SKEL42	S6	4	1	Pit	Adult	24.07.23	-25.793567° 31.803949°	Lying on left side
SKEL43	Y-Z 20	2	2	Pit	Adult	08.08.23	-25,793704° 31,803880°	Lying on right side
SKEL44	V10	4	1	Pit	Adult	02.08.23	-25,793608° 31,803914°	Lying on left side
SKEL45	W20	2	2	Pit	Adult	02.08.23	-25,793702° 31,803907°	Lying on left side
SKEL46	W14	4	2	Pit	Infant	02.08.23	-25,793644° 31,803909°	Poor preservation
SKEL47	X19	2	2	Pit	Infant	03.08.23	-25,793694° 31,803891°	Poor preservation
SKEL48	X21/22	2	2	Pit	Adult	08.08.23	-25,793716° 31,803893°	Lying on left side
SKEL49	Z22/23	4	3	Pit	Adult	10.08.23	-25,793722° 31,803876°	Lying on left side, facing East
SKEL50	AA6	4	3	Pit	Adult	11.08.23	-25,793572° 31,803865°	Lying on left side
SKEL51	BB/CC 3/4	2	2	Pit	Child	11.08.23	-25,793547° 31,803848°	May be damaged
SKEL52	BB23	4	3	Pit	Adult	11.08.23	-25,793730° 31,803858°	Lying on left side
SKEL53	CC17/18	4	3	Pit	Adult	16.08.23	-25,793679° 31,8038441	Lying on left side, facing east
SKEL54	DD13	4	3	Pit	Adult	16.08.23	-25,793641° 31,803839°	Lying on right side, facing south
SKEL55	FF19	4	3	Pit	Adult	18.08.23	-25,793691° 31,8038155°	Damaged, lying on left side
SKEL56	EE6	4	2	Pit	Sub-adult	22.08.23	-25,793579° 31,8038298°	Lying on left side

Table 3 – Grave Register for site NKM21/4.

A total of 570 squares of varying depths were excavated. The two kraals covered approximately 80% of these squares and the rest were midden deposits adjacent and bordering the identified kraals.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	42



Figure 57 – Completed excavations at site NKM21/4 on 18/08/2023.

A few unique artefacts such as worked bone, clay figurines and clay pipes (*Figure 58* to *Figure* 63) as well as a large number of ceramics and animal bone fragments were recovered from the excavations. These will be analysed at the University of Pretoria soon as most of the basic field analyses and artefact curation are completed and the artefacts await transfer to the University.



Figure 58 – Small ceramic cup.



Figure 59 – Clay smoking pipe fragments.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	43



Figure 60 – Carved and decorared bone plug.



Figure 62 – Whet stone.



Figure 61 – Worked ceramic disk.



Figure 63 – Worked bone.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	19691 642HMGR-002		15/09/2023	44

# 7.3 Site NKM21/7 (S -25.793396°; E 31.803371°)

**NOTE:** as mentioned in the beginning of this section, site **NKM21/7** includes site **NKM21/16**, as this is one site with most of the archaeological deposit occurring at NKM21/7.

### 7.3.1 Site Description

The site was described in the HIA (Steyn & De Jager, 2022) as a small midden which is situated on the western side of the existing service road, about 60m from it. It measured approximately 10m x 10m in size. The site contained the following:

- The midden seems to be an extension of the kraal/middens that is located in the surrounding area.
- A small cluster of stones could possibly be a grave. The site likely forms part of the larger kraal/midden complex.
- Another small cluster of stones could possibly be a grave. The site likely forms part of the larger kraal/midden complex.
- Yellow glass bead and an ostrich eggshell bead possibly associated with the midden.

#### 7.3.2 Mitigation Recommendations (2022 HIA)

The following was recommended for site NKM21/7:

- Vegetation clearing of site. Recording of the site i.e. (a) map indicating the position and footprint of all features (b) photographic recording of all features (c) measured drawings of the site.
- Mitigation by means of full-scale archaeological excavation (permit application for this measure is needed and should be included in the timeline). The chance of finding human remains in the kraal/midden areas is very high. Similar sites in the mining area have yielded human remains.
- In addition, an archaeologist should be on-site at all times when any mining related work is undertaken until the mitigation has been completed and a destruction permit issued by SAHRA.

The following was also recommended for features identified at site NKM21/7:

- Apply for test excavation and/or GPR permit to determine if the feature is a grave.
- If human remains are discovered, a grave relocation process is recommended as a mitigation and management measure. This will involve the necessary social consultation and public participation process before grave relocation permits can be applied for with the SAHRA BGG under the NHRA and National Health Act regulations.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	45

- When graves are discovered/uncovered, the site should be demarcated with a 100-meter no-go-buffer-zone, and the grave should be avoided.
- If, during test excavations, it is determined that the feature is not a grave, no further mitigation will be required.

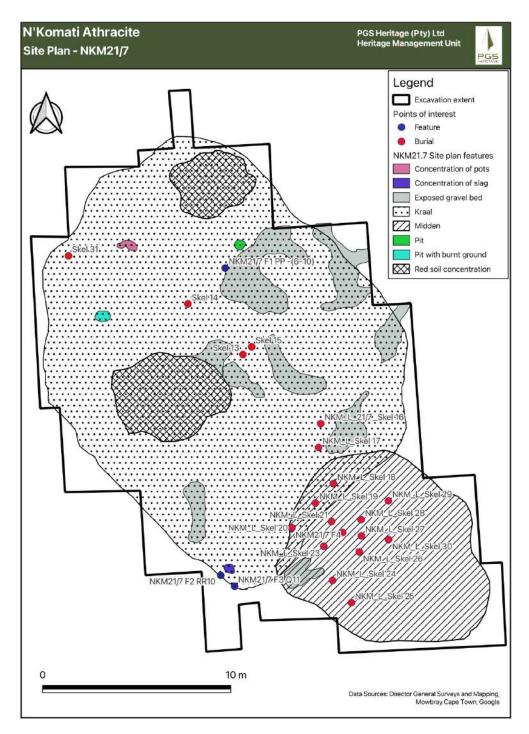


Figure 64 – Site excavation map of site NKM21/7.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	46

#### 7.3.3 Excavation Description

Once the extent of the kraal/midden area of NKM21/16 and 21/7 was determined, the sites were cleared of vegetation before the excavation grid was established.

A block grid system was placed across the site to cover the visible kraal and midden areas. The grid was roughly orientated from north to south. The squares were alphabetically labelled from east to west and numbered from north to south. This grid block was aligned with the grid blocks at sites NKM21/3 and NKM21/4. This meant that some of the northern squares ran into negative numbering e.g., square **UU – (1-5)**.

A 1m x 30m trench (north to south) was laid out along **Trench SS** of the grid, across the approximate middle of the kraal (*Figure 65*). This trench was excavated as a unit to determine the northern and southern ends of the kraal and to establish the average depth of the kraal and associated midden deposits. Excavations were expanded to the east of the initial trench and were conducted in 1m x 5m trenches according to the identified contexts and layers (*Figure 66*). The 5m trenches were selected to control and record the number of buckets excavated and to record the relative location of artefacts recovered. The excavations continued until the extent or end of the kraal/midden was reached on the eastern side and archaeological sterile or poor soil layers were encountered. Different layers and different contexts were recorded as the excavations were extended.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	47





Figure 65 – Initial **SS**-trench, grid blocks **-15 to 15**.

Figure 66 – Grid block **PP6 -10**; Layer 1.

The topsoil across the identified area formed the first stratigraphic layer of most of the excavated trenches. This layer formed the first context (**CO1**) and it consisted of a mixture of trampled livestock dung, fine sandy soil and ash. This mixed top layer was mostly disturbed due to surface activities (people and animals crossing it), plant roots, insects such as ants and animals burrowing into this layer. The layer covered/overlay the main kraal deposit (livestock dung) and midden deposits on the edges of the kraal. The layer was for most a greyish light brown in colour due to the soil and ash content. It varied in thickness across the excavation and measured at its thickest ( $\leq$ 20cm) in the central parts of the kraal and much thinner ( $\geq$ 5cm) on the edges of the kraal. The layer contained a variety of artefacts which included mostly ceramics, animal bone fragments, glass and ostrich eggshell beads.

The excavations were first extended to the east and three burials were found underneath the second layer excavated. The remains of a child (*Figure 67*) were found in square **SS-6** and the remains of two adults (*Figure 68*), buried right next to each other were found in square **PP-4**.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	48



Figure 67 – Child burial in Figure 68 – Two adult burials in square **PP4**. square **SS –6**.

These burials were identified underneath the second layer which formed the second context (**CO2**) which was the kraal deposit that consisted mainly of compacted livestock dung mixed with a little bit of fine sandy soil and ash. It was a pinkish white colour and varied in thickness across the excavation. It was up to 40cm thick in the central parts of the kraal and it became thinner towards the edges of the kraal where it measured 5cm – 10cm thick. The layer was soft to excavate and contained loose rocks, ceramics, animal bone fragments, glass and ostrich eggshell beads Several more burials (*Figure 69*), including an infant buried in a pot (*Figure 70*), were identified within this layer and underneath the layer as excavations continued.



Figure 69 – Child burial in square LL1.

Figure 70 – Infant pot burial in square MM3.

The eastern edge of the kraal was documented within **Trench II** of the excavation. The eastern end of the kraal dung deposit was documented within **Trench P** in the southern parts of the excavation

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	49

The curving northern and southern extents of the kraal were also documented as the excavations progressed eastwards. Context **CO1** is all that is present in these most eastern squares.

At the south-eastern end of the kraal, from square **MM5** and its surrounding squares, the context started to change, and the kraal dung deposit was not predominant anymore. The deposit had much more ash and fine sand within it. It was a midden deposit (**CO7**) which covered the south-eastern extent of the kraal. A cluster of thirteen infant and child burials (*Figure 71* and *Figure 72*) were identified on this south-eastern edge of the kraal and beyond it within the midden.



Figure 71 – Child burial in square KK8.



Figure 72 – Another Infant pot burial in square *KK12*.

The excavations returned to **Trench SS** after the eastern extent of the kraal was established. It was decided to excavate the western half of the identified kraal in the same way as the eastern half of the excavation. Only one more burial was discovered as the excavation of the kraal continued further to the west (see Figure 73). This burial was found underneath the kraal dung deposit (see

Table 4) within an archaeological sterile layer which formed another context (**CO4**). This archaeological sterile layer underlain the extent of the excavated site and was a natural layer with river gravels and pebbles occurring at different depths across the site.

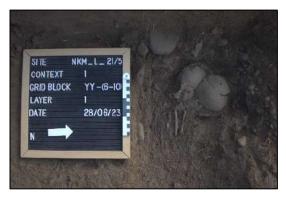


Figure 73 – Child burial in square YY -9.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	50

A series of broken pots were identified at the north-western end of the kraal (*Figure 74*). These pots were found in transitional deposits between the kraal dung deposits (CO2) and the reddishbrown sterile layer (**CO3**) on the edge of the kraal. Interestingly, the pots were placed upside-down and most of them had puncture holes in the bottom of the vessel. One smaller vessel was found buried within another bigger pot (*Figure 75*), but no human remains were found with the pots.



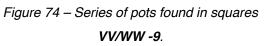




Figure 75 – A small pot buried within a bigger pot in squares *VV/WW -9*.

### 7.3.4 Discussion/Conclusion

The kraal was more or less oval shape and measured approximately 26m from north to south and 20m from east to west. The kraal deposit yielded only two adult burials and four infant or child burials, of which one was a pot burial.

The midden area to the south-east of the identified kraal yielded thirteen infant or child burials of which four were pot burials. The thirteen burials formed a small cluster as these children were buried in close proximity of each other. Most of these burials were within the midden deposits and were very shallow. In total, 19 confirmed burials were found within the kraal and its surrounding midden deposits. All the remains identified were left *in-situ* and will only be exhumed when the relevant permits are in place.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	51

	Project: N'Komati 642HMGR										
	NKM_L_21/7 Grave Register										
Grave No	Square	Context	Layer	Pit / Pot	A/C/I	Date ID	GPS Coordinates	Comments			
SKEL13	00/PP -4	4	1	Pit	Adult	07.06.23	-25.793542° 31.803055°	Remains possibly disturbed.			
SKEL14	SS -7/-6	4	1	Pit	Infant	02.06.23	-25.793515° 31.803026°				
SKEL15	00 -4	1	1	Pit	Adult	07.06.23	-25.793538° 31.803060°				
SKEL16	LL 1	4	2	Pit	Child	15.06.23	-25.793578° 31.803097°				
SKEL17	MM 3	1	1	Pot	Infant	13.06.23	-25.793591° 31.803095°	Broken pot.			
SKEL18	LL 5	4	1	Pit	Infant	13.06.23	-25.793610° 31.803103°				
SKEL19	MM 7	4	1	Pit	Infant	13.06.23	-25.793620° 31.803094°				
SKEL20	NN 8/7	4	1	Pit	Infant	12.06.23	-25.793634° 31.803081°				
SKEL21	LL 6	4	1	Pot	Infant	14.06.23	-25.793630° 31.803102°	Intact pot placed upside-down.			
SKEL22	LL/KK 8	1	1	Pit	Child	14.06.23	-25.793636° 31.803108°				
SKEL23	MM 9	1	1	Pit	Infant	15.06.23	-25.793643° 31.803098°				
SKEL24	LL/MM 11	4	1	Pit	Infant	19.06.23	-25.793661° 31.803103°				
SKEL25	KK/LL 12	4	1	Pot	Infant	19.06.23	-25.793673° 31.803113°	Intact pot placed upside-down.			
SKEL26	КК 9	1	1	Pit	Infant	15.06.23	-25.793646° 31.803117°				
SKEL27	KK 8	1	1	Pot	Infant	15.06.23	-25.793638° 31.803118°	Intact pot placed upside-down.			
SKEL28	KK 7	1	1	Pit	Infant	15.06.23	-25.793629° 31.803118°				
SKEL29	JJ 6/7	1	1	Pot	Infant	19.06.23	-25.793619° 31.803133°	Intact pot placed upside-down.			
SKEL30	II 8/9	7	1	Pit	Child	20.06.23	-25.793640° 31.803133°				
SKEL31	YY -9/-10	4	1	Pit	Child	28.06.23	-25.793489° 31.802963°				

Table 4 – G	arave Register	for site	NKM21/7.
-------------	----------------	----------	----------

A total of 498 squares of varying depths were excavated. The kraal covered approximately 75% of these squares and the rest were midden deposits adjacent and bordering the kraal.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	52



Figure 76 – Completed excavations at site NKM21/7 on 30/06/2023.

A few unique artefacts such as metal bangles and tubes, marine shells, clay figurines, glass and ostrich eggshell beads (Figure 77 to Figure 82) as well as a large number of ceramics and animal bone fragments were recovered from the excavations. These will be analysed at the University of Pretoria soon as most of the basic field analyses and artefact curation are completed and the artefacts await transfer to the University.



Figure 77 – Metal bangle.



Figure 79 – Rolled metal tubes.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	53





Figure 78 – Marine cowrie shell.

Figure 80 – Ceramic figurine fragment.



Figure 81 – Glass beads.

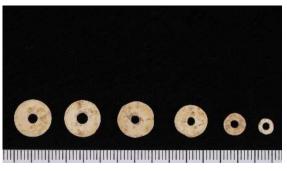


Figure 82 – Ostrich eggshell beads.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	54

# 7.4 Site NKM21/10 (S -25.793953°; E 31.805046°)

### Site Description:

A small stone packed feature of four stones arranged in a circle, possibly be a grave, situated approximately 40m south of site NKM21/3.

# 7.4.1 Mitigation Recommendations (2022 HIA)

It is recommended that:

- Apply for test excavation and/or GPR permit to determine if the feature is a grave.
- If human remains are discovered a grave relocation process is recommended as a mitigation and management measure. This will involve the necessary social consultation and public participation process before grave relocation permits can be applied for with the SAHRA BGG under the NHRA and National Health Act regulations.
- When graves are discovered/uncovered the site should be demarcated with a 100-meter no-go-buffer-zone and the grave should be avoided.
- If, during test excavations, it is determined that the feature is not a grave, no further mitigation will be required.

### 7.4.2 Excavation Description

Once the surface features were documented and removed, a test excavation was conducted. The excavation measured 1m x 0,5m and was excavated down to approximately 30cm. No burial pit, disturbances or finds of any nature was identified.



Figure 83– Feature at site NKM21/10.



Figure 84 – Test excavation at site NKM21/10.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	55

#### 7.4.3 Discussion/Conclusion

 No burial pit, disturbances or finds of any nature was identified. It was determined that the feature is not a grave and no further mitigation is required.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	56

# 7.5 Site NKM21/11 (S -25.794007°; E 31.804403°)

### 7.5.1 Site Description

A small stone packed feature which could possibly be a grave or grain bin foundation. The site is possibly associated with site NKM21/3 and located next to a thicket.

### 7.5.2 Mitigation Recommendations

It is recommended that:

- Apply for test excavation and/or GPR permit to determine if the feature is a grave.
- If human remains are discovered a grave relocation process is recommended as a mitigation and management measure. This will involve the necessary social consultation and public participation process before grave relocation permits can be applied for with the SAHRA BGG under the NHRA and National Health Act regulations.
- When graves are discovered/uncovered the site should be demarcated with a 100-meter no-go-buffer-zone and the grave should be avoided.
- If, during test excavations, it is determined that the feature is not a grave, no further mitigation will be required.

#### 7.5.3 Excavation Description

Site NKM21/11 formed part of the bigger midden and kraal identified at site NKM21/4. After documentation of the surface features, a test pit was excavated. The excavation measured 1m x 0,5m and was excavated down to approximately 20cm deep, where the human remains of an adult were identified. Once the remains were found and documented, the excavation was backfilled, and the remains left *in situ*.



Figure 85 – Surface feature at site NKM21/11.



Figure 86 – Burial identified at site NKM21/11.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	57	

Table 5 –	Grave	Register	for site	NKM21/11.
rabic 0	arave	ricgiolor	101 3110	

	Project: N'Komati 642HMGR										
	NKM_L_21/11 Grave Register										
Grave No Square Context Layer Pit / Pot A / C / I Date ID GPS Coor							GPS Coordinates	Comments			
SKEL 59	SKEL 59         n/a         n/a         Pit         Adult         12.09.23         -25,7940069° 31,8050491°         Lying on its right side, facing West										

### 7.5.4 Discussion/Conclusion

The remains of an adult individual were identified during test excavations at site NKM21/11. It is recommended that the remains be included in the same amended section 35 permit as the other burials from Phase 1.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	58	

# 7.6 Site NKM21/15 (S -25.793412°; E 31.804170°)

## 7.6.1 Site Description

Glass and ostrich eggshell beads were located on a small midden. The site measured approximately 10m x 10m in size.

## 7.6.2 Mitigation Recommendations (2022 HIA)

It is recommended that:

- Vegetation clearing of site. Recording of the site i.e. (a) map indicating the position and footprint of all features (b) photographic recording of all features (c) measured drawings of the site.
- Mitigation by means of full-scale archaeological excavation (permit application for this measure is needed and should be included in the timeline). The chance of finding human remains in the kraal/midden areas is very high. Similar sites in the mining area has yielded human remains.
- In addition, an archaeologist should be on-site at all times when any mining-related work is undertaken until the mitigation has been completed and a destruction permit issued by SAHRA.

# 7.6.3 Excavation Description

Upon clearing of the various sites, it was noted that sites NKM21/15 and NKM21/4 was in fact one site with most of the archaeological deposit situated at NKM21/4. Both sites were therefore excavated as NKM21/4 and any reference to NKM21/15 in this report refers to **BOTH NKM21/15** and NKM21/4.

A small test excavation was conducted at the coordinates given for site NKM21/15. An excavation of 1m x 0,5m and approximately 30cm deep did not yield any finds of significant value.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	59	



Figure 87 – Location of site NKM21/15.



Figure 88 – Test excavation at site NKM21/15.

# 7.6.4 Discussion/Conclusion

It was noted that sites **NKM21/15** and **NKM21/4** was in fact one site with most of the archaeological deposit situated at NKM21/4. Both sites were therefore excavated as NKM21/4 and any reference to NKM21/15 in this report refers to BOTH NKM21/15 and NKM21/4.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	60	

# 7.7 Site NKM21/18 (S -25.793996°; E 31.803207°)

## 7.7.1 Site Description

A small cattle kraal/midden with a surface scatter of undecorated potsherds. The site measured approximately 5m x 5m in size.

# 7.7.2 Mitigation Recommendations (2022 HIA)

It is recommended that:

- Vegetation clearing of site. Recording of the site i.e. (a) map indicating the position and footprint of all features (b) photographic recording of all features (c) measured drawings of the site.
- Mitigation by means of full-scale archaeological excavation (permit application for this measure is needed and should be included in the timeline). The chance of finding human remains in the kraal/midden areas is very high. Similar sites in the mining area have yielded human remains.
- In addition, an archaeologist should be on-site at all times when any mining related work is undertaken until the mitigation has been completed and a destruction permit issued by SAHRA.

# 7.7.3 Excavation Description

A test trench was excavated in the middle of the purported kraal/midden. The test trench measured approximately 0,5m x 0,5m in size and was excavated down to approximately 15cm. It was noticed that most of the identified kraal/midden deposits were largely superficial and did not extent further than a few centimetres under the surface. Very little ash and no livestock dung were found within the identified area. A few ceramic fragments, animal bone fragments and an ostrich eggshell bead were recovered from the deposit.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	61	



Figure 89 – Location of site NKM21/18.



Figure 90 – Test excavation at site NKM21/18.

## 7.7.4 Discussion/Conclusion

The test excavation showed that there were mostly superficial and shallow archaeological deposits which in turn did not yield any finds of significant value or interest. These shallow deposits will not be suited to host any burials such as the much larger and deeper kraal and midden deposits at the neighbouring site NKM21/7. No further mitigation measures are required at this site.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	62	

# 7.8 Site NKM21/24 (S -25.793626°; E 31.802446°)

## 7.8.1 Site Description

A large cattle kraal/midden with the following cultural material were located on the surface:

- A small cluster of stones could possibly be a grave.
- A yellow bead

The site measured approximately 20m x 10m in size.

## 7.8.2 Mitigation Recommendations (2022 HIA)

It is recommended that:

- Vegetation clearing of site. Recording of the site i.e. (a) map indicating the position and footprint of all features (b) photographic recording of all features (c) measured drawings of the site.
- Mitigation by means of full-scale archaeological excavation (permit application for this measure is needed and should be included in the timeline). The chance of finding human remains in the kraal/midden areas is very high. Similar sites in the mining area has yielded human remains.
- In addition, an archaeologist should be on-site at all times when any mining related work is undertaken until the mitigation has been completed and a destruction permit issued by SAHRA.
- Apply for test excavation and/or GPR permit to determine if the feature is a grave.
- If human remains are discovered a grave relocation process is recommended as a mitigation and management measure. This will involve the necessary social consultation and public participation process before grave relocation permits can be applied for with the SAHRA BGG under the NHRA and National Health Act regulations.
- When graves are discovered/uncovered the site should be demarcated with a 100-meter no-go-buffer-zone and the grave should be avoided.
- If, during test excavations, it is determined that the feature is not a grave, no further mitigation will be required.

# 7.8.3 Excavation Description

It was decided to do two test excavations across this location. The first test excavation measured approximately  $1m \ge 0.5m$  in size and was excavated down to approximately 20cm below the surface. The second test excavation measured approximately  $0.5m \ge 0.5m$  in size and was also excavated down to approximately 20cm.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	63	

Both the excavated trenches yielded several ceramic fragments, animal bone fragments, glass beads and even a few cowrie shells from the first test trench. The deposit in both excavations showed some ash and artefacts in the upper parts of the layer, but it diminished as the excavations went further down. The deposit across the kraal/midden turned out to be shallow and did not yield the number of artefacts as was previously expected.



Figure 91 – Location of site NKM21/24 test excavation 1.



Figure 92 – Test excavation 1 at site NKM21/24.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	64	



Figure 93 – Location of site NKM21/24 test excavation 2.



Figure 94 – Test excavation 1 at site NKM21/24.

## 7.8.4 Discussion/Conclusion

The test excavations performed at site NKM21/24 showed that the archaeological deposits were shallow and did not yield any finds of significant value or interest. These shallow deposits will not be suited to host any burials such as the much larger and deeper kraal and midden deposits at the neighbouring site NKM21/7. No further mitigation measures are required at this site.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page	
3926	19691	642HMGR-002	1.0	15/09/2023	65	

## 8 MATERIAL ANALYSIS

The excavations yielded an array of material needing to be documented and analysed. This included ceramics, glass beads, OES beads, faunal material, charcoal, slag, daga, metal and other small finds.

# 8.1 Curation

The material from each trench was recorded on an excel spreadsheet according to the trench grid block, layer, and context (Table 6). The form notes whether there was any diagnostic ceramics, faunal material, slag, daga or metal found in the trench. Charcoal that was collected in the sieve was weighed and recorded. The glass beads (*Figure 95*) were divided into fragments and whole beads which were then counted and classified according to their colour. The OES beads were also separated according to broken fragments and intact beads (*Figure 96*). These were then counted and recorded. Some of these finds included pipe bowls, hippopotamus tusk that was grinded, worked bone with decoration, and metal spear heads (*Figure 97*).

						P	Project: N	l'Komati 642	2HMGR							
							Site:	NKM_L_21	/3							
								Trench: FF								_
Date	Bag no.	Square	Layer	Contex	Rim/	Fauna	Carbon	Glass	beads	OES Be	ads	Metal	Slag	Daga	Pot to be	Other
					decorated ceramics			Fragments	Whole	Fragments	Whole				reconstru cted	
<b>19/07/2</b> 0 23	153	FF(-1)-2	1	CO8	x	x	76,30g	14 yellow	20 yellow, 4 white	4	24	x				Metal spearhea
17/07/20 23	136	FF3-7	1	C01	x	x	39g	15 yellow	99 yellow, 1white	2	38					
17/07/20 23	139	FF3-7	2	CO2	x	x	12g				1					
17/07/20 23	137	FF8-12	1	CO1	x	x	Зg									
17/07/20 23	140	FF8-12	2	CO2	×	x	2,2g									
17/07/20 23	138	FF13-17	1	CO1	x	x	149g	5 yellow	5 yellow, 1 white	4	4			x		Possible pot handle
17/07/20 23	142	FF13-17	2	CO2	x	x	320,4 <sub>8</sub>	1 yellow	1 yellow, 1 white		2	x				Metal spike, cla figurine

Table 6 – Table showing the contents of each grid block in Trench FF of site NKM21/3

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	66



Figure 95 - Glass beads located in site NKM21/7



Figure 96 - OES beads located in site NKM21/7

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	67



Figure 97 - Small finds found throughout sites NKM21/3, NKM21/4 and NKM21/7. (From left to right) Spear heads, Pipe bowls, Hippopotamus tusk with grind marks, Worked bone with decoration, worked bone with decoration, Pipe bowl

# 8.2 Ceramic Analysis

The excavations yielded many ceramic sherds that will be cleaned, curated and then analysed for stylistic affinities after delivered to the University of Pretoria for curation.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	68

## 8.2.1 On Site Analysis

During the excavation, a large amount of material had been uncovered. Due to the inability to keep all the ceramic sherds, due to the sheer volume, an onsite analysis of the ceramics was done. This included separating and weighing the undiagnostic burnished (painted with red ochre) and unburnished (without red ochre) ceramic sherds which were then discarded once they were recorded in a ceramic field recording form and then later digitised in excel (Table 7). All diagnostic ceramics were classified according to the sherds being decorated, plain rims and rims with decoration. These were further categorised as being ether burnished or unburnished. The diagnostic ceramics were then kept for further analysis in the laboratory.

 Table 7 - Table showing the digitized ceramic recording form for each Grid block of trench UU for
 site NKM21/7

1						Ce	eramic Field	Record	ling						
PGS						Proje	ct: 642 HM	IGR N'K	OMATI						
							Trenc	h UU							
Recording Date	Site Code	Square	Square Layer Context Bag		Bag Number	r Non-Rim: Plain N		Non-Rim: Decorated		Rim: Plain		Rim: Decorated		Buckets	
						Burnished (kg)	Unburnished (kg)	Weight (Kg)	Burnished	Unburnished	Burnished	Unburnished	Burnished	Unburnished	(10 L)
27/06/2023	NKM_L_21/7	UU -(11-15)	1	CO1	82	0,865	1,61	2,475	1	1	3	0	0	0	157
26/06/2023	NKM_L_21/7	UU -(6-10)	1	CO1	76	0,645	2,915	3,56	1	2	2	2	0	0	194
26/06/2023	NKM_L_21/7	UU -(1-5)	1	CO1	75	0,32	4,44	4,76	1	5	0	7	0	0	97
26/06/2023	NKM_L_21/7	UU 1-5	1	CO1	79	0,959	1,91	2,505	0	1	2	7	0	0	138
26/06/2023	NKM_L_21/7	UU 6-10	1	CO1	81	0,645	3,695	4,34	2	5	2	5	0	2	110

# 8.2.2 Ceramic Typology

Ceramic typology studies in southern Africa are the predominant approach to studying cultural interaction in southern Africa. Ceramics are classified by varying design styles such as vessel shape, motif forms, and the placement of motifs on the vessels. The combination of these features is then used to infer a cultural identity relating to the sites on which they are found (Huffman 1980). The varying design styles aid in providing a chronological time framework that helps to identify the interaction of communities through time within a region.

This type of approach is built on the idea that varying design styles are a result of interaction between varying communities within a given landscape. Therefore, ceramic styles manifest through structured learning and participation within the manufacturing process and are useful in identifying social interaction within a region.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	69

## 8.2.3 Laboratory Methods

Each selected diagnostic ceramic sherd was cleaned using water and a brush and then left to dry before applying a thin brushstroke of Paraloid B72. Paraloid B72 is a granular solid which dissolves in acetone to produce an adhesive mixture. This adhesive was applied to a small section at the back of the ceramic sherd. An acrylic pigment was then applied using a calligraphy pen to mark each sherd within the assemblage with the corresponding site name, trench code, and layer number.

An attempt was made to refit as many sherds as possible, whereby sherds were cross-compared to varying loci within the trench as well as neighbouring trenches. Sherds that could be refitted were mended using the Paraloid B72 adhesive. All diagnostic sherds relating to an individual vessel were additionally marked with their own unique number.

## 8.2.4 Stylistic Analysis

For this study, Huffman's (1980) standardised core-concept approach was applied to the diagnostic sherds of the sites to analyse their stylistic features. This approach combines the identification of the vessel morphology, type of motif on the vessel, as well as the placement of said motif. The combination of the three stylistic features then allows for grouping of ceramics into similar types and sub-types. Refitted ceramic sherds will then be cross compared to group together those which potentially originated from the same vessel. Where rims were absent, sherds with motifs were still analysed according to their motif type.

The following attributes were analysed:

#### 8.2.5 Profile

Diagnostic and rim sherds were categorised into basic vessel types based on their profile shape. Vessel shapes were a defining feature in the formation of subtypes based on which motifs they had.

#### 8.2.6 Motif

Motif refers to the decorative feature on a ceramic vessel, with a magnitude of various types and combinations thereof. The selected method of application is then repeated to form a distinctive pattern which can often be a reflection of a community's shared identity. Ceramic decoration/motifs are often deeply set into communities of practice whereby pre-existing social behaviours are further

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	70

reinforced in the production of new pottery (Huffman 2007). Motifs were the defining feature in the identification of ceramic types.

Incisions (*Figure 98*), punctuates and stamping (*Figure 99*) were the motif methods documented being implemented during the pottery production process. Incisions refer to decorative motifs whereby lines are cut into the clay using a sharp implement either when the clay is still wet or once it has slightly hardened (Rice 2005). Punctuates are a type of motif whereby a myriad of implements may be used such as fingernails or sharp objects to make an impression into soft clay (Rice 2005). Stamping refers to the repetitive use of an object as to stamp that chosen image into the soft clay until the desired motif is achieved (Rice 2005). Common objects for motif stamping include comb stamping, shell stamping and bracelet stamping whereby a helix or beaded bracelet is used to stamp a motif into the clay.



Figure 98 - Image of incisions on ceramic sherd for site NKM21/7



Figure 99 - Ceramic sherd from site NKM21/7 showing stamping

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	71

## 8.2.7 Motif Placement

The placement of the motif on the vessels was also documented to complete the stylistic analysis. This was documented for rim sherds whereby different portions of the vessels could be differentiated, this includes the rim, neck, shoulder, and body (*Figure 100*).



Figure 100 - Reconstructed pot from NKM21/7 showing motif placement.

Preliminary stylistic analysis has shown that the decorative motives such as red burnishing, double herring bone banding, as well as single multiple banding below the lip, shows corresponding affinity with Tsonga groupings on the Mozambican/Swaziland/South African border (Ohinata, 2002). The same stylistic similarities were identified by Meyer (1986) and attributed to Tsonga groupings post 1830AD. The same stylistic patterning is also attributed to more recent Tsonga pottery (Lawson,1965).

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	72



Figure 101 – Small fragmented ceramic cup.



Figure 102 – Unique incised and framed pattern.



Figure 103 – Multiple band incised herringbone pattern.



Figure 104 – Another multiple band incised herringbone pattern.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	73



Figure 105 – Multiple comb-stamped parallelogram/lozenges pattern.



Figure 106 – Slightly oblique multiple band incised pattern.

Other finds contained in some of the excavated matrix that allude to an archaeo-historic temporality, thus questioning the initial interpretation of an Early Iron Age archaeological site based on a few decorated surface ceramic finds.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	74

# 9 BURIALS AND STAKEHOLDER ENGAGEMENT

In our permit application it was suggested and accepted by SAHRA that any burials that were found during the mitigation process, will be left *in situ* and only removed after an amendment to the excavation permit. Previous excavations on the property under Permits 3230 (Section 36, CaseID: 17686) and 3264 (Section 36, CaseID: 16286) uncovered large numbers of very shallow LIA burials, and here it is no different; fifty-five burials were uncovered on sites NKM21/3, 21/4; 21/7 and 21/11, of which six were pot burials (*Figure 107*).

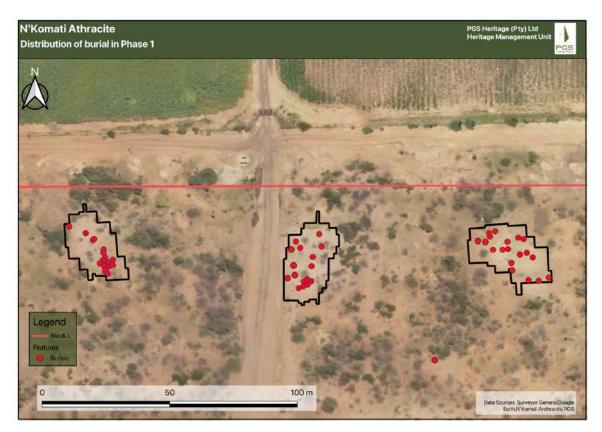


Figure 107 - Distribution of burials in Phase 1

# 9.1 Proposed Mitigation of burials

Although an effort was made to fully excavate all visible archaeological deposit and all features that may contain burials outside of these deposits, there is a significant chance that burials remain in areas that have not been excavated. A very close watching brief will be needed during clearing of the site for mining activities to mitigate any such remains.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	75

## 9.1.1 Documentation and anatomical description of the remains

It is our suggestion that the remains be documented and described by a suitably qualified physical anthropologist; the pot burials are especially rare and could add much value to the archaeological record. We are cognisant of the sensitivity surrounding the removal and analyses of human remains and we suggest that the anatomical description be done on site before reburial. No remains will be removed from site for this work to be done.

During the HIA conducted in 2022, human remains were found on the surface at site NKM21/3; The SAPS were called, and the remains were reburied where they were found, which is in the kraal area of the site. This area of the site has seen some historic removal of kraal deposit, presumable for agricultural purposes. During the mitigation, the disarticulated skeletal remains of more than one individual were found here; a skeletal analysis of the remains will be needed to determine the number of individuals for burial.

# 9.1.2 Stakeholder Engagement

As stated in our initial application, stakeholder engagement to identify the historical and more recent occupants of Block L has been undertaken before the S35 application has been made. The same stakeholder engagement procedure has been followed that would normally been used for a Section 36 permit application process. Stakeholder Engagement, Archaeological Mitigation and Grave Relocation processes have been continuously conducted at Nkomati Anthracite since 2018 and that the various stakeholder (Traditional Authority, surrounding community, and affected families) are aware of the current project.

The mitigation project employs 22 local persons connected to the families who resided in the area where the work is being conducted. Refer to Appendix F and H for stakeholder engagement documents.

With regards to the current project at Block L, the stakeholders have been engaged and subsequently completed affidavits confirming their historic residence in the area. In these affidavits they also lay claim to any human remains that may be uncovered during the mitigation project (refer to **Appendix F**).

Engagements revealed that the area was occupied in the mid-1800's by groups who migrated from the KZN area. The prevalence of late Tsonga cultural material on the archaeological sites is not explained by this migration and may indicate a multi-phase occupation of the area (Refer to section 4 - Background).

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	76



Figure 108 - Members of the community during SE efforts on 2022/09/01.

## 9.1.3 Site - and newspaper notices

Notices were placed at the site in September 2022 and again in July 2023. The latter set of notices remains in place at the time of writing and will be continuously updated and replaced until the completion of all four project phases. Newspaper notices were also published in *The Lowvelder* and *The Daily Sun* during these periods (Refer to Appendix E).

# **10 CONCLUSION AND RECOMMENDATIONS**

Using the information in the 2022 HIA conducted by PGS, the company applied for and obtained an excavation permit from the SAHRA to undertake archaeological mitigation, test excavation and ground penetrating radar scans on sites identified during the HIA. The purpose of the permitted mitigation is to extensively excavate the archaeological sites and features and to collect representative samples of the archaeological material on the sites for analysis to determine temporal localisation, cultural affiliation, and possible social structure and layout of the settlements. A key element of the mitigation would also be to identify unmarked burials and to ensure, as far as it is possible, that no unmarked burials are left in the area after completion of the mitigation work.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	77

Representative samples were recovered from the cultural deposits present on sites NKM21/3; NKM21/4 (included NKM21/15) and NKM21/7 (included NKM21/16). The material recovered included a wide range of archaeological artefacts consisting of decorated ceramics, clay smoking pipes and figurines, metal weaponry and tool-fragments, faunal material (including worked bone), numerous glass and ostrich eggshell beads and charcoal for possible radiocarbon dating. This material is currently being processed at the PGS laboratory after which it will be submitted to the University of Pretoria for curation.

Test excavations at sites NKM21/10, NKM21/18, and NK21/24 showed that the archaeological deposits were very shallow and did not yield any significant material of value or interest.

The test excavation at site NKM21/11 uncovered the human remains of an adult, which justified the execution of the test excavations on the features identified during the HIA.

A total of fifty-five human burials were identified during the excavations of the above-mentioned sites. These burials were mostly very shallow and after being documented, were covered and protected with sandbags, and then marked with mounds of soil. They will be left *in situ* and only removed after an amendment to the excavation permit has been approved by SAHRA.

Due to the extent of post-processing of material this interim report is submitted as backing for the destruction application to be submitted by Nkomati Anthracite Mine to ensure that mining activities can continue.

It is our recommendation that the destruction process of the sites mentioned and described in this report can continue upon the receipt of a destruction permit from SAHRA and the implementation of the recommendation below:

## **10.1 Recommendations**

## The following recommendations are made:

- 1. That the sites described in this interim report, to wit, NKM21/3, NKM21/4, NKM21/7, NKM21/10, NKM21/11, NKM21/15, NKM21/16, NKM21/18, and NKM21/24 be destroyed following the methodology set out in section 10.2, below.
- 2. That the destruction permit makes provision for the relocation of the human remains from the burials found at sites NKM21/3, NKM21/4, NKM21/7, and NKM21/11 after it have been documented and described by a physical anthropologist.
- 3. That any other human remains of archaeological origin that may be uncovered during the destruction of the sites located in Phase 1 of the project, to wit, NKM21/3, NKM21/4,

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	78

NKM21/7, NKM21/10, NKM21/11, NKM21/15, NKM21/16, NKM21/18, and NKM21/24, or in areas situated within the general area of Phase 1 of the project be relocated as stated in Recommendation 2 above.

4. That any archaeological material uncovered during the destruction process be documented and collected as set out in the methodology below.

# 10.2 Destruction methodology

It is recommended that during the destruction of the sites mentioned in this report, archaeologists monitor the earthworks. The destruction process will follow the process as set out below:

- An archaeologist will be appointed to monitor the physical destruction work on site. It is
  envisaged that this senior archaeologist will manage a team of archaeologists and field
  technicians that will be present during the destruction process.
- Where necessary, site clearing will start with the removal of vegetation with suitable heavy machinery that could include bulldozers and TLB machines.
- The clearing will be done in a controlled and systematic manner.
- After clearance of the vegetation, it is recommended that a grader is used to strip the topsoil in 20-30cm layers (this is dependent on the soil and subsurface conditions).
- If any archaeological material is found, the work will be stopped in the specific area of finds until the material can be recovered under the current s 35 permit conditions.
- All recovery work will be done according to SAHRA and ASAPA standards and will follow the archaeological process as already contained in Permit CaseID: 19691 PermitID:3926.
- As reported in this document, the recovered material will be included in the bulk samples collected from the excavation and sampling process and will be added to the material to be analysed.
- A final destruction report will be submitted to SAHRA on completion of the works.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	79

# 11 REFERENCES

- CONYERS, L.B., 2016 Interpreting Ground Penetrating Radar for Archaeology. Published by Routledge, New York, USA.
- HUFFMAN, T. N., 1980. Ceramics, classification and Iron Age entities. African Studies 39(1): 121-73.
- HUFFMAN, T. N., 2007. Handbook to the Iron Age. The Archaeology of Pre-Colonial Farming Societies in Southern Africa. University of Kwa-Zulu-Natal Press.
- LAWTON, A.C., 1965. Bantu pottery of southern Africa (Master's thesis, University of Cape Town).
- LEACH, P., 2021 A Theory primer and Field Guide for Archaeological, Cemetery, and Forensic Surveys with Ground-Penetrating Radar. Geophysical Survey Systems Inc. Nashua, New Hampshire, USA.
- MEYER, A., 1986. 'n Kultuurhistoriese interpretasie van die ystertydperk in die Nasionale Krugerwildtuin (Doctoral dissertation, Universiteit van Pretoria).
- MUCINA, L. & RUTHERFOR, M.C., Eds. (2006) The Vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19, South African National Biodiversity Institute, Pretoria.
- MYBURGH, A. C., 1949. The Tribes of the Barberton District. Government Printer. Pretoria.
- OHINATA, F., 2002. The beginning of 'Tsonga' archaeology: excavations at Simunye, north-eastern Swaziland. Southern African Humanities Vol. 14 Pages 23–50 Pietermaritzburg December, 2002.
- RICE, P.M., 2005. Pottery Analysis: A Sourcebook. Chicago University Press.
- STEYN, H.S. & De JAGER, L. 2022. Heritage Impact Assessment for the N'Komati Anthracite Mine, Nkomazi Local Municipality, in the Ehlanzeni District Municipality, Mpumalanga Province.
- STEYN, H.S. & KITTO, J.A., 2020. Heritage Impact Assessment for the Nkomati Anthracite Mine, Nkomazi Local Municipality, in the Ehlanzeni District Municipality, Mpumalanga Province.
- VAN VOLLENHOVEN AC & A RADFORD. 2011. A Report on a Heritage Impact Assessment for the Nkomati Anthracite Mine in the Magisterial District of Barberton, Mpumalanga Province. For: Sentula Mining. By Archaetnos.
- VAN WARMELO, N. J. 1935. A preliminary survey of the Bantu tribes of South Africa. Ethnological Publications no. 5. Government Printer. Pretoria.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	80

# **APPENDIXES**

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	81

## **APPENDIX A – Landowner Letter**



Nelspruit 1206 Tel: +27 13 492 5557 Co. Reg: 1980/08581/07 VAT Reg: 472 012 0221

P O Box 231 Sonpark

Letter reference nr: M186

The South African Heritage Resources Authority Archaeological, Palaeontological and Meteorites Unit 111 Harrington Street Cape Town 8001

Attention: Mr Philip Hine

Dear Sir,

RE: LANDOWNER CONSENT FOR UNDERTAKING ARCHAEOLOGICAL EXCAVATIONS, GPR SURVEYS, THE RELOCATION OF HUMAN REMAINS AND THE REMOVAL OF ARCHAEOLOGICAL SAMPLES FOR THE N'KOMATI ANTHRACITE MINE, NKOMAZI LOCAL MUNICIPALITY, IN THE EHLANZENI DISTRICT MUNICIPALITY, MPUMALANGA PROVINCE (HIA SAHRA CASEID: 18243)

The above matter refers.

PGS Heritage (Pty) Ltd (PGS) (represented by Professional Accredited Archaeologists, Henk Steyn and Wouter Fourie) has been appointed by the Nkomati Anthracite Mine to undertake phase two Archaeological mitigation for the archaeological sites identified during the HIA of the area to be impacted by the development of its Block L pit. This permission extends to any additional archaeological sites and burials that are found during the mitigation process.

The Nkomati Anthracite Mine hereby provides formal landowner consent for PGS to undertake excavations, GPR surveys, the removal of the archaeological and historical artefacts contained, and the relocation of any human remains should these be discovered, as and when required under the permits issued by the SAHRA.

Kind Regards

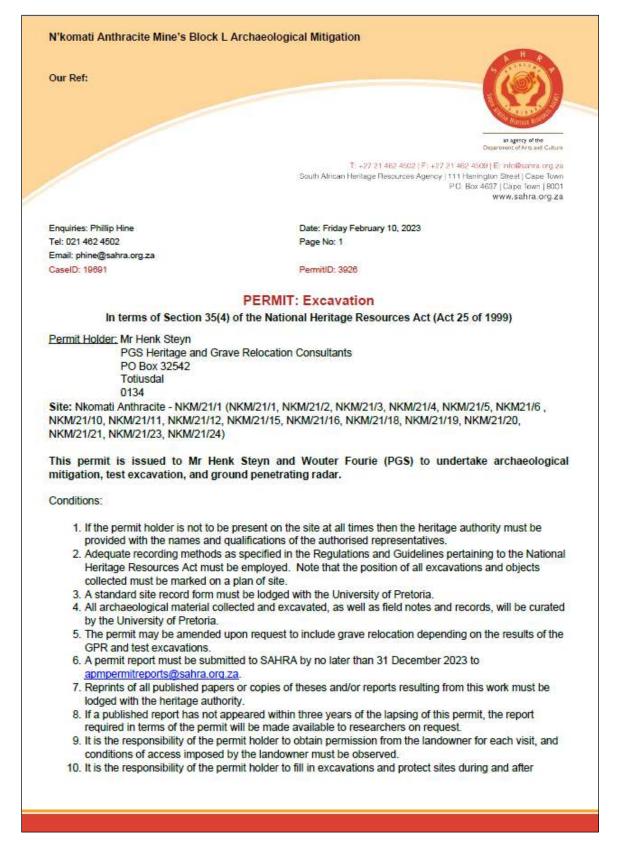
Wijleh Hattingh Geperal Manager 083 408 7630 willem.hattingh@afrimat.co.za

Directors: • C Ramukhubathi • GM Odendaal

Page 1 of 1

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	82

#### **APPENDIX B – SAHRA Permit**



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	83

	- APPR -
Our Ref:	(6)
	and the second sec
	an agency of the Department of Arts and Culturie
	T: +27 21 462 4602 ( F: +27 21 462 4609 ) E: info@sama org za
	South African Heritage Resources Agency   111 Harrington Street   Cape Town P.O. Box 4637   Cape Town   8001 www.sahra.org.za
	<ul> <li>A 2009 0 01 (00 90 3 D 0 90 010)</li> </ul>
Enquiries: Phillip Hine	Date: Friday February 10, 2023
Tel: 021 462 4502	Page No: 2
Email: phine@sahra.org.za	
CaseID: 19691	PermitiD: 3926
	of the heritage authority and the landowner.
	ot be liable for any losses, damages or injuries to persons or properties
as a result of any activities in	
12. The heritage authority reserv	es the right to cancel this permit by notice to the permit holder.
This permit is valid from	
10/02/2023 to 31/12/2023	
Phillip Hine	
Manager: Archaeology, Palaeontolog	
South African Heritage Resources A	gency
Additional Info:	
Additional Info:	and a bould an anneal against the designer by reserved by CMUD
Please note that this permit may be	
Please note that this permit may be within 14 days from the date of the p	ermit. SAHRA may not be held responsible for any costs or losses
Please note that this permit may be	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	ermit. SAHRA may not be held responsible for any costs or losses on or retraction of this permit.
Please note that this permit may be within 14 days from the date of the p incurred in the event of the suspensi	on or retraction of this permit.

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	84

#### **APPENDIX C – UP Curation Letter**

ITIES Car UNIVERSITEIT VAN PRETORIA UNIVERSITY OF PRETORIA YUNIBESITHI YA PRETORIA 1919 - 2019 Department of Anthropology & Archaeology 10 November May 2022 Mr Phillip Hine South African Heritage and Resource Agency Archaeology, Palaeontology and Meteorites Unit Head Office Dear Mr Hine, APPROVAL OF REQUEST FOR THE CURATION OF MATERIAL FROM THE ARCHAEOLOGICAL EXCAVATIONS, GPR SURVEYS, THE POSSIBLE RELOCATION OF HUMAN REMAINS AND THE REMOVAL OF ARCHAEOLOGICAL SAMPLES FOR THE N'KOMATI ANTHRACITE MINE'S BLOCK L DEVELOPMENT, NKOMAZI LOCAL MUNICIPALITY IN THE EHLANZENI DISTRICT MUNICIPALITY, MPUMALANGA PROVINCE (SAHRA CASEID - 19691) Dear Mr Hine. This letter appropriately informs you that the Department of Anthropology and Archaeology at the University of Pretoria is committed to curating the archaeological material generated from the approved archaeological mitigation of sites that will be impacted by the expansion of mining activities in the area known as "Block L" of the Nkomati Anthracite Mine situated in the Kangwane coalfield in the far east of the Mpumalanga province of South Africa, approximately 50km south of Komatipoort. If you have any queries, please do not hesitate to contact me. Yours sincerely, Dr A. Antonites Room 2-27, Building 4 East Faculty of Humanities South Campus University of Pretoria, Private Bag X20 Fakulteit Geesteswetenskappe Hatfeld 0028, South Africa Lefapha la Bomotho Tel +27 (0)12 420 6294 Email alexander.antonites@up.ac.za www.up.ac.za

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	85

# Appendix D – Site Notice

2022			
4			
PGS		SITE NOTICE	
(2022/09/15)			
NOTICE: RELO	CATION OF HUMAN R	EMAINS	
Notice is hereby given that:			
• On behalf of N'Komati Anthrac	ite, PGS Heritage (Pty) Ltd and a	local Funeral Undertaker	
intend applying in terms of the Nat Health Act (Act 61 of 2003) and any and by-laws;			
to the:			
<ul> <li>Provincial Administration of the</li> <li>South African Heritage Resource</li> <li>Relevant District and Local muture</li> <li>The local Traditional authority</li> </ul>	ces Agency (SAHRA); nicipalities and	e located;	
,			
for approval to exhume and re-int following area or within a 100m fi		nan remains buried in the	
<ul> <li>Northeast corner of site: -25.7</li> <li>Southeast corner of site: -25.7</li> <li>Southwest corner of site: -25.7</li> <li>Northwest corner of the site: -25.7</li> </ul>	98002° & 31.805467° 798019° & 31.801579°		
The site is located on state land to the village of Madadeni in Mpuma		503 JU and directly east of	
The human remains will be exhume location <i>as per</i> the request of the de from the buried individuals, all perso or any person or communities with process and must forward their cor (14 days for newspaper notices) of	eceased's families. All persons and ons and communities by tradition h an interest in the graves are ir ntact particulars to the address li	d communities' descendant concerned with the graves wited to participate in the	
Please use the following as reference	te: 642GR		
Mr Themba Duze Email: Tel: 013 4925557 PO Box 231, Sonpark, 1206	Themba.duze@afrim Cell: 082 61822714	at.co.za	
Dee No: PGS PJ PRC002/01	Effective Date: 06/04/2022	Rev: 1.0	

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	86

4		
4		
PGS		SATISO
SASESAYITHINI		
2022/09/15		
SATISO: KUGCWATJW	/A KABUSHA KWEMATSAMBO ALESEBA	LELE
Kuniketwa satiso kwekutsi:		
• Nge kumelela N'Komati Anth	hracite, PGS Heritage (Pty) Ltd neBangcwabi Bendi	zawo
1999); ne National Health Act (U	oisana ne National Heritage Resource Act (Umtset Umtsetfo 61 wanga 2003) kanye naleminye Imit yaVelonkhe, Sifundza noma Masipala;	_
ku:		
	nekungcwaba emathuneni lakulendzawo, no gcwatjwa kuletindzawo noma emamitha la-10	
	anga nempumalanga: -25.793328° & 31.805489	0
	to nempumalanga: -25.798002° & 31.805467°	
	tfo neningizimu: -25.798019° & 31.801579° anga nenyakatfo: -25.793337° & 31.801597°	
Lelisayithi litfolakala emhlabeni	i wembuso longasenyakatfo nalelipulazi lase F ga yesigodzi saseMadadeni eMpumalanga.	ig Tree 503
Lamatsambo ebantfu atawuguj	jwa kulendzawo lekakuyo nyalo ayongcwatjv	va kabusha
	o nesicelo saemindeni yalaba lebashonelwe. Bo	
	salaba labangcwatjwa, bonkhe bantfu ne	
	igalamathuna noma muphi umuntfu noma ayamenywa kutsi bangenelele kulenchubo fut	
	netindlela tekuchumana kulelikheli lelibhalw	
kungakapheli emalanga lali-60 kusukela ngalolusuku lwalesatiso	(emalanga lali-14 esatiso lesikhishwakuliphe o:	phandzaba)
Sicela usebentise lolokulandzelak	o njengereferensi: 642GR	
Mr Themba Duze Email:	Themba.duze@afrimat.co.za	
Tel: 013 4925557 PO Box 231, Sonpark, 1206	Cell: 082 61822714	
ino. yeDok: PGS PJ PRC002/01 Rev: 1.0	Lucuku Iwekusebenta: 06/04/2022	
Nov. 1.0		

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	87

# 

PGS		SITE NOTICE
(11.07.2023)		
NOTICE	RELOCATION OF HUMAN RI	EMAINS
Notice is hereby given that	z.	
On behalf of N'Komat	i Anthracite, PGS Heritage (Pty) Ltd and a	local Funeral Undertaker
	f the National Heritage Resource Act (Act and any other relevant National, Provincia	
to the:		
		e located;
for approval to exhume a following area or within a	nd re-inter in a local cemetery, any hum a 100m from it:	an remains buried in the
<ul> <li>Southeast corner of s</li> <li>Southwest corner of s</li> </ul>	ite: -25.793328° & 31.805489° ite: -25.798002° & 31.805467° site: -25.798019° & 31.801579° site: -25.793337° & 31.801597°	
The site is located on Po Madadeni in Mpumalang	rtion 30 farm Matabula 701 JU and dire a.	ectly east of the village of
location as per the request from the buried individuals or any person or commun	e exhumed from their current place of bu of the deceased's families. All persons and a all persons and communities by tradition ities with an interest in the graves are in their contact particulars to the address lis	communities' descendant concerned with the graves vited to participate in the
Please use the following as	a reference: 642HMGR	
Mr Themba Duze Email: Themba.duze@a Tel: 013 4925557 Cell: 082 6182 2714 PO Box 231, Sonpark, 12		
Dee No: PGS PJ PRC002/01	Effective Date: 05/04/2022	Rev: 1.0

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	88

PGS	SATISO SASESAYITHINI
(11.07.2023)	
SATISO: KUGCWATJWA K	ABUSHA KWEMATSAMBO ALESEBALELE
Kuniketwa satiso kwekutsi:	
• Nge kumelela N'Komati Anthraci	te, PGS Heritage (Pty) Ltd neBangcwabi Bendzawo
	a ne National Heritage Resource Act (Umtsetfo 25 wang setfo 61 wanga 2003) kanye naleminye Imitsetfosimis slonkhe, Sifundza noma Masipala;
ku:	
<ul> <li>Balawuli Besifundza kuleSifundza</li> <li>Sikhungo Semitfombo Yetemagu</li> <li>Sigodzi Lesifanele naMasipala W</li> <li>NeBukhosi Besive Bakulesi Sigodz</li> </ul>	asesifundzeni
	ngcwaba emathuneni lakulendzawo, noma mapl atjwa kuletindzawo noma emamitha la-100 dvutan
<ul> <li>Esayithini lelingaseNnyakato ne</li> <li>Esayithini lelingaseNnyakatfo na</li> </ul>	a nempumalanga: -25.793328° & 31.805489° mpumalanga: -25.798002° & 31.805467° eningizimu: -25.798019° & 31.801579° a nenyakatfo: -25.793337° & 31.801597°
Lendzawo iseceleni kwelupulazi l mpumalanga enkomazi.	wakaMatabula ligama lendzawo kuse Madadeni
endzaweni lensha njengekwesifiso ne nemimmango labasitukulwane sal ngekwelisiko labatsintsekako ngala lenenshisekelo kulamathuna bayam	kulendzawo lekakuyo nyalo ayongcwatjwa kabush sicelo saemindeni yalaba lebashonelwe. Bonkhe bantf aba labangcwatjwa, bonkhe bantfu nemimmang mathuna noma muphi umuntfu noma imimmang ienywa kutsi bangenelele kulenchubo futsi kufane dlela tekuchumana kulelikheli lelibhalwe ngenta ela ngalolusuku lwalesatiso:
Sicela usebentise lolokulandzelako nje	ngereferensi: 642HMGR
Mr Themba Duze Email: Themba.duze@afrimat.co.za Tel: 013 4925557 Cell: 082 6182 2714 PO Box 231, Sonpark, 1206	
Inc. yeDok: PGS PJ PRC002/01	Lucuku Iwekusebenta: 06/04/2022

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	89

Appendix E – Newspaper Notice

<u>2022</u>



Daily Sun:

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	90

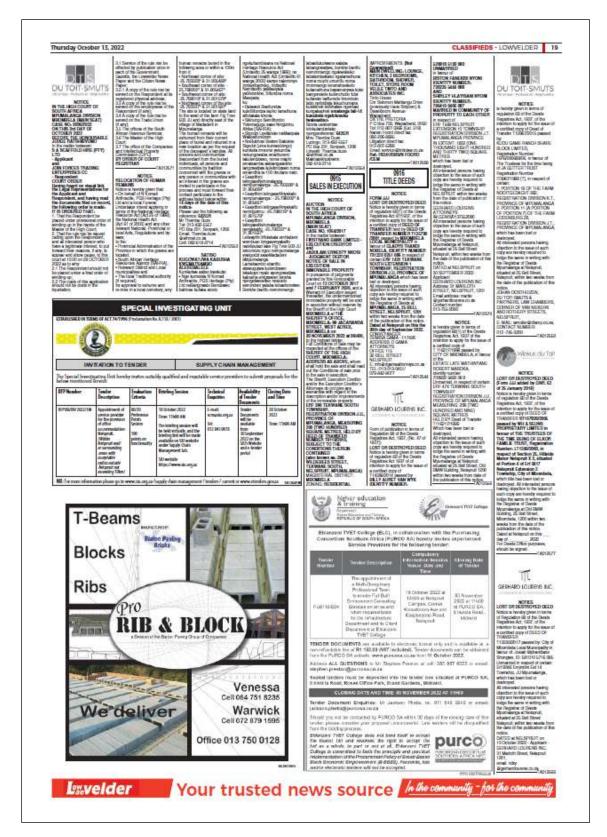


SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	91



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	92

Lowvelder:



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	93

<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	LEGAL8	promulgated in larms of Eaches 24 of the National Environmental	3.5 Serves of the sale ratios effected by were of measures of	OCSIGNFONTEIN FRIM	communicated for set exclusion reading and convergion of	(a) associated infrastructure, structures and outpactures.	Mr Thents Date	That Let 18 warrow
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	0905 ALCEODENTS	Appropriate Act, then Upper Hol, 107 of 1980; Accept, a loose Approximated Process will be	effected by way of measure on the excisi media platform Whats/aps and by way of Short Massage Service (SMS)	abdrosa in the Republic of South Africa and white the Southeries of Moutheliance Province Practal	exhibite event and operation of Law Pel seventi occur on Porton 1, of the term Docurtook. 256-01. Theire Chemic Loop	diructions and owtherafus, deadly related to prospecting of a minimal intecuror, or (b) the primary proceeding of a	PORa 20 Sorper, 126 Enail Trends due Gatteric orts	PROTUS CZE KUM IDAIOUNICT NUMBER N.
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	0910 Public & Legal Notices	A shortpatton from the Mountaining Department of	<ol> <li>A copy of this order be astrong on the employees of the Descontract</li> </ol>	SCRICHFONTEN FAIM LYDENBLFIG \$120	FLEF HO.	nines record todating wining, attactor, cleaning, caronitating, crahing	TADIS	12.1 SALE IN ELECUTION By strue of an Order coeffied (
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	0915 Rales in Ensoution 0919 Lost Title Deads	COULD BE BE THE COULDE	<ol> <li>A copy of this order be served on the shico of the employees of the Respondent.</li> </ol>	CONVENTS MERTING	DE WINTER	actioning of Washing Tull osciluting the secondary processing of a minutes	KWEMATSAMUC	MAGRITRATE COURT, MECHINE A Bolinitement
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>		THE RECEIPTION AND ARTIST	RECIPCTEAR		Contact Paralon: M/ M F Sligbing PTO Rex 2007 STELLIES	instants, including the emotion, bereficiation, induction, infining, calcinitis or paelication of the	A Distance of the State of the	TENCERISTING A SHORE
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	(635 Town Planning		NOTICE NOTICE	copy to the applicant, ic much the said applicant, within thirty (30) days of this publication.	Com man rult	within G in Listing Nation 2	tetting in take similar	MICHIELA In the history
<text></text>	10-80-1710-111	invitation to Participate for an invited product of register as an interested and	FOR A LIQUOR LICENCE IN TERMS OF SECTION BEDINE	Municipality's addresse Thaba Chancul acial Manopality CMR CENTRAL AND VEJCON	ENDS LONDON HOM	SIMPLY ADDRESSOR BY COM IN THE	Hoteland Contraction of Federal Hoteland Headcorte Act (Circlento 25 everylar (1993) 1	111 Star 28 Mir Plan
<text></text>			LIQUON LICENCING ACT,		PO Res 25626 MORNEELA	Application flat no.	National Health Act (Utravits stangs 2001) karyo salanny IndexEcurrey, Indexts	E 10 X CHAPTS
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	NOTICES	captured, Moneyer, II all	C MAGANE PCTRUE WARTER	OF APPLICATION IN TERMS OF SECTION 240 OF THE	E.M.E. (006-6400-14000)	Cantrict of Lasinger, Withstrogger	va Vakinigisi, Situndas nome. Masipala	T-SORDE COMPOSED
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	WARDING STREET	prograd throughout the	application for a liquel lictarics in	MANAGEMENT ACT. 1969 ACT. NO. 107 CE 1969 EDR A	Gyodematics.cs Meters of Childre Darksmatters at	Applicant-KITEREARCHINE (Phy)	<ul> <li>Entretud Desthurting</li> <li>Cold Standard Sector Sector</li> </ul>	* CHAR
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	SCOOLED DESERVED	He Kingerna Machini	Authority to toute-under the memo of GANGS TRISTIN.	WAS COMMENCED WITHOUT AN ENVIRONMENTAL AUTOSWITHTOM		Department of Minana Personana	And a long of the second second	10 1 2 10 PERMITEN
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	CITICAL COLORIDAD	Tel: 076-0919-07020	I POWE TYPE	An application for social spon in terms of eactor 28 G of the	the Netroi Switchers	THE OTHER DESIGNATION AND ADDRESS	Signatzi Luscherwin nuWasign Wassenfutzieren Maßlutzen Desten Data dost	
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	WITHIN CHLANZEN	Creat with	consumption on and of the promase where the light is	Management Act, 1928 (ActMo, 107 of 1938) and the Netonal Entermedia Management	ALL'S ADACHT FUTY, ALLERS	Stakeholders are invited to register as interested and	Signitr (una kurasitiringo) kurakola mauna yakunta nakuramaka anafusan	17 1 5 100 COMPANY 18 1 2 COPENI COMPANY 18 1 2 HELENSE FREDES
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	APUMALANCA PROVINCE	America de porte anterno, co de musicamida A America de porte de proceso de marte de porte	Diffusions Prevalence Prysical address 20400 STREET, AN SANDIELWE	2000 to the blowing lated activities which were	miensi to the major to the piecon given abree within thirty (20) day of until and the	participate in the prices by dentifying bacasis of concern to	ematemble diductions of the second of the se	INC INC
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	and American ELA	WORKE.	African and altigated within the	commenced without an	Date of this advertisement.	of the libest Assessment Report.	amounth a locit fill discharge (sei	COT. BACIER DAINE & PET
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	Table as enormalies published = inversion Sector (Sector 1996) of the indexed Environmental		Representation of Meurodorge Provinces ADDRESSES TO WHICH	Authority will be keeped with the Department of Agriculture, Rumi Development, Land and	TADIORDI		31 Marcar	Tel: 013-620-1775
<text></text>	and an	CASE NO. 50% (OE22 ON THIS JPD DAY OF	COMMENTS MUST IK	MOUTHNESS DOVIDED	OF ENVIRONMENTAL AUTHORISATION	Face: CMC-007-0112	nompurselanges - 25, 7580007 31 205,457* • Easythet interpretational	Contraction of the second states of the
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	<ol> <li>36 of 1980, WWW for the prove democracy project leminude Consultante (Phy) Ltd.</li> </ol>	SEPONE THE HONDURABLE OMENTARIES AND ADDRESS	enting and be addressed to the manicipality concerned and a copy to the applicant, is reject.	WEN - The descents of an area of it	Land and Environmental Atlants (DAPES EA) have, to terms of	Scravity Creation	31101270	FOR THE DESTRICT OF
<complex-block></complex-block>	A Republicant (2) (1) by Suma consulting Engineers (or behall	A DOM NO ANT	(IE) they of this sublication.		Management Act, (DSE (Act 107) of 1024) tax amongst 2014)	TANZIK	nerveloft: St. 782217 B 31 801527	Case No. 4162020
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	AVALATION ANALITY .		26 SCHLITTER STILLT PELTATE 100 ENMOUNTN	vegabato di retgaraci tor - The underbiding of linear		SELDCATION OF HUMAN REMAINS	eventisad konguermekadio tesisitasiad lass Fig. Tree 200	ACTOVERANTS WAREHOUS
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	inversemental inpact assessment for the processal	- HESPONERN	Applicant's with two: STAND NUMBER   ADD	<ul> <li>Man/enance purposes undertaken misconistico with a</li> </ul>	Project description. Development of a referring well and misriprices and and	· Or helpel gill Romat	resigned and Mederari Metamolecta	And
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	and Parlem C of Photogola No. 20-20 al Hartwine, under Dity C Monanda Martyline, under Dity	the Logal Representatives for the Applicant and Tespondent, and being read	Advertiser Norte: FUTH NOCEE Advertiser Address 20153-ELIANE, 15	sectority, 27 of Lating Notice 1, 2017 as amorphot; + Resolvedial, migod, total.	FIRST SACING JALF N.L.	Comparison Service 100 of 10200	<ul> <li>Koleccjujime kulenticemo Inkaliusjo nyslo sytorijchesijes kadustve emizonemi letožne</li> </ul>	the Magazhath & Court of White Registration & Court of White Registration & November 2020 It
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	Autom Dent, ri Thi Apamelenge Province	in conferred lited	Advertiser Druit pathiektivesprentisersulierte		has addressed on their efficiency rule	the Nedional Health Act (Act 41 of 2000) and any other	nargovers fao rescoro	ecic on at Gindo or Sigh day Sevention 2022 by public
<complex-block><complex-block><complex-block></complex-block></complex-block></complex-block>	httu6 Textitional Crainell		TADULAD	ADDRIVENDOT DO D' ARBITUT MON	CORRACT SHAMIN HARRINGSS (2)	USAR		of Moontella al 20 Jacomatida Streat, Waat Acros, Moontalia
<complex-block></complex-block>	Adult Arragement Wells: Park	<ol> <li>A rule rate los ent la haraby exaudi celling acon al panone caruternes to acore ano acore</li> </ol>	INVITATION FOR PUBLIC COMMENTS IN APPLYING FOR A LIGLION EXCENCE IN	be development will occur outside an urbert anna, whom the total land to be developed to	The National Append Act (2014), outfining the append process should you work to access any	<ul> <li>Provincial Adversariation of the Province in which the grasse are invested.</li> </ul>		18100051857
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	Abilutions, Dinase Asian, Restaurant and Doma, Chalada (201) and Stall Cottage, and		TERMS OF SECTION 35(2)(x) OF THE MPUMALANCA LADORY LICENCING ACT.		expect of the decore, you must, may also lotters a roles of manufact to draw with the latter	South Athent Heritigs     Sector Agency (SAHDA)     Holeword (Sater and Local	targeness summarie instricts	tel 1 X ACER MONTON 1 X FLE CARNET 1 X STATE CARNET
<text></text>	roptial diversion and a scalar of Portion C of Mctual	secure taken order and the make of the application should	11 L MOYD BELIERO CLIVE, O No. BREEK GUY (EG. at	<ul> <li>The development of factilities to initiazitucture for the terminazion and dedrication of</li> </ul>	willion 20 days, by mawas of stre- of the following methods: by Facatrolia: DrD 7785-4214		kublické klicholes reprise kurzyksztvol emalerez lel-	2 X CETICE CHARS
<complex-block><complex-block></complex-block></complex-block>	topper and an and the second at the second s	second alone in the second liter.	which make, hereby invites written public continents Concerning the application for a Lipper Lintense	relating conclusion with a	My YOR HOYNE HAR A TINTE	in service it advices and	territoria sgattametar territoria	78 SELECTION OF STREET
<text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	Apumation of Provincial The	official or the Hastorian by 11 Publication of the rule rate for the bit of calls in the	Authority. [2] To track under the name	scively 11 5(-d Liebog Natics 1, 2017 as	Neieralt 1200	Slowing som in within a 100m from 5 • Northwest correct of still	Constructional Comparisonal SECO	TARCE NEPTICE THAT: 1. This selects is a select watching to a select to a
<text></text>	3723 CT 10-44	3.3 Di Primatent of the sole site.	calls where this application on bothell of the satelic person case where of the satelic person	Waste-Wenspersent Listed		- Southeast come of elle	PO Dra 201 Sorpaix, 1206 I-most: Trantas dura	autgement obtained in the administration of the rules of the eact of the eact of the eaction is
<text></text>	to project inggine Labet loter 1 Actory So. 27 anti- part Nation 3 Activity No.	Ner practico address. 24 Septem of The sile star to	The No. 2022 Contractory of The road age of Space for consumption on and of the	to send covering an area in: excess of 200km and etch a total capacity eightwore 25000		SLTREEP & MACLEP	COST DATE TO A PLANT A	surfice at the officer of the
<complex-block><complex-block></complex-block></complex-block>	(10-m), pg, this of the hydroamental impact assumed flags atoms	effected on the Respondent by new of electronic medial doe with two crums	premiere where he import is	tors, advity il under Calegory il		The one is benefited on white land		one seguration subject is specific conditions, more size (s) if according to the Consumer
<complex-block></complex-block>					NOTICE OF MINING PETIMIT			Sankadis/Cell? 12 Bill 1
<complex-block></complex-block>	-	and the		19. 19	NODES IN GROWT IS SHITTP OF THE		FOR THE DESIGNATE COUR	Introducer bas bits logic Th
<complex-block></complex-block>	T-Bea	ams	1= -	1		descontient from the lapted	HELD AT MOOMENLA Case No. 139502	-200-20 for monable propierty - Registerior Stretcherts - David at Michael A Cel
		Bialot Pave	A CONTRACTOR		2017 onder the Nettonia Strift onder the Nettonia Environmental Nettonia	conversion by tradition	SCOREENS RELEGIONS	MATTIANE ATTOANEYS INC
	Block	- Reinita	84		intent to every out the following schedy: (18) Any schedy exclusion the coversion of that		- EXECUTION CHEMICAL	EXECUTOR AREA SOURCE
Ribs       Provide State Control of C	5.000			1		40GHOR BOOK DOOR WITH		REPARE DESCENSIONET
Kibs       Africa         Pro       Anticipality:         Description       Description         Venessa       Cell 064 751 8236         We deliver       Venessa         Cell 072 879 1596       Defice 013 750 0128	D'1	V.W			Description Development Act	Plaine use the bildeng as	ANDLE BRIDGET KING (D NUMBER).	TED MIL MATTANE MADE T
Pro RIB & BLOCK Densities for Pary On all Densities Densities for Pary On all Dens	RIDS	1		- Mar		2 A	frica	
Alternative Pare On al Convex     Alternative Pare On alternalternative Pare On alternative	-	Pro		and a second	LOCAL MUNICI	UNICIPAL AU	ctioneers	OYOTA LONG BASE
Alternative Pare On al Convex     Alternative Pare On alternalternative Pare On alternative	BAY		RIOCL		STORES	G	/aluations	TELIDICHI KOAN TIPPER
Venessa         Cell 064 751 8235         Cell 064 751 8235         Cell 064 751 8236         Cell 072 879 1596         Office 013 750 0128	WAR IN MALE	a Decisi of Per Seter	Samp Church Conguetes	AAT IN A			rts 8 10h00	ATA COMPACTOR
Venessa Cell 064 751 8236         Thaba Chweu Municipality: Lydenburg Municipal Stores Remaining Portion, Portion 39, Udenburg Townlands, 31 Jt         Thaba Chweu Municipality: Thaba Chweu Municipal Stores Remaining Portion, Portion 39, Udenburg Townlands, 31 Jt         Thaba Chweu Municipality: Children Stores Remaining Portion, Portion 39, Udenburg Townlands, 31 Jt         Thaba Chweu Municipal Stores Remaining Portion, Portion 39, Children Stores         Thaba Chweu Municipal Stores Remaining Portion, Portion 39, Udenburg Townlands, 31 Jt         Thaba Chweu Municipal Stores Remaining Portion, Portion 39, Construction Portion 39, Construction Portion,	1			WAR	District Strengthere	Self Landstoney		
Venessa Cell 064 751 8235         Thaba Chweu Municipality: Lydenburg Municipal Stores Remaining Portion, Portion 39, Unice 013 750 0128         Thaba Chweu Municipality: Lydenburg Municipal Stores Remaining Portion, Portion 39, USB Port Port Association (Stores)         Thaba Chweu Municipality: Lydenburg Municipal Stores Remaining Portion, Portion 39, USB Port Port Port Port Port Port Port Port				- Maron	1 acres		TRACK T	RACTORO
We deliver         Warwick Cell 072 879 1596         Use of the state of the stat		A REAL PROPERTY.	1993-2011	1.			an agreed in	ORD
We deliver         Warwick Cell 072 879 1596         Use of the state of the stat					Thata	Churcu Munici	Constant in the	OHN DELINE
Lydenburg Townlands, 31 Jt         Fortow PT real           Office 013 750 0128         R5000 Refundable registration deposit jupyable email africabuctioneers@gmail.com         Result					Lydenb	urg Municipal	Stores 1	NALERO: SKOP DIN
Office 013 750 0128 PRODO Refundable registration deposit payable Ell segment Available on site Structy No Cash 1 email africasouctioneers@gmail.com Change 0155 2670 125 2670 00 757.0	we	Genver			Remainin	g Portion, Por	tion 39,	LAT
Eff. payment Available an also Shoty No. Coshi to Vota Maria Loo email africasuctioneers (Sigmail.com Shore of 265 Script) F. Shungen 2007 7513	and the second	A	A land land	and and a second			d months	AKKIES
email africaauciloneersoggmail.com Down op op 55 con 9 cHu op op op 743		A SPEC	Office 013	750 0128	Ell payment Av	ailuble on site. Strictly	No Gash 1	OYOTA HELLUX
STREET STRE		and the second					all.com	INM ORD
				M.DICTORY	Simon 062 2	00 0402 & EUIU1.08	2 000 1040	an and an and an and an

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	94

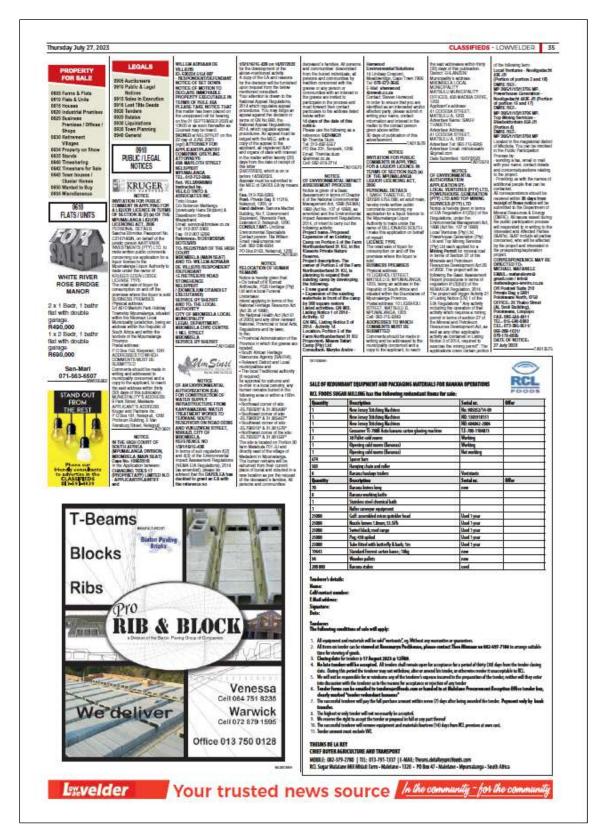
## <u>2023</u>

#### **Daily Sun:**

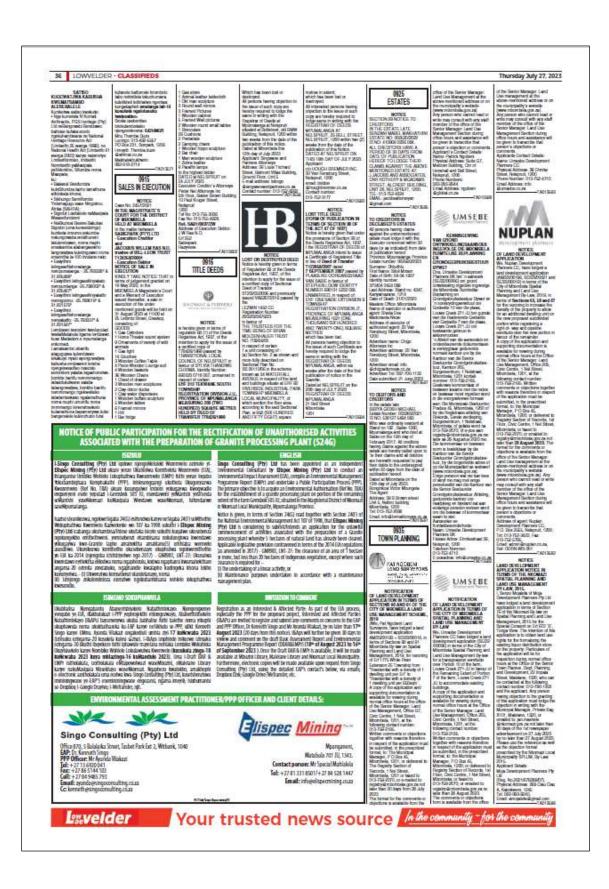


SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	95

Lowvelder:



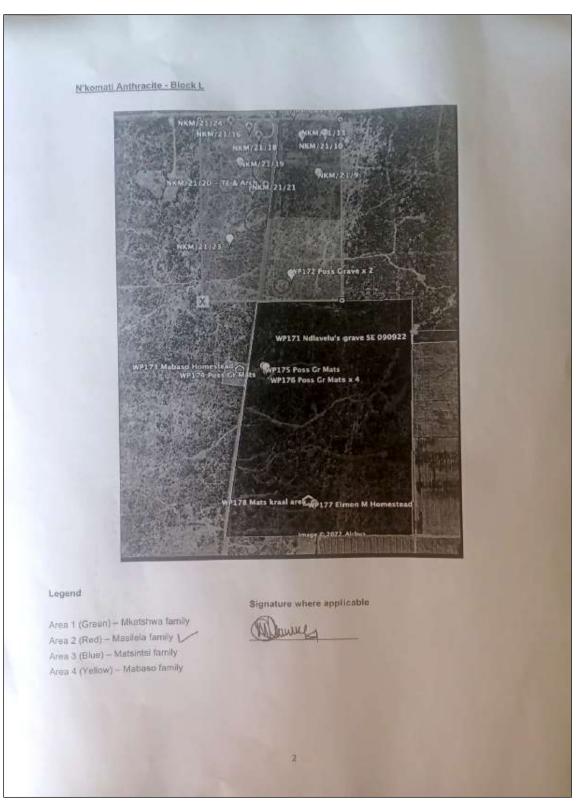
SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	96



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	97

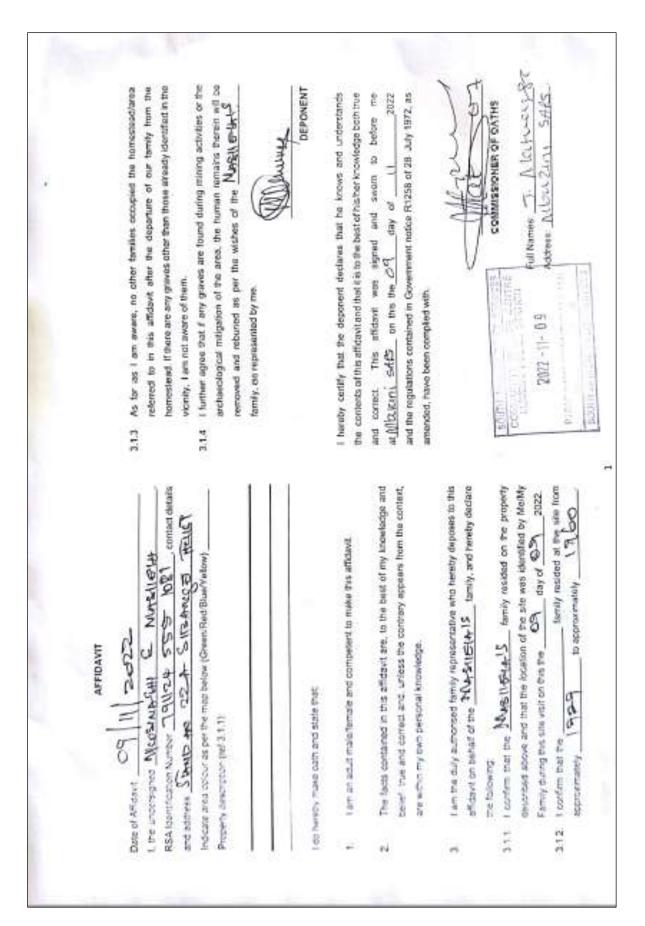


SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	98



Appendix F – Stakeholder Engagement Documents

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	99



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	100



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	101

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	102



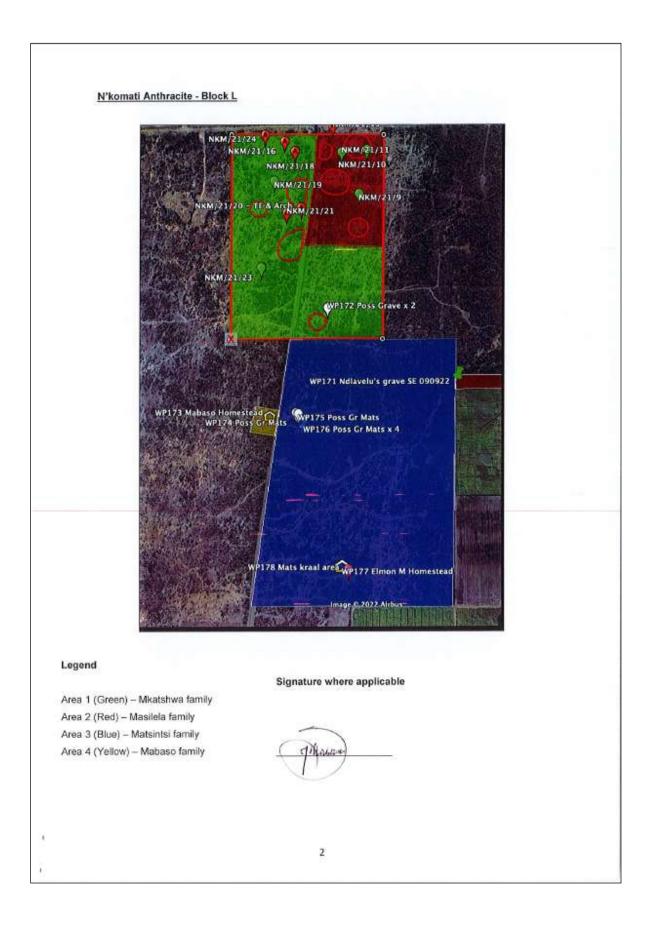
SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	103

	AFFIDAVIT		
ate	Date of Affdavit 25 0 6 7056-7 2022	3.1.3	As far as I am aware, no other families occupied the homestead/area
the	I, the undersigned SONCOLNING MACOLIDE NORHATSHING		referred to in this affidavit after the departure of our family from the
SA SA	RSA Identification Number 46073/5395085 . contact details		homestead. If there are any graves other than those already identified in the vicinity. I am not aware of them
dice	Indicate area colour as per the map below (Green/Red/Blue/Yellow) <i>Chester</i>	3.1.4	I further agree that if any graves are found during mining activities or the
do	Property description (ref 3.1.1):		archaeological mitigation of the area, the human remains therein will be removed and reburied as per the wishes of the PARAMENATION
<u>Y</u>	2112		family, as represented by me.
			MMODSDER
d ob	I do hereby make oath and state that		DEPONENT
-	I am an adult male/female and competent to make this affidavit.	T her	I hereby certify that the deponent declares that he knows and understands the contents of this affidavit and that it is to the best of his/her knowledge both true
ci	The facts contained in this affidavit are, to the best of my knowledge and bellef, true and correct and, unless the contrary appears from the context,	and	correct. This affidavit was signed and sworn to before me
	are within my own personal knowledge.	and	and the regulations contained in Government notice R1258 of 28 July 1972, as amended, have been complied with.
5	Lam the duly authorised family representative who hereby deposes to this affidavit on behalf of the $DDEMA \pm cH_{Lot}A$ . family, and hereby declare		VINTenco 0000
	the following:		
3.1.1.	I confirm that the <u>NNKHATSMANA</u> family resided on the property described above and that the location of the site was identified by Me/My		SUID-AFRIKAANSE POLISIEDIENET
010	Family during this site visit on this the 14 day of Ocrosen 2022	_	2022 -10-2, Address: 1 DOP MOINEUM
4	approximately inc/2 / 7.2 to appr	-Ju	Smitha acair SGM

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	104



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	105



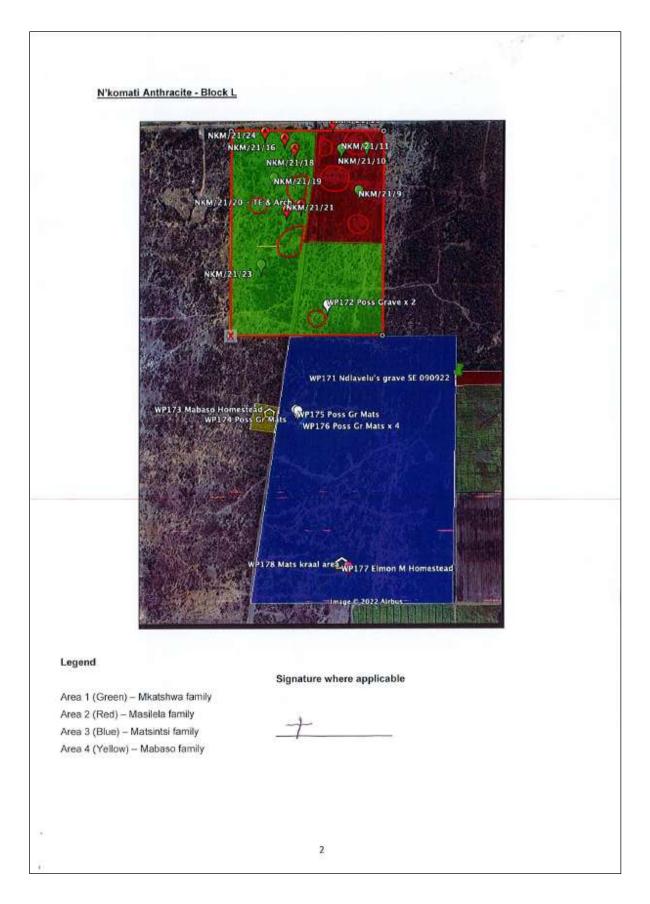
SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	106

Date of Afrident:       JE OF ID SEE DOT       313 As for as 1 am ware, no other families couplied the homestandiates inderval to in this afridand after the departure of our family from the homestandiates are any graves other than those afreacy identified in the homestandiates and control to the section of the indervalues.         1. the undersigned       JE DAT DE DAT         1. the undersigned       JE DAT         1. the undersigned       JE DAT         1. the undersigned       JE DAT         1. the mark excitation (ref 3.11):       JE DAT         1. the area of the mark in graves are found uning mining astrolles or the interval in the index of the mark interval individual after the deportent domes         1. the mark interval       JE DAT		AFFIDAVIT	
A Identification Number       57 / 100 / 45 / 100 / 100 / 45 / 100	Date o	1 Affidavit 25 0010 550 2023 Undersigned Jonn ASE Ibucmon MABASO	
and the during mining and the during mining activation of the area, the human remain perty description (ef 3.1.1).       3.1.4 I further agree that if any graves are found during mining activation of the area, the human remain remain perty description (ef 3.1.1).         MUD 173 70 MP 1744       3.1.4 I further agree that if any graves are found during mining activation (ef 3.1.1).         MUD 173 70 MP 1744       3.1.4 I further agree that if any graves are found during mining activation (ef 3.1.1).         I am an adult male/female and competent to make this affidavit.       1.1 I further agree that if any graves are found during mining activation (ef 3.1.1).         I am an adult male/female and competent to make this affidavit.       1.1 I further agree that if any graves are found during mining activation (ef 3.1.1).         I am an adult male/female and competent to make this affidavit.       1.1 I further agree that if any graves are found during mining activation (ef 3.1.1).         I am an adult male/female and competent to make this affidavit.       1.1 I further agree that if any graves are found during mining activation (ef any the competent of the mining and competent of the mining mining activation (ef any the competent of the mining mining activation (ef and the earth mining activation (ef any the earth mining activation (ef and the earth mining activation (ef and the mining activation (ef and the earth mining acting activation (ef and the earth mining activation (ef a	RSA I	Jentification Number 67 70045448080 contact details	homestead. If there are any graves other than those already identified in the
Operty description (ref 3.1.1):	Indica	en/Red/Blue/Yellow)	
<ul> <li>o hereby make cath and state that:</li> <li>I am an adult male/female and competent to make this affidavit.</li> <li>I am a adult male/female and competent to make this affidavit.</li> <li>I am a adult male/female and competent to make this affidavit.</li> <li>I am a adult male/female and competent to make this affidavit.</li> <li>I am a adult male/female and competent to make this affidavit.</li> <li>I am a adult male/female and competent to make this affidavit.</li> <li>I am a adult male/female and competent to make this affidavit.</li> <li>I the facts contained in this affidavit and that its to the best of my knowledge and belief, true and correct and, unless the contrary appears from the context.</li> <li>I am the duly authorised family resided on the property described above and that the location of the atte site was identified by MeMy Family during this site with the selecter from that the make and with.</li> <li>I. I confirm that the make a day of <u>make</u> and any of <u>make</u> and sworn the contained in Government notice R1258 of 21 amended, have been compleid with.</li> <li>I. I confirm that the <u>make a day of <u>make</u> and its either a day of <u>make</u> and any of <u>make</u>.</u></li> <li>I. I confirm that the <u>make a day of <u>make</u> and y resided at the site from a poprovimately <u>important</u>.</u></li> </ul>	Prope	WP O	he area, the human ren ar the wishes of the
<ul> <li>I am an adult male/female and competent to make this affidavit.</li> <li>I am an adult male/female and competent to make this affidavit.</li> <li>I the facts contained in this affidavit are, to the best of my knowledge and belief. True and correct and, unless the contrary appears from the context.</li> <li>I am the duly authorised family representative who hereby deposes to this affidavit on behalf of the <i>MAABO</i> family representative who hereby deposes to this affidavit on behalf of the <i>MAABO</i> family resided on the property described above and that the location of the site was identified by MeMy Family during this site visit on this the <i>ABABO</i> family resided at the site from approximately <i>MD 73</i> to approximately <i>MD 73</i> to</li></ul>	- ob -	sreby make oath and state that;	DEPONENT
The facts contained in this affidavit are, to the best of my knowledge and belief, true and correct and, unless the contrary appears from the context, are within my own personal knowledge.       and correct. This affidavit was signed and swom the context, are within my own personal knowledge and and swom the context, are within my own personal knowledge.         I am the duly authorised family representative who hereby deports affidavit on behalf of the MASO [amily resided on the property descined in Comment noise R1258 of 21 amended, have been completed with.       and correct. This affidavit was signed and swom the context, and the regulations contained in Government noise R1258 of 21 amended.         1.1       I am the duly authorised family resided on the property described above and that the location of the site was identified by MeMy Family during this site visit on this the <u>MASO</u> family resided at the site from approximately <u>MD 173</u> to approximately <u>MD 173</u>	۴	I am an adult male/female and competent to make this affidavit.	I hereby certify that the deponent declares that he knows and understands the contents of this affidavit and that it is to the best of his/her knowledge both true
1 am the duly authorised family representative who hereby deposes to this affidavit on behalf of the MAAAC family, and hereby declare the following:       1 am the MAAAAC family resided on the property described above and that the location of the site was identified by Me/My Family during this site visit on this the AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2	The facts contained in this affidavit are, to the best of my knowledge and belief, true and correct and, unless the contrary appears from the context, are within my own personal knowledge.	and correct. This affidavit was signed and sworn to before me at <u>VOrSP</u> on this the J day of <u>OCCDEP</u> 2022 and the regulations contained in Government notice R1258 of 28 July 1972, as amended, have been complied with.
the following: I confirm that the $\underline{MABASO}$ family resided on the property described above and that the location of the site was identified by Me/My Family during this site visit on this the $\underline{/7}$ day of $\underline{OC/Dbs2}022$ . I confirm that the $\underline{MABASO}$ family resided at the site from approximately $\underline{MP}$ , $\overline{73}$ to approximately $\underline{MP}$ , $\overline{774}$	сi	I am the duly authorised family representative who hereby deposes to this affidavit on behalf of the $\mathcal{M}_{AS}$ A SC family, and hereby declare	Contraction of the
Family during this site visit on this the $\frac{19}{120}$ day of $\frac{0.270632022}{0.2000}$ . 2022 Rull Names; $\frac{1000}{100}$ Hull Nam	3.1.1.	the following: I confirm that the <u>MABASO</u> described above and that the location	COMMISSIONER
	3.1.2.	Family during this site visit on this the イク I confirm that the かんよみちo approximately <u>iMP 173</u> to appr	22 = 14= 2 5 - 25/24-1 2112-1

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	107

\$ REPUBLIC OF SOUTH AFRICA Somerne MABASO Names JOMASE SOLOMON Sec M M Notionality: RSA Startity Number: \$710045446080 Date of Birth: 04 OCT 1867 Covern of Birth: ... Country of Binti RSA Status: CITIZEN îD de la -Constituted \* This oard has been issued by the Department of Home Atlatra in terms of the Identification Aci, Aci 66 of 1357 For a state times to expension of these Atlant for a site of well these to expension of these Atlant for a site or well these peoples evaluated at the 10 NOV 2018 109138053 THE WORL DE COMMENSION OF A DECEMBER OF A 當 SUB ARRANSI POLSING LATIFY THAT THIS DOCUMENT IS A TIME REPRODUCTION THE ORIGINAL DOCUMENT WHICH WAS HANDED TO ME I'R AUTHORISATION. I FURTHER CENTRY THAT FROM MY DSERIARDINS AN AMENDMENT OR CHANGE WAS NOT MORE TO THE ORIGINAL POCHAEMT. FORCE NO 10200 RANK Tanalua NAME IN PRINT

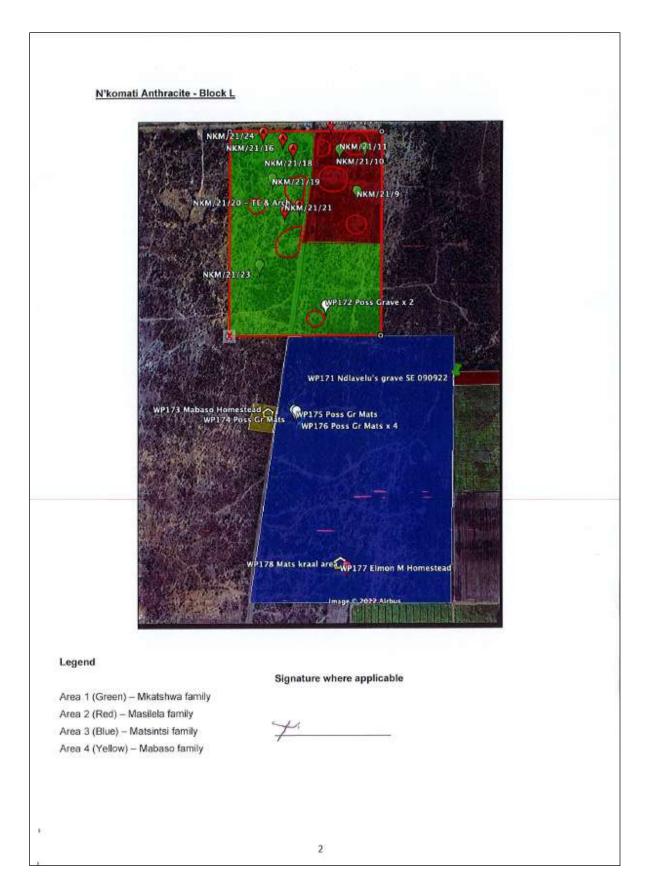
SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	108



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	109

Date of Affidavit スト/iの/ このこひ	3.1.3 As far as I am aware, no other families occupied the homestead/area
I, the undersigned MARSINIM ELMON MANJSHHITCHI	referred to in this affidavit after the departure of our family from the homethad lifthere are any creates other than those afready identified in the
'Ellow)	vicinity, I am not aware of them. 3.1.4 I further agree that if any graves are found during mining activities or the
Property description (ref 3.1.1).	archaeological mitigation of the area, the human remains therein will be removed and reburied as per the wishes of the <u>MOMMATCHIMENTERH</u>
	family, as represented by me.
I do hereby make oath and state that.	DEPONENT
1. I am an adult male/female and competent to make this affidavit.	I hereby certify that the deponent declares that he knows and understands the contents of this affidavit and that it is to the best of his/heitknowledge both true
The facts contained in this affidavit are, to the best of my knowledge and belief, true and correct and, unless the contrary appears from the context,	and correct. This affidavit was signed and sworn to before me aton this theday of2022
are within my own personal knowledge.	and the regulations contained in Government notice R1258 of 28 July 1972, as amended, have been complied with.
I am the duly authorised family representative who hereby deposes to this affidavit on behalf of the $\underline{MMM}$ to $\underline{MM}$ family, and hereby declare	su and the server of H 32,
t the 17 17-17 H2-17 H2-17 fH1 family ove and that the location of the site	202 -10- 28 COMMISSIONER OF OATHS
Earning during this site visit on this the 13 day of 10 2022. 3.1.2. I confirm that the ビバドカイズ ひょっぴ ガー family resided at the site from approximately 1315 to approximately 13 サー	Shimu Acontan bili interezzation Address. To NGA SAC
1	

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	110



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	111

Γ

3.1.3 As far as I am aware, no other families occupied the homestead/area referred to in this affidavit after the departure of our family from the homestead. If there are any graves other than those already identified in the	vicinity, 1 am not aware of them, 3.1.4 I further agree that if any graves are found during mining activities or the archaeological mitigation of the area, the human remains therein will be removed and reburled as per the wishes of the <u>Mont SHrベバル</u> family, as represented by me.	I hereby certify that the deponent declares that he knows and understands the contents of this affidavit and that it is to the best of his/her knowledge both true and correct. This affidavit was signed and sworn to before me	at on this theday of2022 and the regulations contained in Government notice R1258 of 28 July 1972, as amended, have been complied with,	SUD-ATTRICTION POLISIEDIENS Toriga 2022 -10- 2.6 E-MINDER OF OATHS	Address Tonga SAMS	
	elow (Green/Red/	<ol> <li>I do nereoy make pain and state that.</li> <li>I am an adult male/female and competent to make this affidavit.</li> <li>The facts contained in this affidavit are, to the best of my knowledge and</li> </ol>	belief, true and correct and, unless the contrary appears from the context, are within my own personal knowledge.	i am the duy authorised larmly representative who receive deposes to this affidavit on behalf of the <u>10원가가기오버지씨장</u> family, and hereby declare the following: I confirm that the <u>N관버지님께 지정비</u> family resided on the property described above and that the location of the site was identified by MetMy	Family during this site visit on this the / 4 day of / 2022. I confirm that the <u>WYRWT5/HWT5/HWT5/HW</u> family resided at the site from approximately <u>1915</u> to approximately <u>1915</u>	(Address - Principal de la Principa de la Principal de la Principal de la Principa de la P

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	112



SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	113

Ċ	AFFIDAVIT AFFIDAVIT	
and the second	1, the undersigned PHOZA DUDUZILE VICTOPLA RSA Identification Number DSD7310313 083, contact details and address D796664-0373 514444545	3.1.3 As far as I am aware, no other families occupied the homestead/area referred to in this affidavit after the departure of our family from the homestead. If there are any graves other than those already identified in the vicinity, I am not aware of them.
Proj	Indicate area colour as per the map below (Green/Red/Blue/Yellow) PUD PUC	3.1.4 I further agree that if any graves are found during mining activities or the archaeological mitigation of the area, the human remains therein will be removed and reburied as per the wishes of the <u>CHDZRDS</u> family, as represented by me.
op –	I do hereby make oath and state that:	DEPONENT
÷	I am an adult <del>male/</del> female and competent to make this affidavit.	I hereby certify that the deponent declares that he knows and understands the contents of this affidavit and that it is to the best of his/her knowledge both true
2	The facts contained in this affidavit are, to the best of my knowledge and belief, true and correct and, unless the contrary appears from the context, are within my own personal knowledge.	and correct. This affidavit was signed and swom to before me at <u>6.000</u> Art on this the <u>6.0</u> day of <u>1</u> 2022 and the regulations contained in Government notice R1258 of 28 July 1972, as amended, have been complied with.
сi	I am the duly authorised family representative who hereby deposes to this affidavit on behalf of the <u>K-MOT-R?S</u> family, and hereby declare the following:	CU MOUNTO
3.1.1	I confirm that the <u>CHOZ.P.S.</u> family resided on the property described above and that the location of the site was identified by Me/My Family during this site visit on this the <u>OU</u> day of <u>AU</u> 2002	Full Names: (E D) CCM ISSIENCER OF QATHS
3.1.2.	I confirm that the <u>EHCCHS</u> family resided at the si approximately <u>1905</u> to approximately <u>1951</u>	I Samuel S
101112	1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	114

## Appendix G - Attendance Registers

	-			CUMENT CONTROLLE	No. of Street,	NKOM	GEN	F003
	•		TITLE: REVISIO	N Mo	ATTENDANCE R	EGISTER TEMPLATE		
N'KOMATI ANTHRACITE (Pty) Ltd					Eff. Date: 02 Oc Rev. Date: 30 M		Page 1	of 1
ATTENDANCE F	REGIST	TER						
Date:	01/91	2002	181 - OL-11	100	1	Time:	A Sect	
Chairperson:	THE		E		Banna	1000		
Description:	12-18-1	MMATION	TRAVES	MANZIN	Bi FAMIL	LY		- x*
Name and Surname		Designation	Company	Contact No		E-mail (If required)	State - U.	Signature
CHNETHA NK	INA	MANEWE	FORUM	0725684271	Queenett on	EMANUR (	grad	ion cape
De Morria		MANGUE	FORUM	0766141125				Mourance
MAGOLIDE MAK	++Fister	, MAWENE	Tribuna	0726260398	NA	4		a
Ruth Sumans	9	NPROBUE	DANFEHING	0760238977	chomonagous	h @gmail.c	and the	ER:
SIFISO.M. Manai	NTA	MGOBOdzi	MANDINTEI	0636512254	NA	U		Sam
BONGINKOSI MAN.	ISINIST 1	Agabodzi	MANTINISI	0728236119	N	7A	-THEYLAR	BlacktSt
FLMON MANTS.	INTEL 1	MGOBOODZI	MANTSINAL	0760619062	~ NA			X
GIGANE MANB		MGOBODZI		0728849642	N	4		X
Thomas the		Macore	Ngcan	0765374971	The Mastry	LANS?	rmeul-G	and PAT "
MAGRESER DYERA	SHOUTA 1	LAWEUSE	NEHATSIANA	0714617713	NA	1	Contractory (	mare
land Stage	1	es prol.	PES	082375 7622	halpsken	tage . C. U.		18-
herefa Du 20	1	Frinat	Alant	062618272	Kerlan	120 Cap	ad 62	in 15
3	10 T		I TORAC		T THINK I	Salar Salar		1

Project Number:			1	ATTENDANCE	REGISTER
Facilitator:			Date:		
Reason for Meeting/Visit:			Place:	The second s	
Name and Surname	Company/Family Name	Phone Num	ber	Email Address	Signature
Enjoy MASLETA 21. Bang of Mas. (cca Jone Maslerg Ninusse Val Pay	MASILELA'S FAMILY	082764	8979	Enfoy coot 79 tomat	(Dauge
J. Bang to Mas (eca	Mac lela San b	072513	61.00		201
Start Massiers Ninuta	Masurers's faming	072294	148	-	-+
Wat Shy	PES Haky.	082 T25 #27	2	held get hand age co. ac	9°
				1. 1	- <i>1</i> .
120000					

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	115

Project Number: 642 HM/c	62 N'lomati A le belde Ezzagemet - 81.	Date:	2022.09.09 Black L - Sik Wait	1
Reason for Meeting/Visit: Star	te helde Ezgogenet - 81.	ich L	OTALL SHE VIDIT	
Name and Surname	Company/Family Name	Phone Number	Email Address	Signature
Enjoy MARICENA	MARIELAN'S FAMILY	0827648979	enjoy cool 79 Chornal	Dung
1. Bang of Masile		and the second se	-	201
JANE Massiers Nines	mo Masurers's Faminy	072294 148		N
Wat Shy	PES Haley.	082 T75 #22	held pselinday corre	SH
				1302
				1993 and

	Anthroute	Block L	Dat	a: 7 Bloch L Gate -	N'Hemati Ans	Thronk
Reason for Meeting/Visit: Star	17 Dage Cholder Engages	nent	Piat	2027-10-19		
me and Surname	Company/Fami	ly Name	Phone Number	Email Address		Signature
H. Shyn	PGS		0123757622	hechalpsher	loge. 10.24	JI.
Themps Daza	AFrinot		0826182714	L' themate dure	against con	&R_
Daniel Masileta	Messilela.	Family	0825136 400			RI
ane NE; Wani	Masilela	Family	072291114	B. NIA		Def
LAHLACELA ERNEST	MANENE 3	VORKING FORUM	076614112	Demontalista	Damme com	Wednalle
Henne Cynthia			07256842	in the second from the second	6 Mazy 49 Colymain	A 1
hombisa Ryth	Mantshin	tshi Faul	4 07608389	77 Khombisar	uthogmail.co.	R
anterinteri Bongistesi	71	"~	072823611			Rangts
anticintali Sfise	()	$\sim n^{-1}$	06365 225	=4 N1	A	Ema
Astritai Elmon	n ······	-0	076061906	iz N	IA	+
Shabene	11		08183149	Second	AL	att

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	116

Enjey Massilera	Massler 7'S Janua	0827648977	enforces MAQ hornovi	amuse
ERNEST MAMPIELS	Working Group		The second s	Mourace
MAKHATSHWA GOLDEN'	Drown MADADEN		A	Golden
MEHATSHUA MARCEST	MEMATSHWA FAMILY	0714617713	~JA	M. MEARD
MICHAISTUSA ELINAN	MENATSIMO FAMILL	0714471009	NIA	Emp
MKITATSHUA MIEMIE	Menorshin FAMIL	9 0825429185	-JA-	MIL
MABASO SOLOMON	MABASO FAMILY	0760644200	NA	Wassaso
	ALTRADO TO TANK			1
	A CONTRACTOR OF THE OWNER	The state of the s	A CONTRACT OF A CONTRACT.	
12 Roman Providence		ALC CARGE AND	A DESCRIPTION OF THE PARTY OF T	
and the second	Sherry Carlot		Section - Annual	and the second

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	117

# Appendix H – GPR Data Sheets

### GPR DATA SHEET for POST-PROCESSING

Site	NKM21/3					
Survey date	14/03/2023					
Variable DD Sattings						
Variable PP Settings	0.106 m/mc (8) N	at calibrated data		ad at the and a	fthe rainy	
Velocity (dielectric)	0,106 m/ns (8). Not calibrated, data was collected at the end of the rainy					
Time zero correction	season, and some moisture was present.					
	Positive peak					
Constant scale (Gain)	45					
Energy decay (Gain)	1					
Background subtraction	999 traces					
Frequency Filter	Band Pass (107-733Mhz					
Time slice settings						
Migration	15 traces					
Hilbert Transform						
Slice parameters:						
Silce parameters.		Parameters				
		Parameters		<i>i</i>		
		Source	Slice I	~		
		Method	Inverse Distance	W ~		
		Power parameter				
		Bidirectional i	0			
		Cell size i	0.04 🗘	m ~		
		Search radius i	0.4 0	m ~		
		First depth	00	m ¥		
		Depth increment	0.05 0	m •		
		Maximum depth	2 0	m ~		
		Slice thickness i	0.05 🗘	m ×		
		Clip borders $i$	•	D		
		Post-processing		0		
		Interpolation				
		Moving average	e			

SAHRA Permit	SAHRA Case	Document	Revision	Date	Page
3926	19691	642HMGR-002	1.0	15/09/2023	118

Sample slice at 55cm (appr 10 n/s) showing kraal deposit in purple/green.	