SEKOKO RESOURCES: WAYLAND IRON ORE MINE, CAPRICORN DISTRICT MUNICIPALITY, LIMPOPO PROVINCE

**Archaeological Impact Assessment Report** 

August 2012

Document version 1.0 Compiled by N. Kruger



Proudly Supporting TOUCHING AFRICA





Prepared by





## ARCHAEOLOGICAL IMPACT ASSESSMENT ON THE FARMS MAKOTOPONG 1200LS AND KALKFONTEIN 615LS FOR THE PROPOSED WAYLAND IRON ORE MINE, CAPRICORN DISTRICT MUNICIPALITY, LIMPOPO PROVINCE

August 2012

## Conducted on behalf of:

Sekoko Resources AGES Gauteng

Compiled by: Nelius Kruger (BA, BA Hons. Archaeology Pret.)

## **Reviewed by:**

Tania Oostuizen (AGES)

GAUTENG PROVINCE: 356 Zwavelpoort, Lynnwood Pretoria, Postnet no 74, Private Bag X07, Arcadia, 0007 Tel: +27-12 751 2160 Fax: +27 (0) 86 607 2406 www.ages-group.com

> Offices: Eastern Cape Gauteng Limpopo Province Namibia North-West Province Western Cape Zimbabwe AGES Board of Directors: SJ Pretorius JA Myburgh JJP Vivier JH Botha H Pretorius THG Ngoepe SM Haasbroek R Crosby JC Vivier FN de Jager CJH Smit AS Potgieter AGES Gauteng Directors: JJP Vivier JC Vivier E van Zyl M Groble



Although AGES (Pty) Ltd exercises due care and diligence in rendering services and preparing documents, AGES (Pty) Ltd accepts no liability, and the client, by receiving this document, indemnifies Africa Geo-Environmental Services (Pty) Ltd and its directors, managers, agents and employees against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by AGES (Pty) Ltd and by the use of the information contained in this document.

This document contains confidential and proprietary information equally shared between AGES (Pty) Ltd and Sekoko Resources (Pty) Ltd, and is protected by copyright in favour of these companies and may not be reproduced, or used without the written consent of these companies, which has been obtained beforehand. This document is prepared exclusively for Sekoko Resources (Pty) Ltd and is subject to all confidentiality, copyright and trade secrets, rules, intellectual property law and practices of South Africa.

AGES (Pty) Ltd promotes the conservation of sensitive archaeological and heritage resources and therefore uncompromisingly adheres to relevant Heritage Legislation (National Heritage Resources Act no. 25 of 1999, Human Tissue Act 65 of 1983 as amended, Removal of Graves and Dead Bodies Ordinance no. 7 of 1925, Excavations Ordinance no. 12 of 1980). In order to ensure best practices and ethics in the examination, conservation and mitigation of archaeological and heritage resources, AGES (Pty) follows the Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment as set out by the South African Heritage Resources Agency (SAHRA) and the CRM section of the Association for South African Professional Archaeologists (ASAPA).

## NOTATIONS AND TERMS

### Absolute dating:

Absolute dating provides specific dates or range of dates expressed in years.

### Archaeology:

The study of the human past through its material remains.

### Archaeological record:

The archaeological record minimally includes all the material remains documented by archaeologists. More comprehensive definitions also include the record of culture history and everything written about the past by archaeologists.

### Artefact:

Entities whose characteristics result or partially result from human activity. The shape and other characteristics of the artifact are not altered by removal of the surroundings in which they are discovered. In the southern African context examples of artefacts include potsherds, iron objects, stone tools, beads and hut remains.

### Assemblage:

A group of artefacts recurring together at a particular time and place, and representing the sum of human activities.

### <sup>14</sup>C or radiocarbon dating:

The <sup>14</sup>C method determines the absolute age of organic material by studying the radioactivity of carbon. It is reliable for objects not older 70 000 years by means of isotopic enrichment. The method becomes increasingly inaccurate for samples younger than ±250 years.

### **Ceramic Facies:**

In terms of the cultural representation of ceramics, a facies is denoted by a specific branch of a larger ceramic tradition. A number of ceramic facies thus constitute a ceramic tradition.

### **Ceramic Tradition:**

In terms of the cultural representation of ceramics, a series of ceramic units constitutes as ceramic tradition.

#### Context:

An artefact's context usually consists of its immediate *matrix*, its *provenience* and its *association* with other artefacts. When found in *primary context*, the original artefact or structure was undisturbed by natural or human factors until excavation and if in *secondary context*, disturbance or displacement by later ecological action or human activities occurred.

#### Culture:

A contested term, "culture" could minimally be defined as the learned and shared things that people have, do and think.

#### **Cultural Heritage Resource:**

The broad generic term *Cultural Heritage Resources* refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

### Cultural landscape:

A cultural landscape refers to a distinctive geographic area with cultural significance.

### Cultural Resource Management (CRM):

A system of measures for safeguarding the archaeological heritage of a given area, generally applied within the framework of legislation designed to safeguard the past.

### Ecofact:

Non artifactual material remains that has cultural relevance which provides information about past human activities. Examples would include remains or evidence of domesticated animals or plant species.

### Excavation:

The principal method of data acquisition in archaeology, involving the systematic uncovering of archaeological remains through the removal of the deposits of soil and the other material covering and accompanying it.

### Feature:

Non-portable artifacts, in other words artifacts that cannot be removed from their surroundings without destroying or altering their original form. Hearths, roads, and storage pits are examples of archaeological features

### GIS:

Geographic Information Systems are computer software that allows layering of various types of data to produce complex maps; useful for predicting site location and for representing the analysis of collected data within sites and across regions.

### Historical archaeology:

Primarily that aspect of archaeology which is complementary to history based on the study of written sources. In the South African context it concerns the recovery and interpretation of relics left in the ground in the course of Europe's discovery of South Africa, as well as the movements of the indigenous groups during, and after the "Great Scattering" of Bantu-speaking groups – known as the *mfecane* or *difaqane*.

**Impact:** A description of the effect of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

### Iron Age:

Also known as "Farmer Period", the "Iron Age" is an archaeological term used to define a period associated with domesticated livestock and grains, metal working and ceramic manufacture.

### Lithic:

Stone tools or waste from stone tool manufacturing found in on archaeological sites.

Management / Management Actions: Actions – including planning and design changes - that enhance benefits associated with a proposed development, or that avoid, mitigate, restore, rehabilitate or compensate for the negative impacts.

### Matrix:

The material in which an artefact is situated (sediments such as sand, ashy soil, mud, water, etcetera). The matrix may be of natural origin or human-made.

### Megalith:

A large stone, often found in association with others and forming an alignment or monument, such as large stone statues.

### Midden:

Refuse that accumulates in a concentrated heap.

### Microlith:

A small stone tool, typically knapped of flint or chert, usually about three centimetres long or less.

### Monolith:

A geological feature such as a large rock, consisting of a single massive stone or rock, or a single piece of rock placed as, or within, a monument or site.

### **Oral Histories:**

The historical narratives, stories and traditions passed from generation to generation by word of mouth.

### Phase 1 CRM Assessment:

An Impact Assessment which identifies archaeological and heritage sites, assesses their significance and comments on the impact of a given development on the sites. Recommendations for site mitigation or conservation are also made during this phase.

### Phase 2 CRM Study:

In-depth studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required. Mitigation / Rescue involves planning the protection of significant sites or sampling through excavation or collection (in terms of a permit) at sites that may be lost as a result of a given development.

### Phase 3 CRM Measure:

A Heritage Site Management Plan (for heritage conservation), is required in rare cases where the site is so important that development will not be allowed and sometimes developers are encouraged to enhance the value of the sites retained on their properties with appropriate interpretive material or displays.

### Prehistoric archaeology:

That aspect of archaeology which concerns itself with the development of humans and their culture before the invention of writing. In South Africa, prehistoric archaeology comprises the study of the Early Stone Age, the Middle Stone Age and the greater part of the Later Stone Age and the Iron Age.

### **Probabilistic Sampling:**

A sampling strategy that is not biased by any person's judgment or opinion. Also known as statistical sampling, it includes systematic, random and stratified sampling strategies.

### Provenience

Provenience is the three-dimensional (horizontal and vertical) position in which artefacts are found. Fundamental to ascertaining the provenience of an artefact is *association*, the co-occurrence of an artefact with other archaeological remains; and *superposition*, the principle whereby artefacts in lower levels of a matrix were deposited before the artefacts found in the layers above them, and are therefore older.

### Random Sampling:

A probabilistic sampling strategy whereby randomly selected sample blocks in an area are surveyed. These are fixed by drawing coordinates of the sample blocks from a table of random numbers.

### **Relative dating:**

The process whereby the relative antiquity of sites and objects are determined by putting them in sequential order but not assigning specific dates.

### **Remote Sensing:**

The small or large-scale acquisition of information of an object or phenomenon, by the use of either recording or real-time sensing device(s) that is not in physical or intimate contact with the object (such as by way of aircraft, spacecraft or satellite). Here, ground-based geophysical methods such as Ground Penetrating Radar and Magnetometry are often used for archaeological imaging.

### **Rock Art Research:**

Rock art can be "decoded" in order to inform about cultural attributes of prehistoric societies, such as dress-code, hunting and food gathering, social behaviour, religious practice, gender issues and political issues.

**Scoping Assessment:** The process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addressed in an impact assessment. The main purpose is to focus the impact assessment on a manageable number of important questions on which decision making is expected to focus and to ensure that only key issues and reasonable alternatives are examined. The outcome of the scoping process is a Scoping Report that includes issues raised during the scoping process, appropriate responses and, where required, terms of reference for specialist involvement.

### Sensitive:

Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. Sensitive may also refer to an entire landscape / area known for its significant heritage remains.

### Site (Archaeological):

A distinct spatial clustering of artefacts, features, structures, and organic and environmental remains, as the residue of human activity. These include surface sites, caves and rock shelters, larger open-air sites, sealed sites (deposits) and river deposits. Common functions of archaeological sites include living or habitation sites, kill sites, ceremonial sites, burial sites, trading, quarry, and art sites,

### Slag:

The material residue of smelting processes from metalworking.

### Stone Age:

An archaeological term used to define a period of stone tool use and manufacture.

### Stratigraphy:

This principle examines and describes the observable layers of sediments and the arrangement of strata in deposits

### Stratified Sampling:

A probabilistic sampling strategy whereby a study area is divided into appropriate zones – often based on the probable location of archaeological areas, after which each zone is sampled at random.

### Systematic Sampling:

A probabilistic sampling strategy whereby a grid of sample blocks is set up over the survey area and each of these blocks is equally spaced and searched.

### Tradition:

Artefact types, assemblages of tools, architectural styles, economic practices or art styles that last longer than a phase and even a horizon are describe by the term *tradition*. A common example of this is the early Iron Age tradition of Southern Africa that originated ± 200 AD and came to an end at about 900 AD.

**Trigger:** A particular characteristic of either the receiving environment or the proposed project which indicates that there is likely to be an *issue* and/or potentially significant *impact* associated with that proposed development that may require specialist input. Legal requirements of existing and future legislation may also trigger the need for specialist involvement but are not discussed in this guideline.

### Tuyère:

A ceramic blow-tube used in the process of iron smelting / reduction.

Abbreviation	Description
ASAPA	Association for South African Professional Archaeologists
AIA	Archaeological Impact Assessment
BP	Before Present
BCE	Before Common Era
EIA	Early Iron Age (also Early Farmer Period)
EIA	Environmental Impact Assessment
EFP	Early Farmer Period (also Early Iron Age)
ESA	Earlier Stone Age
GIS	Geographic Information Systems
HIA	Heritage Impact Assessment
K2/Map	K2/Mapungubwe Period
LFP	Later Farmer Period (also Later Iron Age)
LIA	Later Iron Age (also Later Farmer Period)
LSA	Later Stone Age
MIA	Middle Iron Age (also Early later Farmer Period)
MRA	Mining Rights Application
MSA	Middle Stone Age
NHRA	National Heritage Resources Act No.25 of 1999, Section 35
SAHRA	South African Heritage Resources Association
YCE	Years before Common Era (Present)

## LIST OF ABBREVIATIONS

AGES (PTY) LTD

## Table of contents

1	EXE	CUTIVE SUMMARY	9	
2	BAC	ACKGROUND		
	2.1	SCOPE AND MOTIVATION	13	
	2.2	PROJECT DIRECTION	13	
	2.3	TERMS OF REFERENCE	13	
	2.4	CRM: LEGISLATION, CONSERVATION AND HERITAGE MANAGEMENT	14	
	2.4.1 2.4.2	Legislation regarding archaeology and heritage sites Background to HIA and AIA Studies	14 15	
3	REG	ONAL CONTEXT	17	
	3.1	Area Location	17	
	3.2	AREA DESCRIPTION: RECEIVING ENVIRONMENT	18	
	3.3	SITE DESCRIPTION	19	
4	MET	HOD OF ENQUIRY	21	
	4.1	SOURCES OF INFORMATION	21	
	4.1.1	Desktop Study	21	
	4.1.2	· · · · · · · · · · · · · · · · · · ·		
	4.1.3 4.1.4			
	4.2	LIMITATIONS		
	4.2.1	Access		
	4.2.2 4.2.3	Visibility Limitations and Constraints		
_				
5				
	5.1	The Stone Age		
	5.2	THE IRON AGE (FARMER PERIOD)		
	5.3	HISTORICAL / COLONIAL PERIOD AND RECENT TIMES		
	5.4	GRAVES		
	5.5	OTHER: MINING	57	
6	ARC	HAE0-HISTORICAL CONTEXT	60	
	6.1	THE ARCHAEOLOGY OF SOUTHERN AFRICA	60	
	6.1.1	The Stone Ages		
	6.1.2	The Iron Age (Farmer Period)		
	6.1.3 6.1.4	Historical and Colonial Times and Recent History: Bantu Speaking Groups in the South African interior:		
	6.2	Discussion: The WayLand Iron Ore Mine Project Area Archaeological Representations		
	6.2.1	The Stone Age Period	63	
	6.2.2	Iron Age / Farmer Period Sites	63	
	6.2.3 6.2.4	Later History: Historical archaeology and living heritage Makgopotong: From Mission to Land Claim		
7		JLTS: STATEMENT OF SIGNIFICANCE AND IMPACT RATING		
1	7.1	HERITAGE RESOURCES MANAGEMENT AND CONSERVATION		
	7.1 7.2	THERITAGE RESOURCES MANAGEMENT AND CONSERVATION		
	7.3	POTENTIAL IMPACTS AND SIGNIFICANCE RATINGS		
	7.3.1 7.3.2	General assessment of impacts on resources Direct impact rating		

		Wayland Iron Ore Mine: Archaeological Impact Assessment Report	and the second second second	
	7.3.3	Management actions		
	7.3.4			
	-	Site SA01		
	-	Site IA01, Site IA02		
	-	Site IA03, IA04, IA05		
	-	Site IA06, IA07		
	-	Site IA08, IA09		
	-	Site HP01		
	-	Site HP02		
	-	Site HP03		
	-	Site HP04, Site HP05, Site HP06, Site HP08		
	-	Site HP07		
	-	Site HP09, HP10, HP11		
	-	Site BP01		
	-	Site BP02		
	-	Site BP03		
	-	Site BP04, BP05, BP07, BP08, BP09		
	-	Site BP06		
	-	Site BP10, BP11		
	-	Site BP12		
	-	Site BP13		
	-	Site BP14		
	-	Site MS01, MS02, MS03, MS04		
7	.4	DISCUSSION: EVALUATION OF RESULTS AND IMPACTS		
8	REC	OMMENDATIONS		
9	GEN	ERAL COMMENTS AND CONDITIONS	127	
10	BIBL	IOGRAPHY		

# List of Figures

Figure 3-1: 1:50 00 Map representation of the Wayland Iron Ore Mine project location on the farms Makotopong 1200LS (east) and Kalkfontein	
615LS (west) (2329DA, 2329CB) Figure 3-2: General surroundings on the farm Makotopong looking east	17
Figure 3-3: General surroundings on the farm Maketopong looking east.	19
Figure 3-4: Map indicating Portions of the consolidated Makotopong farm	20
Figure 3-5: Map indicating Portions of the farm Kalkfontein	
Figure 4-1: Aerial representation of the landscape at Makotopong Figure 4-2: Captured screen contents of real time mobile aerial orientation representations employed during the field survey, current field	21
Figure 4-2: Captured screen contents of real time mobile aerial orientation representations employed during the field survey, current field location indicated by blue marker	22
Figure 4-3: View of areas of disturbed vegetation at Makotopong, looking west.	
Figure 4-4: View across higher ridges on Makotopong, looking north.	24
Figure 4-5: View of abandoned crop fields at Makotopong, looking west.	24
Figure 4-6: View of abandoned crop fields at Makotopong, looking east.	
Figure 4-7: View of general surroundings in more dense vegetation zones Makotopong, looking east Figure 4-8: View of Makotopong, looking east towards the N1 highway	
Figure 4-9: View of the farm Kalfontein from a high ridge north of the farmstead, looking south.	20
Figure 4-10: View of highly disturbed vegetation on the farm Kalfontein, looking north.	27
Figure 4-11: View of general surroundings in the northern portions of the farm Kalfontein	27
Figure 5-1: Map indicating the locations of archaeological and historical occurrences on the farm Makotopong 1200LS, discussed in the text.	28
Figure 5-2: Map indicating the locations of archaeological and historical occurrences on the farm Kalkfontein 615LS, discussed in the text	29
Figure 5-3: MSA debris flakes documented on Makotopong Figure 5-4: View of general surroundings at Site SA01	
Figure 5-5: Quartz lithics originating from Site SA01	
Figure 5-6: Quartz lithics originating from Site SA01	31
Figure 5-7: View of general surroundings at Site IA01. Note the presence of Euphorbia candelabrum	32
Figure 5-8: Diagnostic ceramic fragments from Site IA01. The fragments possibly display decoration motives of the 16th century Icon facies.	
Figure 5-9: View of general surroundings at Site IA02. Note the presence of a large amount of Euphorbia candelabrum trees	33
Figure 5-10: Material culture from Site IA02: upper grindstone (left), decorated and burnished ceramics (right) Figure 5-11: View of general surroundings at Site IA03	
Figure 5-12: View of general surroundings at Site IA03	
Figure 5-13: Undecorated potsherd (left) and stone structure (right) from Site IA04	35
Figure 5-14: View of general surroundings at Site IA05. Note the presence of Cenchrus ciliaris grass cover and Euphorbia candelabrum tree.	35
Figure 5-15: Single stone wall section at Site IA06	
Figure 5-16: Densely overgrown terrace stone structures at Site IA07 Figure 5-17: View of general Site IA08. Note the presence of <i>Cenchrus ciliaris</i> grass in deep ash and cattle dung deposits	36
Figure 5-17: view of general Site IA08. Note the presence of <i>Cenchrus ciliaris</i> grass in deep ash and cattle dung deposits	37
Figure 5-19: View of general surroundings at Site IA09. Note the presence of <i>Marlotis Aloe</i> stands which demarcates stone wall structures	
Figure 5-20: Stone wall structures (left) and small lower grindstone (right) from Site IA09	38
Figure 5-21: The house of the Lutheran Native Association Mission at Site HP01	39
Figure 5-22: View of mud brick house remains at Site HP02.	40
Figure 5-23: Material culture from Site HP02: Glass fragment and metal container (left) and large metal bath (right) Figure 5-24: Various structures at the old Ruigedraai homestead (Site HP03)	
Figure 5-24: Various structures at the old Rulgeoraal homestead (Site HP03).	41
Figure 5-26: The remains of stone foundation structures at Site HP04.	
Figure 5-27: The remains of stone wall structures at Site HP06.	43
Figure 5-28: The remains of stone foundation structures at Site HP07.	43
Figure 5-29: Site HP07: The recent Roodewal farmstead	44
Figure 5-30: Site HP07: A large labourer's hostel compound on the former Roodewal Figure 5-31: Remains of brick and mud structures, stone wall enclosures and middens at Site HP09	
Figure 5-32: Historical occupation area at Site HO10	
Figure 5-33: View of the Makotopong Community cemetery (Site BP01)	
Figure 5-34: Detail of graves at the Makotopong Community cemetery (Site BP01)	47
Figure 5-35: Informal cemetery at Site BP02.	
Figure 5-36: View of old Ruigedraai family cemetery at Site BP03.	
Figure 5-37: Informal cemetery at Site BP04. The tree indicates the location of a grave Figure 5-38: Stone cairn indicating the location of a grave at Site BP05	
Figure 5-39: Informal cemetery with three graves at Site BP06. Note presence of offerings and grave dressing	
Figure 5-40: A damaged metal grave "fence", commonly used as grave dressing which possibly demarcates the location of Site BP07	52
Figure 5-41: Stone cairns indicating the location of 3 graves at Site BP08	52
Figure 5-42: Large stone cairns and heaps indicating the location of 2 of the graves at Site BP09.	
Figure 5-43: Concrete grave dressing (left) and unmarked headstone (right) at Site BP10.	
Figure 5-44: Concrete grave dressings (left) and unmarked headstone (right) at Site BP11	
Figure 5-46: View of the old Kalkfontein family cemetery in a large crop field at Site BP13,	
Figure 5-47: Single marked grave at Site BP14	57
Figure 5-48: View of mine diggings and small scale mica mine at Site MS01	
Figure 5-49: A deep mine shaft at Site MS02	
Figure 5-50:Heaps of Quartzite extracted in the process of mica mining at Site MS03.	59



Figure 5-51: A small excavation trench at Site MS04.	59	
Figure 6-1: Maps detailing the early distribution of Sotho-Tswana speakers (left) and distribution of 16th century Moloko ceramics, specifically		
the Icon facies (right) (After Huffman 2007)	64	
Figure 6-2: Ceramic decoration motives typical of the15th and 16th century Icon facies (After Huffman 2007).		
Figure 6-3: Early trek route (E) of Van Rensburg that was followed by Trichardt in 1836 (After De V. Pienaar 1990)	65	
Figure 6-4: Bantu speaking groups occupying areas area north of Polokwane at around 1930 (after Van Warmelo 1935)	66	
Figure 6-5: The original title deed for the farm Roodewal	68	
Figure 7-1: Heritage sensitivity map for the farm Makotopong	124	
Figure 7-2: Heritage sensitivity map for the farm Kalkfontein	124	

## 1 EXECUTIVE SUMMARY

This report details the results of an Archaeological Impact Assessment (AIA) Study as part of the scoping phase subject to a mining right application (MRA) for the proposed Sekoko Resources (Pty) Ltd. Wayland Iron Ore Mine, north of Polokwane in the Limpopo Province. The report includes background information on the area's archaeology, its representation in southern Africa, and the history of the larger area under investigation, survey methodology and results as well as heritage legislation and conservation policies. A copy of the report will be supplied to the South African Heritage Resources Agency (SAHRA) and recommendations contained in this document will be reviewed in order to consider the conservation priority of sites located in the area.

A number of academic archaeological and historical studies have been conducted in this section of the Limpopo Province and these studies all infer a rich and diverse archaeological landscape, representative of most phases of human and cultural development in southern Africa. Similarly, a number of areas of archaeological and heritage potential were located during the AIA survey which focused around areas of heritage potential on the farms Makotopong 1200LS and Kalkfontein 615LS, covering surface areas exceeding 3500ha.

## Palaeontology:

Since the palaeontological sensitivity of rock units within the study area is generally low the impact significance of the proposed prospecting activities as far as fossil heritage is concerned, is likely to be small. However, a Palaeontological Impact Assessment is recommended and, should fossil remains such as fossil fish, reptiles or vitrified wood be exposed during construction, these objects should carefully safeguarded and the relevant heritage resources authority (SAHRA) should be notified immediately so that the appropriate action can be taken by a professional palaeontologist.

### Stone Age:

A medium density scatter of quartz stone lithics, possibly from the Middle Stone Age (MSA) and / or Later Stone Age (LSA) occurs in the survey area along a drainage line on the farm Kalkfontein. The material occurs in an open context and the presence of source rock in the larger landscape might imply a local manufacture of the lithics where the hills surrounding Kalkfontein might have acted as factory site for these artefacts. This Stone Age occurrence and its cultural context might be of notable research value and these occurrences are therefore of medium significance. It is recommended that a limited Phase 2 Specialist Study be conducted prior to the commencement of development in this area. This process should minimally include the recording of the larger MSA cultural context by means of a more comprehensive area survey, surface sampling and consequent analysis of the stone artefacts by a suitably qualified Stone Age archaeologist. The specialist should obtain the necessary permits from the relevant heritage resources authority (SAHRA). A number of MSA debris flakes were noted on the farm Makotopong 1200LS, scattered in low concentrations. The occurrences are of low significance.

## Iron Age (Farmer Period):

The landscape south of the Soutpansberg display many remnants of Iron Age farmer occupation and a total of 9 sites possibly attributed this time period were identified on Makotopong and Kalkfontein. Two settlement areas with occupation phases possibly dating to the early parts of the Later Iron Age (mid-second millennium AD) was located along the southern border of Makotopong. The sites are characterised by the presence of deep ash deposits, granary stand structures, diagnostic potsherds and faunal remains. In addition, two similar Iron Age occupation areas occur on high ridges on the farm Kalkfontein. The sites display stone enclosures and terracing and they fit a possible Later Iron Age context. These 4 sites are of medium significance and further Phase 2

studies and mitigation procedures are recommended in order to establish the provenance of the sites, by extracting comprehensive material samples prior development / destruction. Such measures should minimally investigate the nature and context of the sites by means of site recording and mapping, surface and sub-surface sampling (limited STP [Shovel Test Spit] excavations) and local social consultation by a suitably qualified archaeological specialist. The specialist should obtain the necessary permits from the relevant heritage resources authority (SAHRA). In addition, a number of smaller sites possibly dating to the Iron Age, more specifically two vitrified cattle dung deposits on a ridge and a large disturbed area to the west on Makotopong, as well as a section of collapsed stone walling and minor terrace structure on Kalkfontein are probably of medium-low significance, as little / no heritage remains were located within these contexts and the preservation of the stone structures is generally poor. However, it is recommended that the provenance of the sites be established and that site monitoring be done if any construction takes place around these areas.

## Historical/ Colonial Period:

The Zandrivierspoort area north of Polokwane has a long and extensive Colonial Period settlement history. From around the first half of the 19th century, the area was frequented by explorers, missionaries and farmers who all contributed to a recent history of contact and conflict which ultimately amounted to the repatriation of the area back to the Makotopong community. The remnants of these histories are scattered across Kalkfontein and Makotopong, with a large number of Colonial Period sites documented specifically on Makotopong. Possibly the most important historical feature in the area is the house of the Lutheran Native Association Mission Station situated near the Sand River on the farm Roodewal (now part of Makotopong). The structure, built in the early 20th century on Roodewal after the farm was purchased from the Berlin Mission Society in the 1920's, is in a rundown state but it is of importance in terms of the regional Missionary history of the Limpopo Province. In addition, the structure is older than 60 years is therefore protected under the NHRA (Act 25 of 1999). It is recommended that the site be maintained and that a site management plan be implemented to restore and conserve the structure. The dilapidated remains of a large number of mud brick houses occur around the Mission house and, as these structures occur within the same historical context as the Mission, they are of medium significance. However, the sites are poorly preserved and it is recommended that the structures be carefully documented and the detailed provenance of the sites be established by means of a desktop study and social consultation and participation, if the sites were to be impacted on by the proposed mining project. If this were to be the case, a destruction permit from the relevant heritage resources authority (SAHRA) would be mandatory.

The remains of the old Ruigedraai homestead, consisting out of an intact farm house and the ruins of a smaller house and hut occurs on the north-eastern periphery of Makotopong. The structures are older than 60 years and they are protected under heritage legislation. It is recommended that the buildings be carefully documented and the detailed provenance of the farmstead be established by means of a desktop study. If the sites were to be impacted on by the proposed mining project, a destruction permit from the relevant heritage resources authority (SAHRA) would be required.

A large number of poorly preserved brick and mud structures, stone wall enclosures and middens are scattered across Makotopong west of the Sand River. In addition, similar structures occur at Kalkfontein north of the current farmstead. The sites, which were probably labourer's quarters in the mid-20<sup>th</sup> century, occur almost without exception in association with clusters of Sisal Trees and Marlotis Aloes. The sites are of medium-low significance and site monitoring of these structures are recommended when development commences, **as graves are likely to occur around the structures.** If the sites were to be impacted on by the mining development, destruction permits should be obtained from the relevant heritage resources authority (SAHRA).



The recent Roodewal farmstead, farm buildings and sheds occur directly west of the Sand River on the southern border of Makotopong. In addition, a large labourer's hostel compound is situated directly south east of earlier historical labourer's dwellings approximately 2km north of the Roodewal farmhouse. These structures are of recent age and they carry a low significance rating. It is recommended that the sites and surroundings be monitored when the mining development commences.

## Graves:

A total of 14 graveyards and/ or burial places were recorded on Makotopong and Kalkfontein. The burial places hold various numbers of graves, most of which are older than 60 years or unmarked and as a result, protected under the NHRA (Act 25 of 1999). As the graves are of high significance and structurally stable, they will require management or mitigation if impact cannot be avoided. A conservation buffer zone of at least 20m around the graves, as well as the fencing off of all cemeteries and graves on the farms Makotopong and Kalkfontein are recommended. However, should the graves or the proposed 20m buffer zone be impacted in any way by the planned activities, full grave relocations are recommended for burials. This measure should be undertaken by a qualified archaeologist, and in accordance with relevant legislation and subject to any local and regional provisions and laws and by-laws pertaining to human remains. A full social consultation process should occur in conjunction with the mitigation of cemeteries and burials and a concerted effort must also be made to identify all buried individuals and to contact their relatives and descendants. Other legislative measures which may be of relevance include the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), the Human Tissues Act (Act no. 65 of 1983, as amended), the Ordinance on Excavations (Ordinance no. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place. As burial locations in this area follow a general (and fairly common) pattern where graves occur around historical house structures and homestead complexes, utmost care should be taken not to disturb such resources.

## Mining Sites:

The remains of small scale mica mining are clearly visible at a number of sites on Kalkfontein. As mining operations were probably decommissioned in recent times, the sites are of limited significance with regards to its heritage value. However, it is recommended that the relevant resources agency be consulted prior to the disturbance or alteration of these sites.

Note that access onto a portion of Mokotopong (formerly Portion 5 of the farm Ruigedraai 809LS) could not be obtained and consequently these area could not be surveyed. It is recommended that this Portion be archaeologically surveyed in order to accurately establish the presence of heritage resources, if the area were to be included in mining development areas.

Considering the large extent of the Study Area and the localised nature of heritage remains, a careful watching brief monitoring process is recommended for all stages of the project, specifically around heritage sensitive areas i.e. MSA scatters, Iron Age sites, historical period structures and graves. Should any subsurface palaeontological, archaeological or historical material be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately

It is essential that cognisance be taken of the larger archaeological landscape of the area in order to avoid the destruction of previously undetected heritage sites. Here, care should be taken around rock faces and outcrops in the larger landscape, as rock art is known to occur on these outcrops. Water sources such as drainage lines

and rivers should also be regarded as potentially sensitive in terms of possible Stone Age and Iron Age deposits. The possible existence of Historical Period resources deriving from the area's more recent history should also be considered. Graves and cemeteries generally occur around homesteads and utmost care should be taken not to disturb these high risk heritage resources as they involve complex intrinsic social and ritual attributes within the community.

This report details the methodology, limitations and recommendations relevant to these heritage areas, as well as areas of proposed development. It should be noted that mitigation measures are valid for the duration of the development process, and mitigation measures might have to be implemented on additional features of heritage importance not detected during this Phase 1 assessment (e.g. uncovered during the construction process).

## 2 BACKGROUND

## 2.1 Scope and Motivation

AGES was appointed by Sekoko Resources (Pty) Ltd to conduct an Archaeological Impact Assessment (AIA) Study on the farms Makotopong 1200LS (formerly portions of Roodewal 808LS and Ruigedraai 809LS) and Kalkfontein 615 LS north of Polokwane in the Limpopo Province. The study was requested subject to the scoping phase for the Mining Right application of the proposed Wayland Iron Ore Mine. The rationale of the study was to determine the presence of heritage resources such as archaeological and historical sites and features, graves and places of religious and cultural significance; to consider the impact of the proposed project on such heritage resources, and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features.

## 2.2 Project Direction

AGES's expertise ensures that all projects be conducted to the highest international ethical and professional standards. As archaeological specialist for AGES, Mr Neels Kruger acted as field director for the project; responsible for the assimilation of all information, the compilation of the final AIA report and recommendations in terms of heritage resources on the demarcated project areas. Mr Kruger is an accredited archaeologist and Culture Resources Management (CRM) practitioner with the Association of South African Professional Archaeologists (ASAPA), a member of the Society for Africanist Archaeologists (SAFA) and the Pan African Archaeological Association (PAA) as well as a Master's Degree candidate in archaeology at the University of Pretoria.

## 2.3 Terms of Reference

Heritage specialist input in Environmental Impact Assessment (EIA) processes is essential to ensure that through the management of change, development conserves our heritage. Heritage specialist input in EIA processes can play a positive role in the development process by enriching an understanding of the past and its contribution to the present. It is also a legal requirement for certain categories of development defined in the relevant heritage legislation, which may have an impact on heritage resources.

Thus, EIAs should, in all cases, include the assessment of Heritage Resources. The heritage component of the EIA is provided for in the **National Environmental Management Act**, (Act 107 of 1998) and endorsed by section 38 of the **National Heritage Resources Act (NHRA - Act 25 of 1999)**. In addition, the NHRA protects all structures and features older than 60 years (see Section 34), archaeological sites and material (see Section 35) and graves as well as burial sites (see Section 36). The objective of this legislation is to enable and to facilitate developers to employ measures to limit the potentially negative effects that the development could have on heritage resources.

Based hereon, this project functioned according to the following terms of reference for heritage specialist input:

- Provide a detailed description of all archaeological artefacts, structures (including graves) and settlements which may be affected, if any.
- Assess the nature and degree of significance of such resources within the area.
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance.
- Assess any possible impact on the archaeological and historical remains within the area emanating

from the proposed development activities.

- Propose possible heritage management measures provided that such action is necessitated by the development.
- Liaise and consult with the South African Heritage Resources Agency (SAHRA).

## 2.4 CRM: Legislation, Conservation and Heritage Management

The broad generic term *Cultural Heritage Resources* refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

## 2.4.1 Legislation regarding archaeology and heritage sites

The South African Heritage Resources Agency (SAHRA) and their provincial offices aim to conserve and control the management, research, alteration and destruction of cultural resources of South Africa. It is therefore vitally important to adhere to heritage resource legislation at all times.

- National Heritage Resources Act No 25 of 1999, section 35

According to the National Heritage Resources Act of 1999 a historical site is "any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 60 years." This clause is commonly known as the "60-years clause". Buildings are amongst the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Iron Age settlements. "Tell" refers to the evidence of human existence which is no longer above ground level, such as building foundations and buried remains of settlements (including artefacts).

The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects, meteorites and rare geological specimens
- visual art objects
- military objects
- numismatic objects
- objects of cultural and historical significance
- objects to which oral traditions are attached and which are associated with living heritage
- objects of scientific or technological interest
- any other prescribed category

With regards to activities and work on archaeological and heritage sites this Act states that:

"No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority." (34. [1] 1999:58)

and

"No person may, without a permit issued by the responsible heritage resources authority-

(a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;

AGES (PTY) LTD

- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
   (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
  - (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites. (35. [4] 1999:58)."

And:

"No person may, without a permit issued by SAHRA or a provincial heritage resources agency-

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60)."
- Human Tissue Act of 1983 and Ordinance on the Removal of Graves and Dead Bodies of 1925

Graves 60 years or older are heritage resources and fall under the jurisdiction of both the National Heritage Resources Act and the Human Tissues Act of 1983. However, graves younger than 60 years are specifically protected by the Human Tissues Act (Act 65 of 1983) and the Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) as well as any local and regional provisions, laws and by-laws. Such burial places also fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities.

## 2.4.2 Background to HIA and AIA Studies

South Africa's unique and non-renewable archaeological and palaeontological heritage sites are 'Generally' protected in terms of the National Heritage Resources Act (Act No 25 of 1999, section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority. Heritage sites are frequently threatened by development projects and both the environmental and heritage legislation require impact assessments (HIAs & AIAs) that identify all heritage resources in areas to be developed. Particularly, these assessments are required to make recommendations for protection or mitigation of the impact of the sites. HIAs and AIAs should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of developed and (b) make recommendations for protection or the sites.

The National Heritage Resources Act (Act No. 25 of 1999, section 38) provides guidelines for Cultural Resources Management and prospective developments:

**"38.** (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as:

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length;

(c) any development or other activity which will change the character of a site:

(i) exceeding 5 000  $m^2$  in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000  $m^2$  in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development." And:

"The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

- (a) The identification and mapping of all heritage resources in the area affected;
- (b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
- (c) an assessment of the impact of the development on such heritage resources;
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development (38. [3] 1999:64)."

Consequently, section 35 of the Act requires Heritage Impact Assessments (HIAs) or Archaeological Impact Assessments (AIAs) to be done for such developments in order for all heritage resources, that is, all places or

objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic or technological value or significance to be protected. Thus any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

## 3 REGIONAL CONTEXT

## 3.1 Area Location

The proposed Wayland Iron Ore Mine study area is located approximately 30 kilometres north of Polokwane in the Capricorn Magisterial District in the Limpopo Province, more or less at **S23°38'13.82" E29°35'50.78"** (Makotopong), **S23°42'03.46" E29°28'37.00"** (Kalkfontein). The Sand River and the N1 highway demarcate the eastern boundary of the farm Makotopong, where the farm Kalkfontein is situated adjacent to the D453 Soetdorings road north-west of Polokwane.

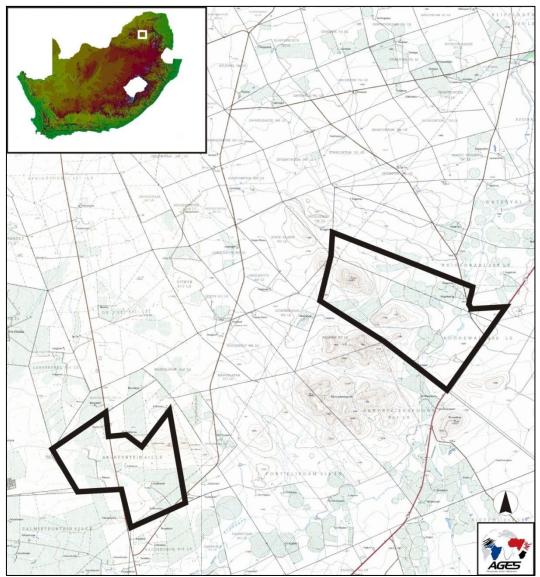


Figure 3-1: 1:50 00 Map representation of the Wayland Iron Ore Mine project location on the farms Makotopong 1200LS (east) and Kalkfontein 615LS (west) (2329DA, 2329CB).

AGES (PTY) LTD

## 3.2 Area Description: Receiving Environment

The area of the proposed Wayland Iron Ore Mine lies within the Savanna biome which is the largest biome in Southern Africa. It is characterised by a grassy ground layer and a distinct upper layer of woody plants (trees and shrubs). The most recent classification of the area by Mucina & Rutherford is the mountainous areas to be part of the Mamabolo Mountain Bushveld, while a section forms part of the Polokwane Plateau Bushveld in the northwest, while the remainder of the plains and footslopes falls within the Makhado Sweet Bushveld vegetation type. The landscape features of the Makhado Sweet Bushveld vegetation type is slightly to moderately undulating plains, sloping generally down to the north, with some hills to the southwest, while the vegetation is characterised by short and shrubby bushveld with a poorly developed grass layer. The Polokwane Plateau Bushveld vegetation type is characterised by moderately undulating plains with short open tree layer with a welldeveloped grass layer to grass plains with occasional trees at higher altitudes. The hills and low mountains embedded in this vegetation type are of the Mamabolo Mountain Bushveld. The Mamabolo Mountain Bushveld vegetation type is characterised by low mountains and rocky hills. The slopes are moderate to steep, and very rocky, covered by small trees and shrubs. The regional geology reflects the guartz-amphibolite schists which contain the quartzmagnetite horizons as "banded iron formations" as preserved in a complexly folded outlier, surrounded by tonalitic gneiss. Four deformational phases have been recognised which broadly correlate with those of the Southern Marginal Zone of the Limpopo Metamorphic Complex. The proposed area of the Wayland Iron Ore Mine is underlied by a low-grade Magnetite deposit in the Palaeoproterozoic Rhenosterkoppies Greenstone Belt or Rhenosterkoppies Fragment, which occurs to the northwest of the main, northeast-trending Pietersburg Greenstone Belt. The quartz-amphibolite schists which contain the quartz-magnetite horizons as "banded iron formations" outcrop as a prominent range of hills in an east west direction across the centre of the farm Kalkfontein 615LS; and as a prominent range of hills over much of the western portion of the farm Makotopong 1200LS (see Henning 2012).

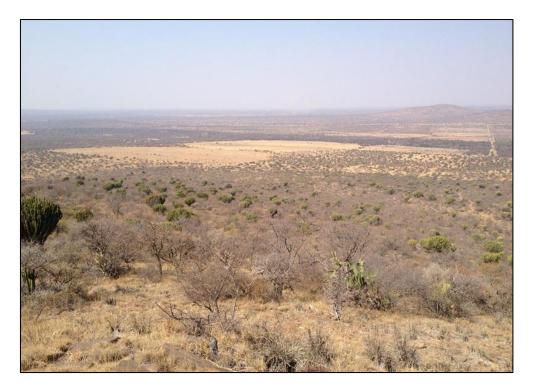


Figure 3-2: General surroundings on the farm Makotopong looking east.



Figure 3-3: General surroundings on the farm Kalkfontein, looking south.

## 3.3 Site Description

The project area subject to Sekoko Resources (Pty) Ltd's MRA covers the farms Kalkfontein 615LS and Makotopong 1200LS (formerly portions of Vuursteenlaagte 868LS, Roodewal 808LS and Ruigedraai 809LS). More specifically, the AIA study focused around all portions of the farm Makotopong 1200LS (owned by the Makotopong community) and Portions 1, 2 and 6, and the remainder of the farm Kalkfontein 615LS (currently owned by the Du Preez Trust).

At Makotopong, large scale infrastructural developments (i.e. roads, power lines, boreholes, fences, pipelines, etc.) and agricultural activities (i.e. sheds, agricultural fields and irrigation pivots) have been established in recent years but farming activities have been suspended after the repatriation of the farm. These farming activities have nonetheless had an adverse impacted on the terrain. Large areas remain undeveloped where pristine indigenous vegetation still occurs, especially in the mountainous regions.

Some fields on the farm Kalkfontein are currently under cultivation, while other areas were cultivated in the past. A large game enclosure covers most of the higher lying areas and the small hill on the farm.

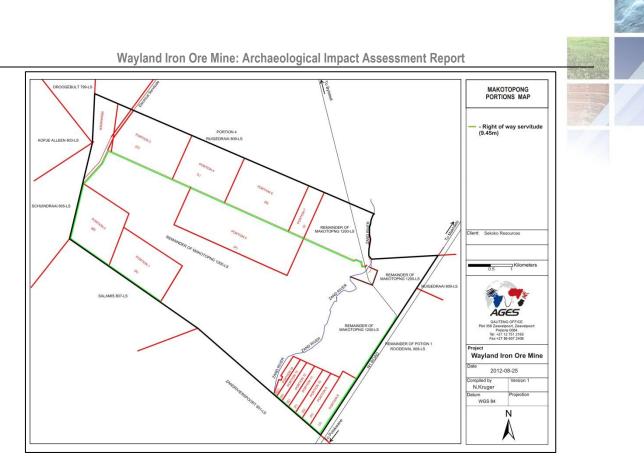


Figure 3-4: Map indicating Portions of the consolidated Makotopong farm.

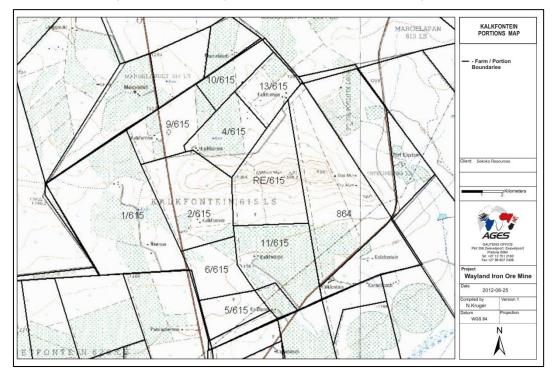


Figure 3-5: Map indicating Portions of the farm Kalkfontein.

## 4 METHOD OF ENQUIRY

## 4.1 Sources of Information

As the survey area subject to the Wayland Iron Ore MRA is vast, detailed desktop, aerial and field studies were conducted in order to sample surface areas systematically and to ensure a high probability of heritage site recording.

## 4.1.1 Desktop Study

A desktop study was prepared in order to contextualize the proposed project within a larger historical milieu. The study focused on relevant previous studies, archaeological and archival sources, Heritage Impact Assessment Reports, aerial photographs, historical maps and local histories, all pertaining to the larger landscape of this section of the Limpopo Province.

## 4.1.2 Aerial Representations and Survey

Aerial photography is often employed to locate and study archaeological sites, particularly where larger scale area surveys are performed. This method was applied to aid the pedestrian and vehicular survey of Makotopong and Kalkfontein and surroundings, where contour lines of elevations, depressions, variation in vegetation, soil marks and landmarks were examined.



Figure 4-1: Aerial representation of the landscape at Makotopong

Specific attention was given to shadow sites (shadows of walls or earthworks which are visible early or late in the day), crop mark sites (crop mark sites are visible because disturbances beneath crops cause variations in their height, vigour and type) and soil marks (e.g. differently coloured or textured soil (soil marks) might indicate ploughed-out burial mounds). Attention was also given to moisture differences, as prolonged dampening of soil

as a result of precipitation frequently occurs over walls or embankments. By superimposing high frequency aerial photographs with images generated with Google Earth, potential sensitive areas were subsequently identified, geo-referenced and transferred to a handheld GPS device. In addition, based on existing knowledge of the local heritage landscape, the farms were divided into smaller survey zones centred around areas of higher site catchment probability (where human activity was likely to occur in prehistoric and historic times e.g. around water sources, near soils fit for agriculture, on ridges). These survey zones were then transferred to a handheld GPS device.

These areas served as referenced points from where further vehicular and pedestrian surveys were carried out

## 4.1.3 Field Survey

Archaeological survey implies the systematic procedure of the identification of archaeological sites. An archaeological survey of areas to be impacted by the proposed Wayland Iron Ore Mine was done by means of a systematic survey in accordance with standard archaeological practise by which heritage resources are observed and documented. In order to sample surface areas systematically and to ensure a high probability of site recording the farms were systematically surveyed, GPS reference points were visited and random spot checks were made (see detail in previous section). Using a Garmin E-trex Legend GPS objects and structures of archaeological / heritage value were recorded and photographed with a Canon 450D Digital camera. Real time aerial orientation, by means of a mobile Google Earth application was also employed to investigate possible disturbed areas during the survey.

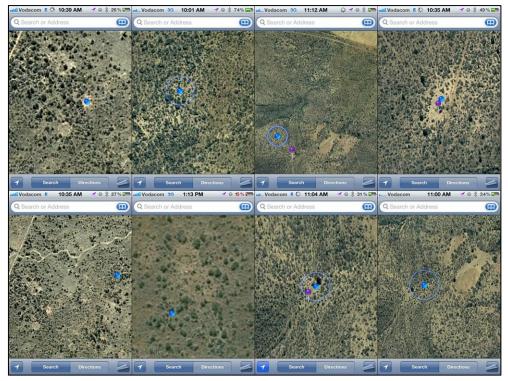


Figure 4-2: Captured screen contents of real time mobile aerial orientation representations employed during the field survey, current field location indicated by blue marker.

As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion.

## 4.1.4 General Public Liaison

In single cases, consultation with local residents provided information on the general history of the area, possible locations of heritage resources and brief commentaries on the recent history of the area.

## 4.2 Limitations

## 4.2.1 Access

The farm Makotopong is accessed via a dirt road connecting to the N1 from the west. A network of smaller farm roads provides access to most areas on the property but access gates the north-western portion of Mokotopong (formerly Portion 5 of the farm Ruigedraai 809LS) could not be obtained and these areas could not be surveyed. Kalkfontein is accessed via the D453 Soetdorings road through a series of farm gates. Most areas on the property are easily accessible via small dirt roads and no access restrictions were encountered.

## 4.2.2 Visibility

The surrounding vegetation differs slightly across the farms subject to the AIA study (refer to Section 3.2) and is mostly constituted out of a combination of scattered bush, trees, grasslands and riverine bush. Similarly, the general visibility at the time of the field survey (August 2012) ranged between high visibility in disturbed areas and agriculture fields, moderate visibility in flatter more pristine areas and low visibility in mountainous regions. In single cases during the survey sub-surface inspection was possible.

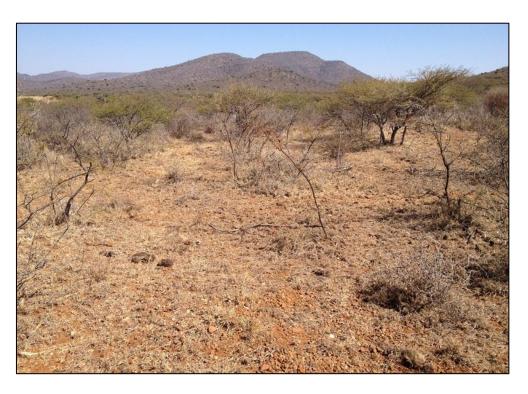


Figure 4-3: View of areas of disturbed vegetation at Makotopong, looking west.



Figure 4-4: View across higher ridges on Makotopong, looking north.

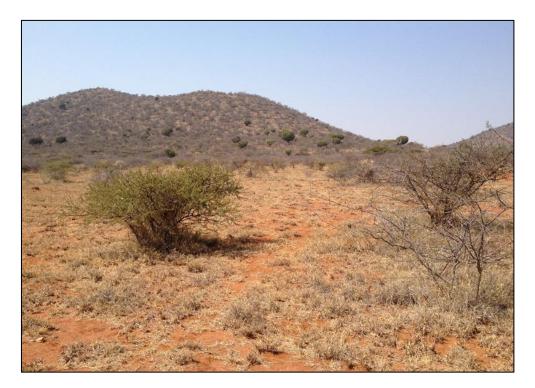


Figure 4-5: View of abandoned crop fields at Makotopong, looking west.



Figure 4-6: View of abandoned crop fields at Makotopong, looking east.

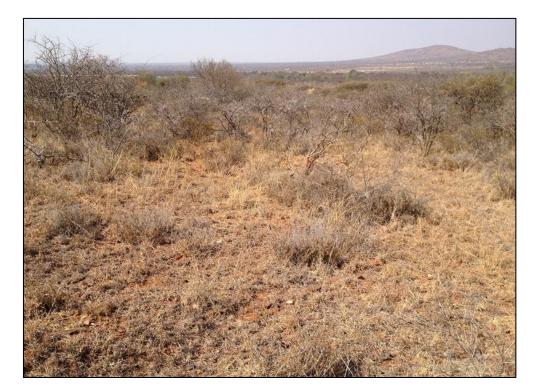


Figure 4-7: View of general surroundings in more dense vegetation zones Makotopong, looking east.

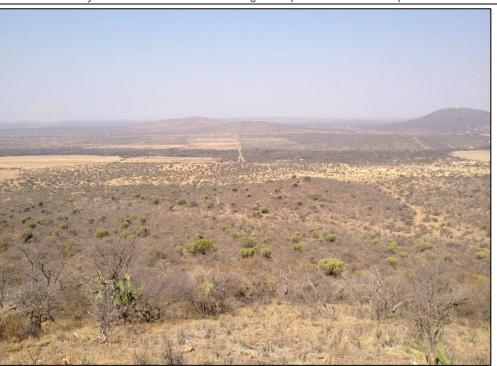


Figure 4-8: View of Makotopong, looking east towards the N1 highway.



Figure 4-9: View of the farm Kalfontein from a high ridge north of the farmstead, looking south.



Figure 4-10: View of highly disturbed vegetation on the farm Kalfontein, looking north.



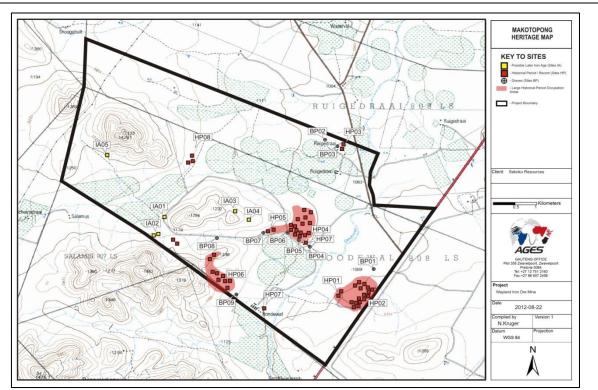
Figure 4-11: View of general surroundings in the northern portions of the farm Kalfontein.

## 4.2.3 Limitations and Constraints

Due to the large extent of the surface area subject to the AIA study, the pedestrian and vehicular site survey primarily focused around areas tentatively identified as sensitive and of high heritage probability (i.e. those noted during the aerial survey) as well as areas of high human settlement catchment. However, the following constraints were encountered:

- Access: Access to a portion of Mokotopong (formerly Portion 5 of the farm Ruigedraai 809LS) were constrained and this area could not be surveyed.
- **Visibility:** Visibility proved to be a constraint in more pristine and mountainous areas where documented sites proved to be densely overgrown and obstructed by surface vegetation.

Thus, even though it might be assumed that survey findings are representative of the heritage landscape of the Mokotopong and Kalkfontein areas, it should be stated that the possibility exists that individual sites could be missed due to the localised nature of some heritage remains as well as the possible presence of sub-surface archaeology. Therefore, maintaining due cognisance of the integrity and accuracy of the archaeological survey, it should be stated that the heritage resources identified during the study do not necessarily represent *all* the heritage resources present on the property. The subterranean nature of some archaeological sites, dense vegetation cover and visibility constraints sometimes distort heritage representations and any additional heritage resources located during consequent development phases must be reported to the Heritage Resources Authority or an archaeological specialist.



## 5 RESULTS: ARCHAEOLOGICAL SURVEY

Figure 5-1: Map indicating the locations of archaeological and historical occurrences on the farm Makotopong 1200LS, discussed in the text.

AGES (PTY) LTD

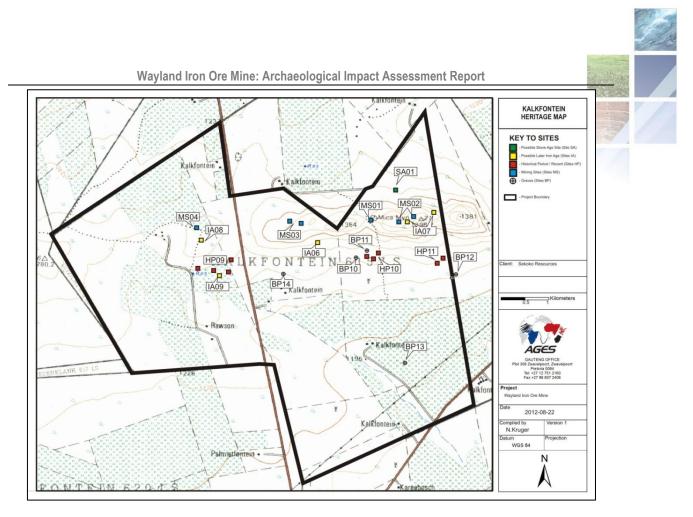


Figure 5-2: Map indicating the locations of archaeological and historical occurrences on the farm Kalkfontein 615LS, discussed in the text.

## 5.1 The Stone Age

A number of MSA debris flakes were noted on the farm Makotopong 1200LS, scattered in low concentrations. The occurrences are of low significance.

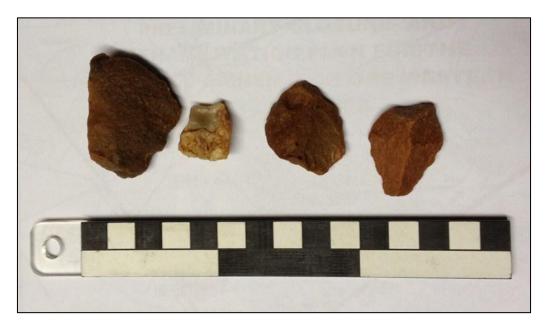


Figure 5-3: MSA debris flakes documented on Makotopong.

## Site SA01: S23°41'15.46" E29°28'56.55" (Kalkfontein 615LS : MSA Quartz lithic scatter)

A medium density scatter of quartz stone lithics, possibly from the Middle Stone Age (MSA) and / or Later Stone Age (LSA) occurs in the survey area along a drainage line on the farm Kalkfontein. The material, including side scrapers, cores and broken blades occurs in an open context and the presence of source rock in the larger landscape might imply a local manufacture of the lithics where the hills surrounding Kalkfontein might have acted as factory site for these artefacts. Some of the flakes could also be attributed to the Later Stone Age (LSA), as secondary retouching of the artefacts occurs. The density of the scatter was arbitrarily estimated by placing a one-meter drawing frame, sub-divided into quadrants, on a randomly-selected area displaying higher amounts of surface lithics. By plotting the counts of all lithic elements present in the 1x1 metre square relative density per m<sup>2</sup> was established and rated on a scale of low (<10), medium (10-20) and high (>20). This method has been adapted as expedient and non-invasive sampling technique that is particularly useful in value assessment of lithic occurrences during Phase 1 AIA's (see Van Der Ryst 2012).



Figure 5-4: View of general surroundings at Site SA01.



Figure 5-5: Quartz lithics originating from Site SA01.





Figure 5-6: Quartz lithics originating from Site SA01.

## - Possible other Stone Age Sites

It is highly likely that additional Earlier, Middle and possibly Later Stone Age scatters will occur in the area, specifically along drainage lines and where source rock material occurs in the landscape.

## 5.2 The Iron Age (Farmer Period)

It has been suggested elsewhere that the limited occurrence of Iron Age settlements in the mountainous areas around the Sand River, known as the Iron Mountains can be attributed to the occurrence of the magnetite (banded iron stone) where the abundant magnetite attracts lightning during the rainy season, which makes the area very unsafe and not an ideal area to live (e.g. Coetzee 2009). However, at least 5 possible Iron Age sites have been identified in the larger study area on Makotopong and Kalkfontein.

## - Site IA01: S23°38'13.47" E29°34'25.42" (Makotopong 1200LS: Iron Age farmer period sites)

An Iron Age occupation site, measuring approximately 100m x 50m in horizontal extent and more or less eastwest orientated, was located along a gravel road towards the southern periphery of Makotopong. The site, situated along a large cluster of *Euphorbia candelabrum* trees, possibly dates to the early parts of the Later Iron Age at around 1500 AD. This temporal interpretation is based on (also refer to see Section 6.2.2):

- <u>The regional context:</u> Considering the location of the site in the larger archaeological landscape, the site was probably occupied by early Sotho-Tswana speakers.
- <u>Diagnostic pottery</u>: Pottery fragments recovered from surface areas display similarities to early phases of the Moloko Ceramic Tradition, a regional expression of early Sotho-Tswana ceramic styles which dates to the middle of the second millennium AD.
- <u>The absence of stone walling</u>: Elaborate stone walling is a characteristic feature of Later Iron Age sites in the north-western interior of South Africa area post 1600. *Site IA01* contains no stone walling, which implies that settlement phases of the site predate stone walling, at around 1500AD.

Material culture observed at the site includes granary stand structures, deep ash deposits and a small number of diagnostic potsherds. The potsherds generally display decoration motives such as punctuated, stabbed and incised decorations and exterior surfaces have also been coloured and bi-chromed using ochre and graphite composites. These motives are similar to that of the Moloko Ceramic tradition, more specifically the Icon facies, a regional expression of the Moloko Branch, dating to the 14th – 15th century AD (see Section 6.2.2). There is a

high probability that unmarked graves might being present at this site.



Figure 5-7: View of general surroundings at Site IA01. Note the presence of Euphorbia candelabrum.



Figure 5-8: Diagnostic ceramic fragments from Site IA01. The fragments possibly display decoration motives of the 16<sup>th</sup> century Icon facies.



## Site IA02: S23°38'27.23" E29°34'16.53" (Makotopong 1200LS: Iron Age farmer period sites)

Another Iron Age site was documented directly south-west of Site IA01 in a dense cluster of *Euphorbia candelabrum* trees. The possible occupation site profile is similar to that of Site IA01 and it is highly likely that the sites occur in direct context with each other. Artefacts from the site include decorated and undecorated ceramics, upper grindstones and ash deposits.

There is a high probability that unmarked graves might being present at this site.



Figure 5-9: View of general surroundings at Site IA02. Note the presence of a large amount of Euphorbia candelabrum trees.



Figure 5-10: Material culture from Site IA02: upper grindstone (left), decorated and burnished ceramics (right).

- Site IA03: S23°38'07.71" E29°35'12.82" (Makotopong 1200LS: Iron Age farmer period sites)
- Site IA04: S23°38'15.48" E29°35'28.28" (Makotopong 1200LS: Iron Age farmer period sites)

Two sites possibly dating to the Iron Age occur on high ridges in a central portion of Makotopong. The sites are demarcated by a clear vegetation change as a result of deep vitrified cattle dung deposits. Single undecorated ceramic occurrences and unidentified stone structures were observed. However, no other material culture was observed in association with the sites and they were likely utilized as cattle outposts rather than occupation zones.



Figure 5-11: View of general surroundings at Site IA03.



Figure 5-12: View of general surroundings at Site IA04. Note surface vegetation disturbance as a result of vitrified cattle dung.



Figure 5-13: Undecorated potsherd (left) and stone structure (right) from Site IA04.

## Site IA05: S23°37'25.69" E29°33'40.77" (Makotopong 1200LS: Iron Age farmer period sites)

A clear vegetation change, possibly indicating historical human activity, occurs at the foot of a large mountain towards the western border of Mokotopong. Here, a dense stand of Cenchrus ciliaris (blue buffalo grass) and couch grass might indicated a large cattle dung accumulation, as elsewhere on Iron Age sites where these grass types are closely linked to livestock enclosures (e.g. Denbow 1979). No other material culture was observed in association with the vegetation change.

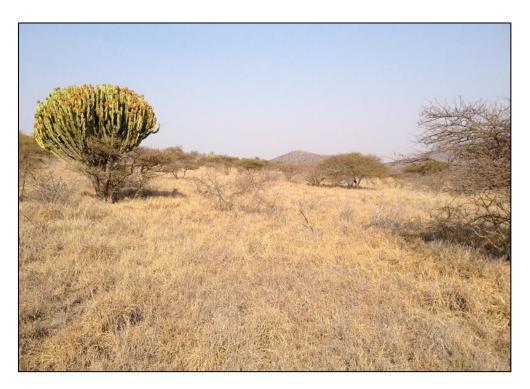


Figure 5-14: View of general surroundings at Site IA05. Note the presence of Cenchrus ciliaris grass cover and Euphorbia candelabrum tree.

# Site IA06: S23°41'41.26" E29°28'17.78" (Kalkfontein 615LS : Iron Age farmer period sites)

A single section of collapsed stone walling was located on a slope in a central portion of the farm Kalkfontein. The walling extends for about 30m from east to west and a small entrance in the structured is demarcated by a -35monolith. No material culture was found in association with the walling and it is therefore not possible to accurately ascertain a temporality for the structures. However, considering the intensification of stone wall building in this landscape after the 17<sup>th</sup> century as well as the settlement of Sotho-Tswana groups, the walls are probably not older than 300 years (see Section 6.2.2).



Figure 5-15: Single stone wall section at Site IA06.

# Site IA07: S23°41'26.60" E29°29'15.99" (Kalkfontein 615LS : Iron Age farmer period sites)

Densely overgrown and poorly preserved terrace sections occur on a high plateau towards the north-eastern boundary of Kalkfontein. No material culture or other similar / related structures were identified in the area. Even though the temporality of the structures is not known it might date to the later Iron Age farmer period.



Figure 5-16: Densely overgrown terrace stone structures at Site IA07.

- Site IA08: S23°41'37.51" E29°27'20.03" (Kalkfontein 615LS : Iron Age farmer period sites) A clear vegetation change and deep vitrified cattle dung deposits in association with a circular stone wall structure occur on a ridge on a north-western portion of the farm Kalkfontein. The stone structure measures approximately 4m in diameter. In addition to the cattle dung deposits, deep ashy soils were observed but no material culture was observed and the sites was likely utilized as cattle outposts rather than occupation zones during the Iron Age.



Figure 5-17: View of general Site IA08. Note the presence of Cenchrus ciliaris grass in deep ash and cattle dung deposits.



Figure 5-18: Circular stone structure at Site IA08.

- Site IA09: S23°41'56.24" E29°27'20.96" (Kalkfontein 615LS : Iron Age farmer period sites) A large stonewalled site, possibly dating to the later phases of the Iron Age occurs directly west of the D453 Soetdorings road on Kalkfontein, in association with dense *Marlotis Aloe* stands. The site covers a surface area of more than 1ha where a large complex of roughly built stone walls forming enclosures, periphery walls and terraces are scattered across the gradual downward slope of the hill. Besides for a single small lower grind stone, no material culture was observed in association with the structures.



Figure 5-19: View of general surroundings at Site IA09. Note the presence of *Marlotis Aloe* stands which demarcates stone wall structures.



Figure 5-20: Stone wall structures (left) and small lower grindstone (right) from Site IA09.

### 5.3 Historical / Colonial Period and recent times

The Zandrivierspoort area north of Polokwane has a long and extensive Colonial Period settlement history. From around the first half of the 19<sup>th</sup> century, the area was frequented by explorers, missionaries and farmers who all contributed to a recent history of contact and conflict which ultimately amounted to the repatriation of the area back to the Makotopong community. The remnants of these histories are scattered across Kalkfontein and

Makotopong, with a large number of Colonial Period sites documented specifically on Makotopong.

# Site HP01: S23°39'13.10" E29°36'37.59" (Makotopong 1200LS: Historical Period Structure)

A large 3 room house in dilapidated state was documented east of the Sand River on the old Roodewal farm (now part of Makotopong). The structure has partially collapsed and the corrugated iron roof has been dissembled. The structure acted as headquarters for the Lutheran Native Association Mission and was run by the "Makotopong Community Authority". The house, built in the early 20<sup>th</sup> century on Roodewal after the farm was purchased from the Berlin Mission Society in the 1927, is of importance in terms of the regional Missionary history of the Limpopo Province.



Figure 5-21: The house of the Lutheran Native Association Mission at Site HP01.

# Site HP02: S23°39'20.64" E29°36'48.66" (south) S23°39'1.82" E29°36'52.83" (north) (Makotopong 1200LS: Historical Period Structure)

The dilapidated remains of a large number of mud brick houses occur around the Lutheran Native Association Mission, specifically to the east towards the N1 highway. In most cases, only foundation structures and middens containing glass, metal and bone remain. As these structures occur within the same historical and temporal context as the Mission, they are of significance.



Figure 5-22: View of mud brick house remains at Site HP02.



Figure 5-23: Material culture from Site HP02: Glass fragment and metal container (left) and large metal bath (right).

# Site HP03: S23°37'17.68" E29°36'40.14" (Makotopong 1200LS: Historical Period Structure)

The remains of the old Ruigedraai homestead, consisting out of an intact multi-room brick farm house and the ruins of a smaller house and hut occurs on the north-eastern periphery of Makotopong. The settlement complex also includes several cattle enclosures (constructed of wooden poles), sheds, gardens and a family cemetery.

-



Figure 5-24: Various structures at the old Ruigedraai homestead (Site HP03).

- Site HP04: S23°38'22.22" E29°36'04.91" (centre) (Makotopong 1200LS: Historical Period Structure)
- Site HP05: S23°38'24.60" E29°35'43.53" (Makotopong 1200LS: Historical Period Structure)
- Site HP06: S23°39'00.71" E29°35'04.52" (Makotopong 1200LS: Historical Period Structure)
- Site HP08: S23°37'27.27" E29°34'46.01" (Makotopong 1200LS: Historical Period Structure)

A large number of poorly preserved brick and mud structures, stone wall enclosures and middens are scattered across Makotopong west of the Sand River. In addition, similar structures occur at Kalkfontein north of the current farmstead. The sites occur almost without exception in association with clusters of Sisal Trees and Marlotis Aloes. The houses, generally built with clay bricks or stone in square of circular shapes, were probably labourer's quarters in the mid-20<sup>th</sup> century, as many of the settlements are indicated as existing homesteads on 1:50 000 maps of the area. In addition, material in middens such as glass, metal, enamel, plastic and wood indicate a more recent age for the structures. Interestingly enough, grindstones occur within the context of some of these homesteads, which indicates a continuation of Iron Age farming technologies into present-day agricultural activities.



Figure 5-25: The remains of stone wall structures at Site HP04. Note the presence of Sisal trees.



Figure 5-26: The remains of stone foundation structures at Site HP04.

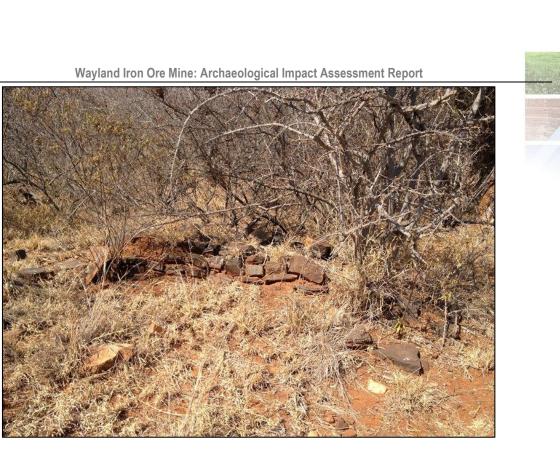


Figure 5-27: The remains of stone wall structures at Site HP06.



Figure 5-28: The remains of stone foundation structures at Site HP07.

 Site HP07: S23°39'22.12" E29°35'40.77" (Makotopong 1200LS: Historical Period Structure-Recent Farmhouse) & S23°38'30.86" E29°36'12.66" (Makotopong 1200LS: Historical Period Structure – labourers hostels) The recent Roodewal farmstead, farm buildings and sheds occur directly west of the Sand River on the southern border of Makotopong. In addition, a large labourer's hostel compound is situated directly south east of earlier historical labourer's dwellings approximately 2km north of the Roodewal farmhouse. These structures are of recent age and they carry a low significance rating. an extended veranda.



Figure 5-29: Site HP07: The recent Roodewal farmstead.



Figure 5-30: Site HP07: A large labourer's hostel compound on the former Roodewal.

- Site HP09: S23°41'55.79" E29°27'33.74" (Kalkfontein 615LS: Historical Period Structure)

Site HP10: S23°41'46.39" E29°28'47.54" (Kalkfontein 615LS: Historical Period Structure)

Site HP11: S23°41'49.02" E29°29'20.76" (Kalkfontein 615LS: Historical Period Structure)

Brick and mud structures, stone wall enclosures and middens similar to those located on Makotopong occur at Kalkfontein along the southern slopes a small mountain. The sites occur in association with clusters Marlotis Aloes. The houses, generally built with clay bricks or stone in square of circular shapes, were probably labourer's quarters in the mid-20<sup>th</sup> century, and material in middens such as glass, metal, enamel, plastic and wood indicates a more recent age for the structures.



Figure 5-31: Remains of brick and mud structures, stone wall enclosures and middens at Site HP09.



Figure 5-32: Historical occupation area at Site HO10.

# - Possible other Historical / Colonial Period Remains

It highly likely that further historical period remains will be present in lower laying areas around crop lands on Makotopong and Kalkfontein.

# 5.4 Graves

A total of 14 graveyards and/ or burial places were recorded on Makotopong and Kalkfontein. The burial places hold various numbers of graves, most of which are older than 60 years or unmarked. In many instances, burial locations in this area follow a general (and fairly common) pattern where graves occur around historical house structures and homestead complexes.

# Site BP01: S23°38'52.05" E29°37'03.55" (Makotopong 1200LS: Makotopong Community Cemetery)

A cemetery was recorded north of the Lutheran Native Association Mission and directly west of the N1 highway. The site consists of a graveyard containing a large number of marked and unmarked graves (in excess of 600). Most of the graves have an east-west orientation with headstones placed on the western side. Where headstones do not occur, graves are demarcated by packed rocks. Burial offerings and grave dressing were recorded on several of the graves which confirm existing social ties to the graves. The cemetery is further linked to the Lutheran Native Association Mission community and settlement.



Figure 5-33: View of the Makotopong Community cemetery (Site BP01).



Figure 5-34: Detail of graves at the Makotopong Community cemetery (Site BP01).

# - Site BP02: S23°37'14.37" E29°36'26.97" (Makotopong 1200LS: Informal Burial Place)

A large cemetery was recorded next to a crop field north of the old Ruigedraai farmstead. The site consists of a large number of graves, of which one is marked with granite headstone. The following inscription was recorded:

Ngoakwana, Mmaselaelo Born: 1874/12/30; Died: 1958/07/05; Buried: 1958/07/05 Gotswa go Ditlogolo tsa Gago. Robala Ka Khutso Nkwe More or less 40 further graves are demarcated by heaps of packed rocks. Most of the graves have an east–west orientation with unmarked headstones placed on the western side. Burial offerings and grave dressing were recorded on several of the graves which confirm existing social ties to the graves.

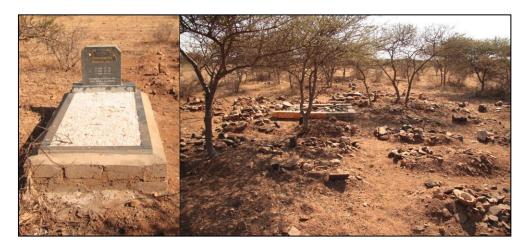


Figure 5-35: Informal cemetery at Site BP02.

#### Site BP03: S23°37'19.82" E29°36'36.01" (Makotopong 1200LS: Ruigedraai Family Cemetery)

A family cemetery was recorded at the old Ruigedraai farmstead. The site consists of 9 graves which are demarcated by inscribed granite headstones. The following inscription was recorded:

In tere herinnering aan ons dierbare moeder Maria Christina Bekker Geb. 2 Junie 1877 Oorl. 20 Mei 1961 In tere herinnering aan ons dierbare vader Pieter Jacobus Bekker Geb. 27 Augustus 1862 Oorl. 3 Julie 1950

In liefdevolle herinnering aan ons moeder Catherine M.M Swanepoel Gebore 10-10-1885 Oorlede 22-12-1955 Rus in Vrede In liefdevolle herinnering aan my eggenoot en ons vader Petrus Johannes van Heerden 11-0-1875 – 2-5-1942 Rus in Vrede

> GELDENHUYS In liefdevolle herinnering aan ons dogtertjie Maria C. 2-11-1936 – 12-8-1937

AGES (PTY) LTD

En ons seuntjie Everhardus J. 1-10-1925 – 31-10-1925 Ons seuntjie Pieter J. 22-8-1927 – 31-8-1928 Veilig in Jesus Armen

In tere herinnering aan ons "Pietie" P.J Becker 7-11-1936 – 18-10-1941 Veilig in Jesus Armen

In liefdevolle herinnering aan ons dierbare seuntjie Johannes (J.v.H Becker) 24-05-1940 – 24-03-1942 Veilig in Jesus Armen



Figure 5-36: View of old Ruigedraai family cemetery at Site BP03.

# Site BP04: S23°38'34.89" E29°36'15.25" (Makotopong 1200LS: Informal Burial Place)

A current resident of Makotopong pointed out a small cemetery directly south of the former Roodewal labourer hostel compound. Here, a small area of about 15m x 15m has been fenced but the fence has since disappeared. Even though no surface structures could be identified, at least 2 graves are said to occur here. According to the informant the burials relate to the earlier 20<sup>th</sup> century farming history and labourer occupation of Roodewal.



Figure 5-37: Informal cemetery at Site BP04. The tree indicates the location of a grave.

# - Site BP05: S23°38'30.00" E29°36'06.71" (Makotopong 1200LS: Informal Burial Place)

A single stone cairn resembling a grave with stone dressing was located near the 20<sup>th</sup> century labourer occupation areas (Site HP04) on the former Roodewal farm. No offerings were recorded on the grave.



Figure 5-38: Stone cairn indicating the location of a grave at Site BP05.

## Site BP06: S23°38'24.38" E29°35'58.69" (Makotopong 1200LS: Informal Burial Place)

Three marked burials were documented directly west of the 20<sup>th</sup> century labourer occupation areas (Site HP04) on the former Roodewal farm. The site consists of a graveyard with 3 graves which are demarcated by concrete slabs and unmarked headstones. The graves have a relative east–west orientation with the headstones placed on the western side. Grave dressing and offerings in the form of clay pots, calabashes and snuff containers were recorded near the graves which confirm existing social ties to the graves.



Figure 5-39: Informal cemetery with three graves at Site BP06. Note presence of offerings and grave dressing.

# Site BP07: S23°38'25.32" E29°35'39.45" (Makotopong 1200LS: Informal Burial Place)

A current resident of Makotopong pointed out a burial place north of the 20<sup>th</sup> century labourer occupation areas at Site HP04. However, he was not certain of the graves' exact location and the graves could not be located but a damaged metal grave "fence", commonly used as grave dressing were observed in the general area. According to the informant the burials relate to the earlier 20<sup>th</sup> century farming history and labourer occupation of Roodewal. No further grave offerings or dressing were recorded in the area.





Figure 5-40: A damaged metal grave "fence", commonly used as grave dressing which possibly demarcates the location of Site BP07.

# - Site BP08: S23°38'28.55" E29°35'04.91" (Makotopong 1200LS: Informal Burial Place)

A small burial site was located in a valley towards the southern border of Makotopong. The site consists of 3 graves which are demarcated by packed stones. No offerings or grave dressing were recorded on the graves.



Figure 5-41: Stone cairns indicating the location of 3 graves at Site BP08.

AGES (PTY) LTD

# Site BP09: S23°39'12.45" E29°35'19.40" (Makotopong 1200LS: Informal Burial Place)

A burial site was located in association with another 20<sup>th</sup> century labourer occupation area at Site HP06, along the southern border of Makotopong. The site consists of at least 4 graves which are demarcated by packed stones. No offerings or grave dressing were recorded on the graves.



Figure 5-42: Large stone cairns and heaps indicating the location of 2 of the graves at Site BP09.

# Site BP10: S23°41'47.34" E29°28'41.39" (Kalkfontein 615LS: Informal Burial Place)

Two graves were identified in a historical settlement area (Site HP10) on the farm Kalkfontein. One of the burials is marked with a concrete slab. The following inscription was recorded:

Mokgaba Leso 1-8-1976

The second grave is demarcated by packed stones with a clear unmarked headstone. No offerings or further grave dressing were recorded on the graves.



Figure 5-43: Concrete grave dressing (left) and unmarked headstone (right) at Site BP10.

# - Site BP11: S23°41'46.95" E29°28'41.46" (Kalkfontein 615LS: Informal Burial Place)

Another 3 graves were identified in the historical settlement area (Site HP10) on the farm Kalkfontein, directly north of Site BP10. Two of the burials are marked with concrete slabs in similar fashion to that of the grave at Site BP10. The following inscriptions were recorded on the two graves:

Jonas M Leso

Leso F

The third grave is demarcated by a few stones with a clear unmarked headstone. No offerings or further grave dressing were recorded on the graves.



Figure 5-44: Concrete grave dressings (left) and unmarked headstone (right) at Site BP11.

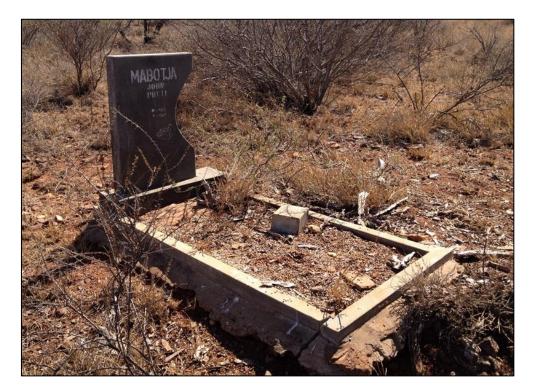
# Site BP12: S23°41'57.69" E29°29'24.32" (Kalkfontein 615LS: Informal Burial Place)

A single grave was identified along the eastern border of the study area at Kalkfontein. The burial is demarcated by a concrete headstone and grave dressing. The following inscription was recorded:

Mabotja John Phuti Born – 1923 Died – 1947



No offerings or further grave dressing were recorded on the grave.





Site BP13: S23°42'41.36" E29°29'01.31" (Kalkfontein 615LS: Old Kalkfontein Family Cemetery)

A small historical family cemetery was documented in a crop land south-east of the old Kalkfontein farmstead. The site consists of 4 graves grave which is demarcated by aged granite headstone. The following inscriptions were recorded:

Hier Rus JHL Oelofse Geb.14Des.1856 Oorl.14Julie.1935

Hier Rus RC Oelofse Geb.18Julie 1844 Oorl.30April 1930

-

Hier Rus Philliphina Chrinstina Oelofse Geb.1Mei 1895 Oorl.21September 1907

> Hier Rus Mathias Daniel Lotter Geb. 7 Sept 1863 Oorl. 12 Feb 1899



No offerings or further grave dressing were recorded on the graves. The graves are in poor condition and, as they are older than 60 years the burials are protected by the NHRA (Act no 25 of 1999).



Figure 5-46: View of the old Kalkfontein family cemetery in a large crop field at Site BP13,.

### Site BP14: S23°41'57.05" E29°28'00.68" (Kalkfontein 615LS: Informal Burial Place)

A single grave was located directly north of the new Kalkfontein farmstead. The grave is demarcated by a recently erected granite headstone and grave dressing. The following inscription was recorded:

Lamola Rakgamo Malose Hendrick Born: 1910-03-05 Died: 1963-04-23 Robala Ka KhutsoTlou Letebele Psalm 23...

Offerings placed on the grave include a clay pot, calabash and cold drink bottle, which confirm existing social ties to the graves.

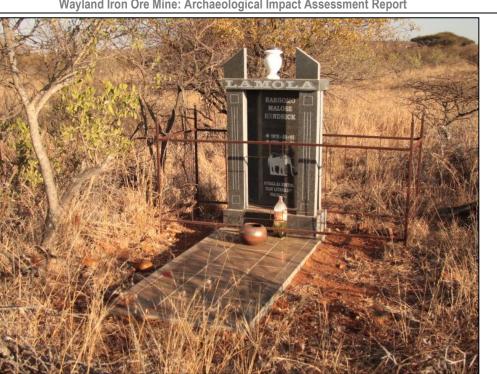


Figure 5-47: Single marked grave at Site BP14.

## **Possible other Burial Sites**

In this area, graves and family cemeteries are generally to be found in association with homesteads, crop fields and historical buildings and burials will, in all probability occur around these locations.

#### 5.5 **Other: Mining**

- Site MS01: S23°41'33.75" E29°28'32.07" (Kalkfontein 615LS: Small Mica Mining Site) \_
- Site MS02: S23°41'28.67" E29°29'05.74" (Kalkfontein 615LS: Small Mica Mining Site)
- Site MS03: S23°41'36.82" E29°27'57.51" (Kalkfontein 615LS: Small Mica Mining Site) -
- Site MS04: S23°41'32.34" E29°27'29.33" (Kalkfontein 615LS: Small Mica Mining Site)

The remains of small scale mica mining are clearly visible at a number of sites on Kalkfontein. As mining operations were probably decommissioned in recent times, the sites are probably of limited significance with regards to its heritage value.



Figure 5-48: View of mine diggings and small scale mica mine at Site MS01.



Figure 5-49: A deep mine shaft at Site MS02.





Figure 5-50:Heaps of Quartzite extracted in the process of mica mining at Site MS03.

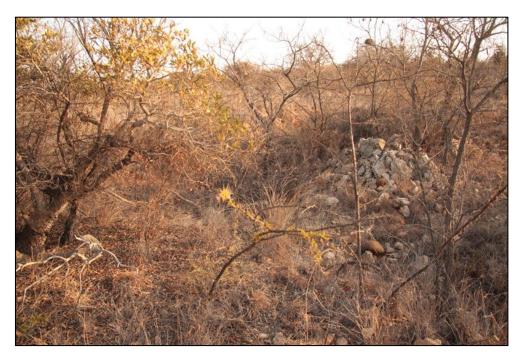


Figure 5-51: A small excavation trench at Site MS04.

# 6 ARCHAE0-HISTORICAL CONTEXT

# 6.1 The archaeology of Southern Africa

Archaeology in southern Africa is typically divided into two main fields of study, the **Stone Age** and the **Iron Age** or **Farmer Period**.

The following table provides a concise outline of the chronological sequence of periods, events, cultural groups and material expressions in Southern African pre-history and history:

Period	Epoch	Associated cultural groups	Typical Material Expressions
Early Stone Age 2.5m – 250 000 YCE	Pleistocene	Early Hominins: Australopithecines Homo habilis Homo erectus	Typically large stone tools such as hand axes, choppers and cleavers.
Middle Stone Age 250 000 – 25 000 YCE	Pleistocene	First Homo sapiens species	Typically smaller stone tools such as scrapers, blades and points.
Late Stone Age 20 000 BC – present	Pleistocene / Holocene	Homo sapiens sapiens including San people	Typically small to minute stone tools such as arrow heads, points and bladelets.
Early Iron Age / Early Farmer Period 300 – 900 AD	Holocene	First Bantu-speaking groups	Typically distinct ceramics, bead ware, iron objects, grinding stones.
Middle Iron Age (Mapungubwe / K2) / early Later Farmer Period 900 – 1350 AD	Holocene	Bantu-speaking groups, ancestors of present-day groups	Typically distinct ceramics, bead ware and iron / gold / copper objects, trade goods and grinding stones.
Late Iron Age / Later Farmer Period 1400 AD -1850 AD	Holocene	Various Bantu-speaking groups including Venda, Thonga, Sotho-Tswana and Zulu	Distinct ceramics, grinding stones, iron objects, trade objects, remains of iron smelting activities including iron smelting furnace, iron slag and residue as well as iron ore.
Historical / Colonial Period ±1850 AD – present	Holocene	Various Bantu-speaking groups as well as European farmers, settlers and explorers	Remains of historical structures e.g. homesteads, missionary schools etc. as well as, glass, porcelain, metal and ceramics.

# 6.1.1 The Stone Ages

# - The Earlier Stone Age (ESA)

Earlier Stone Age deposits typically occur on the flood-plains of perennial rivers and may date to between 2 million and 250 000 years ago. These ESA open sites sometimes contain stone tool scatters and manufacturing debris ranging from pebble tool choppers to core tools such as handaxes and cleavers. These stone tools were made by the earliest hominins. These groups seldom actively hunted and relied heavily on the opportunistic scavenging of meat from carnivore fill sites.

# - The Middle Stone Age (MSA)

The majority of Middle Stone Age (MSA) sites occur on flood plains and sometimes in caves and rock shelters. Sites usually consist of large concentrations of knapped stone flakes such as scrapers, points and blades and associated manufacturing debris. Tools may have been hafted but organic materials, such as those used in hafting, seldom remain preserved in the archaeological record. Limited drive-hunting activities are also associated with the MSA.

# The Later Stone Age (LSA)

Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material. By using San (Bushman) ethnographic data a better understanding of this period is possible. South African rock art is also associated with the LSA.

# 6.1.2 The Iron Age (Farmer Period)

# - Early Iron Age (Early Farming Communities)

The Early Iron Age (also Early Farmer Period) marks the movement of Bantu speaking farming communities into South Africa at around 200 A.D. These groups were agro-pastoralists that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Artefact evidence from Early Farmer Period sites is mostly found in the form of ceramic assemblages and the origins and archaeological identities of this period are largely based upon ceramic typologies and sequences, where diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. Early Farmer Period ceramic traditions are classified by some scholars into different "streams" or trends in pot types and decoration that, over time emerged in southern Africa. These "streams" are identified as the Kwale Branch (east), the Nkope Branch (central) and the Kalundu Branch (west). More specifically, in the northern regions of South Africa at least three settlement phases have been distinguished for prehistoric Bantu-speaking agropastoralists. The first phase of the Early Iron Age, known as Happy Rest (named after the site where the ceramics were first identified), is representative of the Western Stream of migrations, and dates to AD 400 - AD 600. The second phase of Diamant is dated to AD 600 - AD 900 and was first recognized at the eponymous site of Diamant in the western Waterberg. The third phase, characterised by herringbone-decorated pottery of the Eiland tradition, is regarded as the final expression of the Early Iron Age (EIA) and occurs over large parts of the North West Province, Northern Province, Gauteng and Mpumalanga. This phase has been dated to about AD 900 - AD 1200. Early Farmer Period ceramics typically display features such as large and prominent inverted rims, large neck areas and fine elaborate decorations. The Early Iron Age continued up to the end of the first millennium AD.

# - Middle Iron Age / K2 Mapungubwe Period (early Later Farming Communities)

The onset of the middle Iron Age dates back to ±900 AD, a period more commonly known as the Mapungubwe / K2 phase. These names refer to the well known archaeological sites that are today the pinnacle of South Africa's Iron Age heritage. The inhabitants of K2 and Mapungubwe, situated on the banks of the Limpopo, were agriculturalists and pastoralists and were engaged in extensive trade activities with local and foreign traders. Although the identity of this Bantu-speaking group remains a point of contestation, the Mapungubwe people were the first state-organized society southern Africa has known. A considerable amount of golden objects, ivory, beads (glass and gold), trade goods and clay figurines as well as large amounts of potsherds were found at these sites and also appear in sites dating back to this phase of the Iron Age. Ceramics of this tradition take the form of beakers with upright sides and decorations around the base (K2) and shallow-shouldered bowls with decorations as well as globular pots with long necks. (Mapungubwe). The site of Mapungubwe was deserted at around 1250 AD and this also marks the relative conclusion of this phase of the Iron Age.

# Later Iron Age (Later Farming Communities)

The late Iron Age of southern Africa marks the grouping of Bantu speaking groups into different cultural units. It also signals one of the most influential events of the second millennium AD in southern Africa, the difaqane. The difaqane (also known as "the scattering") brought about a dramatic and sudden ending to centuries of stable society in southern Africa. Reasons for this change was essentially the first penetration of the southern African

interior by Portuguese traders, military conquests by various Bantu speaking groups primarily the ambitious Zulu King Shaka and the beginning of industrial developments in South Africa. Different cultural groups were scattered over large areas of the interior. These groups conveyed with them their customs that in the archaeological record manifest in ceramics, beads and other artefacts. This means that distinct pottery typologies can be found in the different late Iron Age groups of South Africa.

# 6.1.3 Historical and Colonial Times and Recent History:

The Historical period in southern Africa encompass the course of Europe's discovery of South Africa and the spreading of European settlements along the East Coast and subsequently into the interior. In addition, the formation stages of this period are marked by the large scale movements of various Bantu-speaking groups in the interior of South Africa, which profoundly influenced the course of European settlement. Finally, the final retreat of the San and Khoekhoen groups into their present-day living areas also occurred in the Historical period in southern Africa.

# 6.1.4 Bantu Speaking Groups in the South African interior:

It should be noted that terms such as "Nguni", "Sotho", "Venda" and others refer to broad and comprehensive language groups that demonstrated similarities in their origins and language. It does not imply that these Nguni / Sotho groups were homogeneous and static; they rather moved through the landscape and influenced each other in continuous processes marked by cultural fluidity.

Ethnographers generally divide major Bantu-speaking groups of southern Africa into two broad linguistic groups, the Nguni and the Sotho with smaller subdivisions under these two main groups. Nguni groups were found in the eastern parts of the interior of South Africa and can be divided into the northern Nguni and the southern Nguni. The various Zulu and Swazi groups were generally associated with the northern Nguni whereas the southern Nguni comprised the Xhosa, Mpondo, Thembu and Mpondomise groups. The same geographically based divisions exist among Sotho groups where, under the western Sotho (or Tswana), groups such as the Rolong, Hurutshe, Kwena, Fokeng and Kgatla are found. The northern Sotho included the Pedi, and an amalgamation of smaller groups united to become the southern Sotho group or the Basutho. Other smaller language groups such as the Venda, Lemba and Tshonga Shangana transpired outside these major entities but as time progressed they were, however to lesser or greater extend influenced and absorbed by neighbouring groups.

During the last 500 years, the Highveld areas of Gauteng, Mpumalanga and the Limpopo Province were occupied mainly by Ndebele and Pedi groups. These Ndebele groups originated from the Hlubi, a small split group that moved to the north-eastern parts of the Transvaal where they became known as the Transvaal Ndebele (not to be confused with the Ndebele of Mzilikazi). Ndebele groups settled in areas surrounding present-day Pretoria, at Kwa Maza near present-day Stoffberg, at Polokwane and Modimole and across large parts of Mpumalanga. The Kgatla, a Pedi group was established at the end of the 15<sup>th</sup> century by chief Mokgatla, who broke away from the Hurutshe group to settle in the Witwatersrand area. The Kgatla resided in an expansive area that included present-day Pretoria, the surroundings of the Magaliesberg and areas around present-day Brits, Rustenburg, Modilmolle and Bela-Bela (Warmbaths) as well as the Pilansberg area. Isolated Kgatla communities also settled in the surroundings of Lydenburg, Middelburg, Bronkhorstspruit and the Soutpansberg.

## 6.2 Discussion: The Wayland Iron Ore Mine Project Area Archaeological Representations

A number of academic archaeological and historical studies have been conducted in this section of the Limpopo Province and these studies all infer a rich and diverse archaeological landscape, representative of most phases of human and cultural development in southern Africa.

# 6.2.1 The Stone Age Period

The cultural historical landscape of Polokwane area area spans million years with evidence of hominin occupation, Stone Age traditions, Iron Age farmers and historical events. Makapansgat, a deep limestone cave near Mokopane has yielded remains of *Australopithecus africanus* that dates to more than 3 million years BP and also *Homo erectus*, dating to approximately 1 million years BP. However, Earlier Stone Age (ESA) material is scarce on the Waterberg plateau. The Middle Stone Age (MSA) is abundantly represented in the Waterberg area and archaeological excavations at sites such as the Olieboomspoort Shelter in the north-western part of the Waterberg have yielded rich MSA deposits which display a large degree of specialisation and skill in stone working (Van der Ryst 1996). These groups occupied open camps which were situated in the proximity of water sources such as pans, lakes or rivers. There is a noticeable gap in the area between MSA assemblages and material form the Later Stone Age (LSA), suggesting that the region may not have seen dense human occupation for a long period of time. However, Later Stone Age groups, including the San hunter gatherers and Khoi herders frequented the area in the last few millennia, and numerous LSA sites have been discovered and excavated. Similarly, LSA evidence such as stone implements, ceramics and a wealth of rock paintings and markings are scattered over the plateau.

# 6.2.2 Iron Age / Farmer Period Sites

Within the last two thousand years, San and Khoi groups were displaced by Iron Age farming communities moving into the Polokwane area, possibly prompted by the spread of tsetse fly into the lowveld areas. Three phases of Iron Age occupation are generally distinguished here (Aukema 1989). The first phase, known as the Eiland tradition, is characterised by herringbone decoration motives on pottery. Little to no stone walling occurs at sites dating to this phase. On the other hand, sites of the second phase of occupation dating to the Later Iron Age are commonly found on hilltops where they display elaborate stone walling. These settlements could be linked to the arrival of Nguni-speakers (Ndebele) in the region between the 16<sup>th</sup> and 17<sup>th</sup> centuries AD. The third phase of Iron Age settlement, dating to the 18<sup>th</sup> and early 19<sup>th</sup> century, contains bi and multi chrome (red and black) pottery commonly attributed to a Sotho-Tswana ceramic tradition known as Moloko (see *Sotho-Tswana History* section below).

In the northern regions of South Africa at least three settlement phases have been distinguished for early prehistoric agropastoralist settlements during the **Early Iron Age** (EIA). Diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. The first phase of the Early Iron Age, known as **Happy Rest** (named after the site where the ceramics were first identified), is representative of the Western Stream of migrations, and dates to AD 400 - AD 600. The second phase of **Diamant** is dated to AD 600 - AD 900 and was first recognized at the eponymous site of Diamant in the western Waterberg. The third phase, characterised by herringbone-decorated pottery of the **Eiland** tradition, is regarded as the final expression of the Early Iron Age (EIA) and occurs over large parts of the North West Province, Northern Province, Gauteng and Mpumalanga. This phase has been dated to about AD 900 - AD 1200. These sites are usually located on low-lying spurs close to water. However, please note that there are no EIA sites in the Free State.

The Late Iron Age (LIA) settlements are characterised by stone-walled enclosures situated on defensive hilltops c. AD 1640 - AD 1830). This occupation phase has been linked to the arrival of ancestral Northern Sotho, Tswana and Southern Ndebele (Nguni–speakers) in the northern and Waterberg regions, and dates from the sixteenth to seventeenth centuries AD. The terminal LIA is represented by late 18th/early 19th century settlements with multichrome Moloko pottery commonly attributed to the Sotho-Tswana. These settlements can in many instances be correlated with oral traditions on population movements during which African farming communities sought refuge in mountainous regions during the processes of disruption in the northern interior of South Africa, resulting from the so-called *difagane* (or m*fecane*).

#### Early Sotho-Tswana History

Within a larger archaeological context, the Iron Age settlement representations at Makotopong and Kalkfontein can possibly be traced back to ancestral Sotho-Tswana occupation and developments from the sixteenth century AD onwards. As mentioned previously, diagnostic pottery assemblages are commonly used in the South African Iron Age to infer group identities and to trace movements across the landscape. Similarly, the migration of the Sotho-Tswana speakers in South Africa in the 16<sup>th</sup> century marked a new ceramic style, known as Moloko. The Moloko Tradition can be divided into two phases: an early phase (e.g. Icon) in which sites were usually located at the foot of hills and contained little or no stone walling; and a later phase characterised by extensive stone wall complexes which were often erected on hills. The early Later Iron age sites at Makotopong and Kalkfontein display ceramic characterises similar to that of the Icon facies. Further afield, in the Waterberg area, the later Maloko phase manifested in the Madikwe ceramic facies with pottery typically displaying stab and fingernail impression decoration motives. Sites of this period display extensive stone walls, erected to construct stock byres and to demarcate residential units where pole-and-dagha (clay) huts were placed.

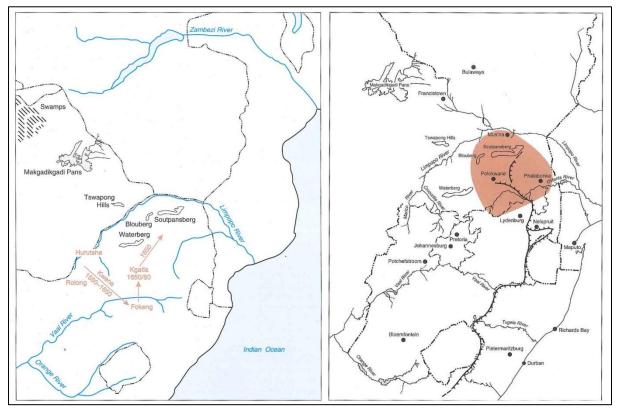


Figure 6-1: Maps detailing the early distribution of Sotho-Tswana speakers (left) and distribution of 16<sup>th</sup> century Moloko ceramics, specifically the Icon facies (right) (After Huffman 2007).

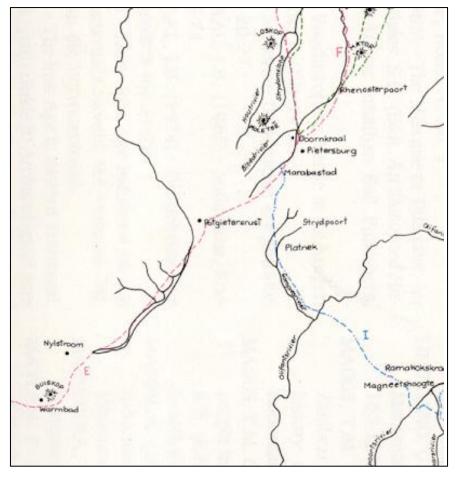
AGES (PTY) LTD

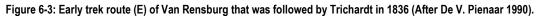


Figure 6-2: Ceramic decoration motives typical of the15th and 16th century Icon facies (After Huffman 2007).

#### 6.2.3 Later History: Historical archaeology and living heritage

Some of the early Voortrekkers such as Hans van Rensburg and Louis Trigardt and the Boer communities that travelled with them, traversed through the survey area on their way to the Soutpansberg Mountains, in April 1836.





According to indications they trekked through Houtrivier, Loskop, Kalkbank, past Moletse's location (the BaMoletse is a Tswana group) east of Strydomsloop, through Bloedrivier and Doornkraal where he went past Polokwane on the western side. The route then took them north along the Sandrivier where they passed the Ysterberge (Iron Mountains) on the western side, through Makapanspoort and further north (de V. Pienaar 1990:54). A second expedition under Andries Hendrik Potgieter arrived in the area in June 1836, but also continued on further to the north. Some of them settled in Schoemansdal and later also Louis Trichardt.

However it seems that on the way some of the families stayed behind and settled. Some of these early white farmers who settled in the general area north of the present-day Polokwane in the 1830s and 1840s, are Gert Koekemoer on the farm Zandriver, Baart Fourie on Sterkloop, Piet (PJL) Venter and the families Grobler, van Emmenis, Moolman and Vercueil on Doornbult, Hendrik Geyser, Thobias en Jan le Grange on Klipdam, Piet du Preez and Willem Marias on Weltevreden (Zandrivierspoort), and Jan Bosch, Barend Vorster and F Snijman on Rooiwal. With the establishment of the ZAR on 17 January 1852 the constitution stated that all citizens who settled in the area before 1852 were entitled to two farms of 3000 morgen each. It seems that after the small village of Schoemansdal (which was situated east of the presentday Louis Trichardt) was vacated in 1867 most of the uprooted families trekked back to the south and met up with families who stayed behind during the earlier trek northwards towards the Soutpansberg.

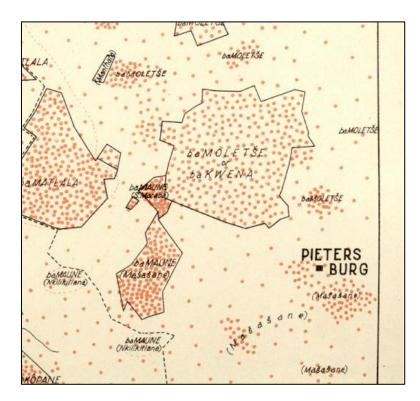


Figure 6-4: Bantu speaking groups occupying areas area north of Polokwane at around 1930 (after Van Warmelo 1935).

Small communities, therefore, existed north of the present-day Polokwane on the farms Doornbult, Klipdam, Rhenosterpoort (Zandrivierspoort and Weltevreden) and Rooiwal (Rita). Known families who settled in the area after leaving Schoemansdal are Du Preez, Hugo, Potgieter, Strydom, Marias and Botha. A fort was also built on the farm Klipdam which was under the supervision of veldkornet JLH du Preez (Changuion 1986:7, 9, 11). As a result, the area was settled and extensively farmed for over 150 years. Various Bantu-speaking communities also lived in the general area from before white farmers moved into the region. Several Tswana-speaking groups

settled in the area to the north of Polokwane from very early on. The Moletse Bakwena live to the southwest of the survey area on an extensive mountain range.

## 6.2.4 Makgopotong: From Mission to Land Claim

The farms Roodewal and Ruigedraai were repatriated to the Makgopotong community after a successful claim on the land in 2002. The land claimants are descendants from two cultural groups who were resident on Roodewal. The origins of the Pedi group are unclear, but the Nguni group (of Shangaan origin) came from Mozambique and resided for a time in the Soekmekaar (Morebeng) area before settling at Roodewal. In the past, the Makotopong community enjoyed rights such as residential, cropping, and grazing until they were dispossessed of the land. The dispossession was effected during the 26th of June and 4th July 1967 in terms of Chapter IV of the Development Trust and Native Land Act of 1936, (Act 18 of 1936) as part of the move to eradicate "Black Spots" in 'White Areas".

At the beginning of the 1900's, Roodewald 808LS was owned by the Berlin Mission Society. In 1927, the society sold the land to the Lutheran Native Association, who, in the same year, sold portions to private families residing on the property. It appears that even before this period, the community recognized the leadership of the Phambane's, even though the Headman Phambane was only formally recognized in the 1940s. At the time, the farm Roodewal 808LS comprised Portion A and Portion B and a remainder prior to its subdivision and subsequent consolidation. Portion A was owned in freehold ownership by the trustees of Lutheran Association, known as Makotopong Community Authority. Portion B was owned by Finias Bopape and 15 others and the remainder portions were owned by the Mission Station, which they later sold to private individuals. Roodewal Portion A was sold to the Republic of South Africa by the Lutheran Association in 1974. Portion B was subdivided into 15 portions in 1937 and jointly registered in the name of the 15 owners.

Historically, communities residing at Roodewal were made up of plot owners and tenants who stayed on these plots and the 'common land' owned by the Lutheran Native Association. All enjoyed the rights associated with land ownership and tenancy until 1960, when it was decided as a general policy that the people on Mission

Stations in white areas were no longer allowed to remain and were to be resettled on land or residential sites in the released areas as defined in the Development Trust and Land Act, 1936. The community was settled at Nooitgedacht 913 LS and Onverwacht 914 LS north east of Polokwane on the Mooketsi road. This area later became known as Makotopong settlement. They were also awarded financial compensation for inconvenience and improvements on different portions of the property. Later, the owner of Roodewal, Oerlemans Boerdery, developed the area extensively, especially for irrigation, and operated a multi-million rand business, producing a variety of agricultural products. The irrigation section of the farm used to produce a variety of crops which included maize, wheat, potatoes, tobacco and a variety of vegetables. Roodewal and Ruigedraai was returned to the Makotopong community in 2002 and consolidated to form Makotopong 1200LS after a successful land reformation process.

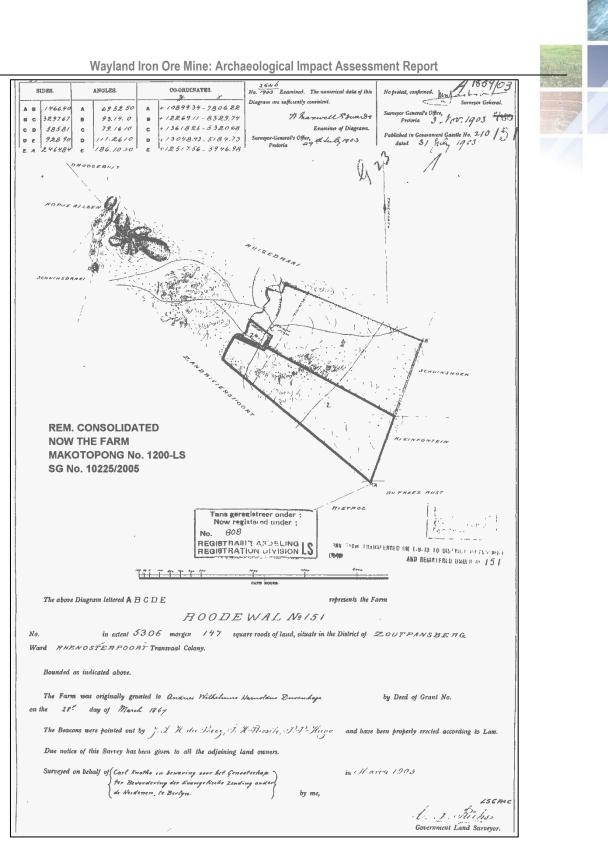


Figure 6-5: The original title deed for the farm Roodewal.

## 7 RESULTS: STATEMENT OF SIGNIFICANCE AND IMPACT RATING

## 7.1 Heritage resources management and conservation

Archaeological sites, as previously defined in the National Heritage Resources Act (Act 25 of 1999) are places in the landscape where people have lived in the past – generally more than 60 years ago – and have left traces of their presence behind. In South Africa, archaeological sites include hominid fossil sites, places where people of the Earlier, Middle and Later Stone Age lived in open sites, river gravels, rock shelters and caves, Iron Age sites, graves, and a variety of historical sites and structures in rural areas, towns and cities. Palaeontological sites are those with fossil remains of plants and animals where people were not involved in the accumulation of the deposits. The basic principle of cultural heritage conservation is that archaeological and other heritage sites are valuable, scarce and *non-renewable*. Many such sites are unfortunately lost on a daily basis through development for housing, roads and infrastructure and once archaeological sites are damaged, they cannot be re-created as site integrity and authenticity is permanently lost. Archaeological sites have the potential to contribute to our understanding of the history of the region and of our country and continent. By preserving links with our past, we may not be able to revive lost cultural traditions, but it enables us to appreciate the role they have played in the history of our country.

## 7.2 Categories of significance

Rating the significance of archaeological sites, and consequently grading the potential impact on the resources is linked to the significance of the site itself. The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences. The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3 are used when determining the cultural significance or other special value of archaeological or historical sites. In addition, ICOMOS (the Australian Committee of the International Council on Monuments and Sites) highlights four cultural attributes, which are valuable to any given culture:

- Aesthetic value:

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria include consideration of the form, scale, colour, texture and material of the fabric, the general atmosphere associated with the place and its uses and also the aesthetic values commonly assessed in the analysis of landscapes and townscape.

Historic value:

Historic value encompasses the history of aesthetics, science and society and therefore to a large extent underlies all of the attributes discussed here. Usually a place has historical value because of some kind of influence by an event, person, phase or activity.

- Scientific value:

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality and on the degree to which the place may contribute further substantial information.

- Social value:

Social value includes the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a certain group.

It is important for heritage specialist input in the EIA process to take into account the heritage management structure set up by the NHR Act. It makes provision for a 3-tier system of management including the South Africa Heritage Resources Agency (SAHRA) at a national level, Provincial Heritage Resources Authorities (PHRAs) at a provincial and the local authority. The Act makes provision for two types or forms of protection of heritage resources; i.e. formally protected and generally protected sites:

## Formally protected sites:

- Grade 1 or national heritage sites, which are managed by SAHRA
- Grade 2 or provincial heritage sites, which are managed by the provincial HRA.
- Grade 3 of local heritage sites.

## Generally protected sites:

- Human burials older than 60 years.
- Archaeological and palaeontological sites.
- Shipwrecks and associated remains older than 70 years.
- Structures older than 60 years.

With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise and if the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low. The significance of archaeological sites is generally ranked into the following categories.

Significance	Rating Action
No significance: sites that do not require mitigation.	None
Low significance: sites, which may require mitigation.	2a. Recording and documentation (Phase 1) of site; no further action required 2b. Controlled sampling (shovel test pits, augering), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction
Medium significance: sites, which require mitigation.	3. Excavation of representative sample, C14 dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b]
High significance: sites, where disturbance should be avoided.	4a. Nomination for listing on Heritage Register (National, Provincial or Local) (Phase 2 & 3 investigation); site management plan; permit required if utilised for education or tourism
High significance: Graves and burial places	4b. Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinterment [including 2a, 2b & 3]

Furthermore, the significance of archaeological sites was based on four main criteria:

- Site integrity (i.e. primary vs. secondary context),
- Amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter),
- Social value,

- Uniqueness, and
- Potential to answer current and future research questions.

A fundamental aspect in assessing the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information, which would otherwise be lost.

## 7.3 Potential Impacts and Significance Ratings<sup>1</sup>

The following section provides a background to the identification and assessment of possible impacts and alternatives, as well as a range of risk situations and scenarios commonly associated with heritage resources management. The section ultimately provides a guideline (Section 7.3.1, Section 7.3.2 & Section 7.3.3) for the rating of impacts and recommendation of management actions for sites of heritage potential in the Wayland Iron Ore Mine Project area, as supplied in section 7.3.4.

## 7.3.1 General assessment of impacts on resources

Generally, the value and significance of archaeological and other heritage sites might be impacted on by any activity that would result immediately or in the future in the destruction, damage, excavation, alteration, removal or collection from its original position, any archaeological material or object (as indicated in the National Heritage Resources Act (No 25 of 1999)). Thus, the destructive impacts that are possible in terms of heritage resources would tend to be direct, once-off events occurring during the initial construction period. However, in the long run, the proximity of operations in any given area could result in secondary indirect impacts. The EIA process therefore specifies impact assessment criteria which can be utilised from the perspective of a heritage specialist study which elucidates the overall extent of impacts.

## Significance of the heritage resource

This is a statement of the nature and degree of significance of the heritage resource being affected by the activity. From a heritage management perspective it is useful to distinguish between whether the significance is embedded in the physical fabric or in associations with events or persons or in the experience of a place; i.e. its visual and non-visual qualities. This statement is a primary informant to the nature and degree of significance of an impact and thus needs to be thoroughly considered. Consideration needs to be given to the significance of a heritage resource at different scales (i.e. sitespecific, local, regional, national or international) and the relationship between the heritage resource, its setting and its associations.

## Nature of the impact

This is an assessment of the nature of the impact of the activity on a heritage resource, with some indication of its positive and/or negative effect/s. It is strongly informed by the statement of resource significance. In other words, the nature of the impact may be historical, aesthetic, social, scientific, linguistic or architectural, intrinsic, associational or contextual (visual or non-visual). In many cases, the nature of the impact will include more than one value.

## Extent

Here it should be indicated whether the impact will be experienced:

- On a site scale, i.e. extend only as far as the activity;
- Within the immediate context of a heritage resource;
- On a local scale, e.g. town or suburb
- On a metropolitan or regional scale; or
- On a national/international scale.

#### Duration

Here it should be indicated whether the lifespan of the impact will be: - Short term, (needs to be defined in context)

<sup>&</sup>lt;sup>1</sup> Based on: W inter, S. & Baumann, N. 2005. Guideline for involving heritage specialists in EIA processes: Edition 1.



- Medium term, (needs to be defined in context)
- Long term where the impact will persist indefinitely, possibly beyond the operational life of the activity, either because of natural processes or by human intervention; or
- Permanent where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.

Of relevance to the duration of an impact are the following considerations:

- Reversibility of the impact; and
- Renewability of the heritage resource.

#### Intensity

Here it should be established whether the impact should be indicated as:

- Low, where the impact affects the resource in such a way that its heritage value is not affected;
- Medium, where the affected resource is altered but its heritage value continues to exist albeit in a modified way; and
- High, where heritage value is altered to the extent that it will temporarily or permanently be damaged or destroyed.

#### Probability

This should describe the likelihood of the impact actually occurring indicated as:

- Improbable, where the possibility of the impact to materialize is very low either because of design or historic experience;
- Probable, where there is a distinct possibility that the impact will occur;
- Highly probable, where it is most likely that the impact will occur; or
- Definite, where the impact will definitely occur regardless of any mitigation measures

#### Confidence

This should relate to the level of confidence that the specialist has in establishing the nature and degree of impacts. It relates to the level and reliability of information, the nature and degree of consultation with I&AP's and the dynamic of the broader socio-political context.

- High, where the information is comprehensive and accurate, where there has been a high degree of consultation and the socio-political context is relatively stable.
- Medium, where the information is sufficient but is based mainly on secondary sources, where there has been a limited targeted consultation and socio-political context is fluid.
- Low, where the information is poor, a high degree of contestation is evident and there is a state of socio-political flux.

#### Impact Significance

The significance of impacts can be determined through a synthesis of the aspects produced in terms of the nature and degree of heritage significance and the nature, duration, intensity, extent, probability and confidence of impacts and can be described as:

- Low; where it would have a negligible effect on heritage and on the decision
- Medium, where it would have a moderate effect on heritage and should influence the decision.
- High, where it would have, or there would be a high risk of, a big effect on heritage. Impacts of high significance should have a major influence on the decision;
- Very high, where it would have, or there would be high risk of, an irreversible and possibly irreplaceable negative impact on heritage. Impacts of very high significance should be a central factor in decision-making.

## 7.3.2 Direct impact rating

**Direct or primary effects** on heritage resources occur at the same time and in the same space as the activity, e.g. loss of historical fabric through demolition work. **Indirect effects or secondary effects** on heritage resources occur later in time or at a different place from the causal activity, or as a result of a complex pathway, e.g. restriction of access to a heritage resource resulting in the gradual erosion of its significance, which is dependent on ritual patterns of access. The following table provides an outline as to the relationship between the significance of a heritage context, the intensity of development and the significance of heritage impacts to be expected.

			ogical Imp	act Assessment Repo	rt	
HERITAGE CONTEXT	TYPE OF DEVELOPME CATEGORY A	CATEGOR	ŕВ	CATEGORY C	CATEGORY D	
<b>CONTEXT 1</b> High heritage Value	Moderate heritage impact expected	High heritag expected	le impact	Very high heritage impact expected	Very high heritage impact expected	
CONTEXT 2 Medium to high heritage value	Minimal heritage impact expected	Moderate he impact expe		High heritage impact expected	Very high heritage impact expected	
CONTEXT 3 Medium to low heritage value	Little or no heritage impact expected	Minimal her impact expe		Moderate heritage impact expected	High heritage impact expected	
CONTEXT 4 Low to no heritage value	Little or no heritage impact expected	Little or no h impact expe		Minimal heritage value expected	Moderate heritage impact expected	
NOTE: A DEFAU				LUE APPLIES WHERE A	HERITAGE RESOURCE	
HERITAGE CONTEX				RIES OF DEVELOPMENT		
national, provincial and lo Grade 1, 2 or 3A heritage Context 2: Of moderate to high intri local context, i.e. potentia Context 3: Of medium to low intrinsi a national, provincial and resources Context 4: Of little or no intrinsic, as	tional and contextual heritage valu ocal context, i.e. formally declared e resources nsic, associational and contextual al Grade 3B heritage resources. c, associational or contextual herit l local context, i.e. potential Grade sociational or contextual heritage v ditions or extent of irreversible dan	or potential value within a age value within 3C heritage value due to	Category B - - - - - - - - - - - - - - - - - - -	Minor internal changes to exi New building footprints limited : Low-key intensity develop Spot rezoning with no change Linear development less thar Building footprints between 1 Minor changes to external en than 25%) Minor changes in relation to the adjacent structures (less thar : Moderate intensity develop Rezoning of a site between 5 Linear development between 2	existing use rights. ucture within existing envelopes sting structures d to less than 1000m2. ment e to overall zoning of a site. h 100m 000m2-2000m2 velop of existing structures (less bulk and height of immediately h 25%). pment 000m2-10 000m2. 100m and 300m. 000m2 and 5000m2 hal envelop of existing structures and height in relation to	
			-		of 10 000m2 s of 300m. he character of a site exceeding division of a site into three or more and height in relation to	

## 7.3.3 Management actions

Recommendations on relevant heritage resources management actions are vital to the conservation of heritage resources. Recommended management actions may include the following:

#### No further action / Monitoring

Where no heritage resources have been documented, heritage resources occur well outside the impact zone of any development or the primary context of the surroundings at a development footprint has been largely destroyed or altered, no further immediate action is required. Site monitoring during development, by an ECO or the heritage specialist are often added to this recommendation in order to ensure that no undetected heritage\ remains are destroyed.

Avoidance

This is appropriate where any type of development occurs within a formally protected or significant or sensitive heritage context and is likely to have a high negative impact. Mitigation is not acceptable or not possible.

#### Mitigation

This is appropriate where development occurs in a context of heritage significance and where the impact is such that it can be mitigated to a degree of medium to low significance, e.g. the high to medium impact of a development on an archaeological site could be mitigated through sampling/excavation of the remains. Not all negative impacts can be mitigated.

#### Compensation

Compensation is generally not an appropriate heritage management action. The main function of management actions should be to conserve the resource for the benefit of future generations. Once lost it cannot be renewed. The circumstances around the potential public or heritage benefits would need to be exceptional to warrant this type of action, especially in the case of where the impact was high.

#### Rehabilitation

Rehabilitation is considered in heritage management terms as a intervention typically involving the adding of a new heritage layer to enable a new sustainable use. It is not appropriate when the process necessitates the removal of previous historical layers, i.e. restoration of a building or place to the previous state/period. It is an appropriate heritage management action in the following cases:

- The heritage resource is degraded or in the process of degradation and would benefit from rehabilitation.
- Where rehabilitation implies appropriate conservation interventions, i.e. adaptive reuse, repair and maintenance, consolidation and minimal loss of historical fabric.
- Where the rehabilitation process will not result in a negative impact on the intrinsic value of the resource.

#### Enhancement

Enhancement is appropriate where the overall heritage significance and its public appreciation value are improved. It does not imply creation of a condition that might never have occurred during the evolution of a place, e.g. the tendency to sanitize the past. This management action might result from the removal of previous layers where these layers are culturally of low significance and detract from the significance of the resource. It would be appropriate in a range of heritage contexts and applicable to a range of resources. In the case of formally protected or significant resources, appropriate enhancement action should be encouraged. Care should, however, be taken to ensure that the process does not have a negative impact on the character and context of the resource. It would thus have to be carefully monitored.

## 7.3.4 Site significance and impact rating

Refer to Section 7.3.1, Section 7.3.2 & Section 7.3.3 for background on the rating of impacts and recommendation of management actions for sites of heritage potential. Impact thresholds and management measures for the sites are further discussed in section 7.3.5.

#### - Site SA01

#### 1. SITE DESCRIPTION : Possible MSA Quartz scatter

#### **1.1 General Site Description**

1.2 Site features / artafasts / Other

A medium density scatter of quartz stone lithics, possibly from the Middle Stone Age (MSA) and / or Later Stone Age (LSA).

Site Location				
Province / Dsitrict	Limpopo Province	Map Number	2329DA, 2329CB	
Farm Name	Kalkfontein 615LS	Co-ordinates	S23°41'15.46"	E29°28'56.55"
Site Type				
Surface sites	X	Caves and rock she	elters	
Larger open-air sites	X	Sealed sites (depos	sits	
River deposits		Other		
Site Function				
Living / habitation		Kill		
Ceremonial		Burial		
Trading / Barter		Art		
Quarry / Mining / Smelting		Other	X – fa	ictory
Site Placement				
Valley floor	Hill top	Vlei/swamp	River	Mouth



Dam		River Bank	X	Slope		Plair	is X	10.05
Other / Comm	ents		<u> </u>	l Siopo	1	- Tian	·• / ^	
Vegetation								
Riverine		Duckusld		Cauranah			atain fanaat	17
forest		Bushveld		Savannah		Mou	ntain forest	
Thornveld	X	Grassland	X	Cultivated	X	Othe	r	
Age Classific	ation							
Stone Age	X	Early Iron Age		Middle Iron Age		Late	r Iron Age	
Historical		Other						
Material Cultu	ure							
Midden		House Remains		Stone Walling			e Structures	X
Granary		Grinding Stone	(L)	Grinding Stone (		Gran	ary Stand	
Metal		Ceramics (Potte	əry)	Ceramics (Porce	elain)		e (non-lithic)	
Metal slag		Tuyere		Fauna			d (Glass)	
Bead (OES / S		Glass		Lithics		Sme	Iting Residues	
Other: X - terr	•			Other:				
1.3 Site C	ondition							
The site integ	rity has compron	nised due to the mixi	ng of surface of	deposits and displacem	ent of artefac	cts.		
2. SITE E\	<b>ALUATION</b>							
2.1 HERIT	AGE VALUE	(NHRA, Sectio	on 2 [3])			High	Medium	Low
				or pre-colonial history.		- ngn	X	
•				h Africa's natural or cultura	al horitago		X	
		on that will contribute to			ai nentaye.			
	ltural heritage.			ung of South Anica's			X	
It is of importa			cteristics of a pa	articular class of South Af	rica's		x	
It has importar cultural group.		articular aesthetic chara	acteristics value	ed by a particular commur	nity or			x
It has importar particular perio		ng a high degree of cre	eative or technic	cal achievement at a			x	
	or special associat ns (sense of place)		ommunity or cul	Itural group for social, cult	tural or			x
It has strong o the history of §		on with the life or work	of a person, gr	roup or organisation of imp	portance in			x
•	nce through contril a tourist destination	•	motion of a loca	al sociocultural identity an	id can be			X
-	-	history of slavery in So						X
•	nce to the wider un numan occupation.	derstanding of tempor	al changes with	nin cultural landscapes, se	ettlement		X	
FIELD RE	GISTER RA							
National/Grad	e 1 [should be regi	stered, retained]						
Provincial/Gra	de 2 [should be ree	gistered, retained]						
Local/Grade 3	A [should be regist	tered, mitigation not ac	lvised]					
Local/Grade 3	B [High significand	e; mitigation, partly ret	tained]					
Generally Prot	tected A [High/Med	lium significance, mitig	jation]					
	ected B [Medium s	significance, to be reco	orded]					X
Generally prot	•							
	-	ificance, no further act	ion]					

	Wayland Iron Ore Mine	: Archaeological Im	pact Assessment Re	eport		in Mare
International						Station and a
National						
Provincial						
Local				X		
Specific community						
E. GENERAL	STATEMENT OF SITE SIGNIF	ICANCE				
Low						
Medium						X
High						
F. RATING O	F POTENTIAL IMPACT OF DEV					
		F IMPACT: HISTORICAL				
	APPROXIMATE DIS	STANCE FROM DEVELOR	-			
			Without Management*		With Management*	
		Extent	Local		Local	
General assessme	ent of impacts on resource	Duration	Sort Term: Medium		Sort Term: Low	
(Refer to Section 7			Medium Probable		Improbable	
		Probability Confidence	High		High	
		Impact Significance	Medium		Low	
	None (the potential development does no					
Direct impact on resource	Peripheral / Indirect (the heritage resourc			f the pote	ntial development	)
	Destruction / Direct (the heritage resource					X
	ng (Refer to Section 7.3.2)				eritage impact	
	or no heritage impact expected" value applies where a heri	•			<b>3</b> - <b>1</b>	
	ENDED MANAGEMENT* (REFE	ER TO SECTION 7.	.3.3)			
Mitigation	ommanded management					
If further impact is	ommended management					
- Docun	nentation of sites.					
- Furthe	er desktop study to more accurately ascent ant Permitting from Heritage Resources A					
	and a community more measures of the					
- Releva			<u> </u>			
- Releva H. APPLICAB	LE LEGISLATION AND LEGA		5			

# 1. SITE DESCRIPTION : Iron Age farmer period sites

## **1.1 General Site Description**

Two settlement areas with occupation phases possibly dating to the early parts of the Later Iron Age (mid-second millennium AD),

#### 1.2 Site features / artefacts / Other Site Location Province / Dsitrict Limpopo Province 2329DA, 2329CB Map Number S23°38'13.47" E29°34'25.42" Farm Name Makotopong 1200LS Co-ordinates S23°38'27.23" E29°34'16.53" Site Type Surface sites Х Caves and rock shelters Х Sealed sites (deposits Larger open-air sites



	;					Other					Fatter of
Site Function	ï										
Living / habita	ation		X			Kill					e pole
Ceremonial						Burial					
Trading / Barte	er					Art					
Quarry / Mining	g / Smelt	ing				Other			X – unknowr	۱	
Site Placemer	nt										
Valley floor			Hill top			Vlei/swamp			River Mouth		
Dam			River Bank			Slope			Plains	X	
Other / Comme	ents						1				
Vegetation											
Riverine			Duckusld			Courses			Mauratain fam		
forest			Bushveld			Savannah			Mountain fore	est	
Thornveld	X		Grassland	X		Cultivated	X		Other		
Age Classifica	ation										
Stone Age			Early Iron Age			Middle Iron Age			Later Iron Ag	e X	
Historical			Other								
Material Cultu	ure										
Midden		X	House Remains			Stone Walling			Stone Structu	ires	
Granary		X	Grinding Stone (	L)		Grinding Stone (L	J)	X	Granary Stan	d	X
Metal			Ceramics (Potter	ry)	X	Ceramics (Porcel	ain)		Stone (non-lit	thic)	X
Metal slag			Tuyere			Fauna		X	Bead (Glass)		
Bead (OES / S											
2300 (02070	Shell)		Glass			Lithics			Smelting Res		
Other:	,	on	Glass			Cithics Other:			Smelting Res		
Other: 1.3 Site Co The site integ 2. SITE EV	onditio prity has VALUA	comprom ATION	ised due to the displ			Other:				idues	
Other: 1.3 Site Co The site integ 2. SITE EV	onditio prity has VALUA	comprom ATION				Other:		Hi			Low
Other: 1.3 Site Co The site integ 2. SITE EV 2.1 HERIT	onditio grity has VALUA AGE \	comprom ATION /ALUE	ised due to the displ	n 2 [3	i])	Other:		Hi		idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> <b>1.1 has importan</b>	onditio grity has VALUA AGE V nce to the	comprom ATION /ALUE e communit	ised due to the displ (NHRA, Sectio	n 2 [3 Africa's I	5]) history or p	Other:	l heritage		gh Mec	idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It possesses units It has potential	onditio prity has VALUA AGE V nce to the inique, ur I to yield	comprom TION /ALUE e communit ncommon, information	ised due to the displ (NHRA, Sectio	n 2 [3 Africa's I spects of	]) history or p f South Afr	Other: cts and structures. pre-colonial history. ica's natural or cultural	l heritage		gh Mec	idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It possesses un It has potential natural and cul It is of important	onditio rity has VALUA AGE V Ince to the unique, ur I to yield ultural her nce in de	comprom TION /ALUE a communit ncommon, information itage. monstratin	ised due to the displ (NHRA, Sectio ty or pattern of South <i>J</i> rare or endangered as that will contribute to g the principle charac	n 2 [3 Africa's I spects of an unde	i]) history or p f South Afr erstanding	Other: cts and structures. pre-colonial history. ica's natural or cultural			gh Mec X X	idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It possesses under the second secon	onditio grity has VALUA AGE V Ince to the unique, ur il to yield ultural her nce in de ural place nce in ext	comprom TION /ALUE e communi ncommon, information itage. monstratin es or object	ised due to the displ (NHRA, Sectio ty or pattern of South / rare or endangered as n that will contribute to ng the principle characts.	n 2 [3 Africa's I spects of an unde teristics	f South Afr erstanding of a partice	Other: cts and structures. pre-colonial history. ica's natural or cultural of South Africa's	ca's		gh Mec X X X	idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It possesses under the simportant natural and cullur It is of important natural or cultur It has important natural group.	ondition rity has VALUA AGE V AGE V Ince to the unique, ur I to yield unique, ur I to yield unual place nce in ext nce in deu	comprom TION /ALUE e communit ncommon, informatior itage. monstratin es or object hibiting par	ised due to the displ (NHRA, Sectio ty or pattern of South / rare or endangered as n that will contribute to ng the principle characts.	n 2 [3 Africa's I spects of an unde teristics	i]) history or p f South Afr erstanding of a partice is valued b	Other: cts and structures. pre-colonial history. ica's natural or cultural of South Africa's ular class of South Afri y a particular communi	ca's		gh Mec X X X X X	idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It has potential natural and cult It has potential natural or cultur It has important cultural group. It has important particular period	ondition rity has VALUA AGE V Ince to the inique, ur I to yield iltural her ince in dei ural place ince in dei od. or specia	comprom TION /ALUE e communi ncommon, information itage. monstratin s or object hibiting par monstrating	ised due to the displ (NHRA, Sectio ty or pattern of South <i>i</i> rare or endangered as n that will contribute to ig the principle charac ts. ticular aesthetic chara g a high degree of cre on with a particular co	n 2 [3 Africa's I spects of an unde teristics acteristic ative or	) history or p f South Afr erstanding of a particu is valued b technical a	Other: cts and structures. pre-colonial history. ica's natural or cultural of South Africa's ular class of South Afri y a particular communi	ca's ity or		gh Mec X X X X X X X	idues	Low
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It has potential natural and cul It has potential natural or cultur It has important cultural group. It has important particular period It has marked of spiritual reason	ondition rity has VALUA AGE V Ince to the inique, ur il to yield iltural her ince in de ural place ince in der od. or special	comprom TION /ALUE a communit ncommon, information itage. monstrating so r object itage. monstrating anostrating anostrating a association	ised due to the displ (NHRA, Sectio ty or pattern of South / rare or endangered as n that will contribute to ng the principle charac ts. ticular aesthetic chara g a high degree of cre on with a particular co	n 2 [3 Africa's I spects of an unde teristics acteristic ative or mmunity	i]) history or p f South Afr erstanding of a partici s valued b technical a y or cultura	Other: cts and structures. pre-colonial history. ica's natural or cultural of South Africa's ular class of South Afri y a particular communi chievement at a	ca's ity or iral or		gh Mec X X X X X X X	idues	
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It possesses under the supportant it possesses under the supportant it is of important inatural or cultural group. It has important cultural group. It has important particular period it has marked of spiritual reasont it has strong of the history of S It has significant	ondition rity has VALUA AGE V AGE V ance to the unique, ur il to yield litural her ince in der ural place nce in ext nce in der or special South Afri nce throu	comprom TION ALUE e communi ncommon, informatior itage. monstrating sor object nibiting par monstrating al association e of place). association ica. ugh contrib	ised due to the displ (NHRA, Sectio ty or pattern of South <i>i</i> rare or endangered as in that will contribute to ing the principle charac ts. ticular aesthetic chara g a high degree of cre on with a particular co in with the life or work of uting towards the pror	n 2 [3 Africa's I spects of an unde teristics acteristic ative or mmunity of a pers	i]) history or p f South Afr erstanding of a particu is valued b is valued b technical a y or cultura son, group	Other: cts and structures. re-colonial history. ica's natural or cultural of South Africa's ular class of South Afri y a particular communi chievement at a I group for social, cultur	ca's ity or iral or ortance i		gh Mec X X X X X X X	idues	X
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It has potential natural and cull It has potential natural or cultur It has important cultural group. It has important cultural group. It has important particular period It has simportant particular period It has strong on the history of S It has significant developed as a	onditional rity has VALUA AGE V Ince to the inique, ur ince to the inique, ur ince to the inique, ur ince in deural place noce in deural place noce in deural place noce in deural place noce in deural or special south Afri inice throu a tourist of	comprom TION /ALUE a communi incommon, information itage. monstrating as or object hibiting par monstrating association ica. ugh contrib destination	ised due to the displ (NHRA, Sectio ty or pattern of South <i>i</i> rare or endangered as in that will contribute to ing the principle charac ts. ticular aesthetic chara g a high degree of cre on with a particular co in with the life or work of uting towards the pror	n 2 [3 Africa's I spects of an unde teristics acteristic ative or mmunity of a pers notion o	i]) history or p f South Afr erstanding of a partici of a partici s valued b technical a y or cultura son, group f a local sc	Other: cts and structures. pre-colonial history. ica's natural or cultural of South Africa's ular class of South Afri y a particular communi ichievement at a I group for social, cultur or organisation of impo	ca's ity or iral or ortance i		gh Mec X X X X X X X	idues	x
Other: <b>1.3 Site Co</b> <b>The site integ</b> <b>2. SITE EV</b> <b>2.1 HERIT</b> It has important It has potential natural and cull It has potential natural or cultur It has important cultural group. It has important particular period It has significant the history of S It has significant developed as a It has significant thas signif	onditional prity has VALUA AGE V Ince to the inique, ur il to yield iltural her ince in de ural place nce in der ural place nce in der or special South Afri ince throu a tourist of ince relation nce to the	comprom TION /ALUE a communit acommon, information itage. monstrating so r object itage. monstrating association ica. ugh contrib destination ing to the h a wider unc	ised due to the displ (NHRA, Sectio ty or pattern of South / rare or endangered as n that will contribute to ig the principle charac ts. ticular aesthetic chara g a high degree of cre on with a particular co n with the life or work of uting towards the pror istory of slavery in So	n 2 [3 Africa's I spects of an unde teristics acteristic ative or mmunity of a pers motion o	i]) history or p f South Afr erstanding of a partice is valued b technical a y or cultura son, group if a local sc ca.	Other: cts and structures. pre-colonial history. ica's natural or cultural of South Africa's ular class of South Afri y a particular communi ichievement at a I group for social, cultur or organisation of impo	ca's ity or iral or ortance i I can be		gh Mec X X X X X X X	idues	x x x x

Wayland Iron Ore	Mine: Archaeolog	gical Impact As	sessment Report
------------------	------------------	-----------------	-----------------

Ì	

National/Grade 1 [s	hould be registered, retained]						1800 Storifs.
Provincial/Grade 2	should be registered, retained]						
Local/Grade 3A [sh	ould be registered, mitigation not advised	d]					- State
Local/Grade 3B [Hig	gh significance; mitigation, partly retained	d]					-/17/
Generally Protected	A [High/Medium significance, mitigation	]				X	
Generally protected	B [Medium significance, to be recorded]	]					
Generally Protected	I C [Low significance, no further action]						
C. SPHERE O	F SIGNIFICANCE		High	Мес	lium	Low	
International							
National							
Provincial							
Local				X			
Specific community							
E. GENERAL	STATEMENT OF SITE SIGN	IIFICANCE					
Low							
Medium						X	
High							
F. RATING OF	POTENTIAL IMPACT OF D	EVELOPMENT					
	NATUR	E OF IMPACT: HISTORICAL	& SCIENTIFIC				
	APPROXIMATE	DISTANCE FROM DEVELO	PMENT: 0 - 50METE	RS			
			Without Manage	ment*	With Ma	nagement	*
		Extent	Local		Local		
		Duration	Sort Term: Medi	um	Sort Ter	m: Low	
General assessme (Refer to Section 7	nt of impacts on resource	Intensity	Medium		Low		
(		Probability	Probable		Improba	able	
		Confidence	High		High		
		Impact Significance	High		Low		
Direct impact	None (the potential development does	s not adversely or positively a	ffect the heritage reso	urce)			
on resource	Peripheral / Indirect (the heritage reso	ource or its setting is located in	n proximity to the foot	print of the po	tential devel	lopment)	
	Destruction / Direct (the heritage reso	urce or site is physically locat	ed within the footprint	of the potent	ial developm	nent)	X
	g (Refer to Section 7.3.2) r no heritage impact expected" value applies where a	heritage resource occurs outside the in	npact matrix of the developm	High	heritage in	npact	
	NDED MANAGEMENT* (RE						
Mitigation							
-	ommended management						
If further impact is							
	entation of sites. r desktop study to more accurately as	certain context of sites					
	d Phase 2 Site Samping						
	nt Permitting from Heritage Resource	s Authority.					
H. APPLICAB	LE LEGISLATION AND LEG	BAL REQUIREMENT	S				
- Nation	al Heritage Resources Act (Act no. 25	5 of 1999)					
	A03, IA04, IA05 RIPTION : Iron Age farmer (	noriad sites					

1.1 General Site Description

Sm	aller sites	possibly dati	ing to the Iron Age	, more s	pecifically	two vitrified cattle du	ung depo	osits on a	a ridge and	a large di	sturbed a	rea.
1.2 Site fe	atures	/ artefact	ts / Other									
Site Location												interes of
Province / Dsiti	rict	Limpopo	Province			Map Number		2329DA	, 2329CB			
Farm Name		Makotop	otopong 1200LS			Co-ordinates		S23°38	38'07.71" E29 38'15.48" E29		E29°35'12.82" E29°35'28.28" E29°33'40.77"	
Site Type												
Surface sites			Х			Caves and rock	shelters	s				
Larger open-ai	r sites					Sealed sites (de	eposits					
River deposits						Other						
Site Function												
Living / habita	tion					Kill						
Ceremonial						Burial						
Trading / Barte						Art						
Quarry / Mining	-	g				Other			X	– pastora	al	
Site Placemer	nt											
Valley floor			Hill top			Vlei/swamp			Ri	iver Mouth	1	
Dam			River Bank			Slope	X		PI	ains		
Other / Comme	ents											
Vegetation												
Riverine			Bushveld			Savannah			м	ountain fo	rest	
forest			Dusilvelu								1031	
Thornveld	X		Grassland	X		Cultivated	X		0	ther		
Age Classifica	ation	r										
Stone Age			Early Iron Age			Middle Iron Age			La	ater Iron A	ge X	
Historical			Other									
Material Cultu	re											
Midden		X	House Remains			Stone Walling				tone Struc		X
Granary			Grinding Stone (I			Grinding Stone				ranary Sta		
Metal			Ceramics (Potter	у)	X	Ceramics (Porc	elain)			tone (non-		
Metal slag			Tuyere			Fauna				ead (Glass		
Bead (OES / S			Glass			Lithics			S	melting Re	esidues	
Other: X – Cat	-					Other:						
1.3 Site Co	onditio	n										
The site integ	rity has be	een severel	y compromised b	y surfac	ce degradi	ing and vegetation						
2. SITE EV	/ALUA1	FION										
2.1 HERIT	AGE VA	ALUE (N	HRA, Sectio	n 2 [3	])				High	Ме	dium	Low
It has importan	ice to the c	community o	r pattern of South /	Africa's l	nistory or p	re-colonial history.						X
lt possesses u	nique, unc	ommon, rare	e or endangered as	spects of	South Afri	ica's natural or cultu	ral herita	age.				X
t has potential natural and cul			at will contribute to	an unde	erstanding	of South Africa's				x		
lt is of importar natural or cultu		-	ne principle charact	teristics	of a particu	ular class of South A	frica's			x		
lt has importan cultural group.	ice in exhit	biting particu	lar aesthetic chara	cteristic	s valued by	y a particular comm	unity or					X
group.												

	Wayland Iron Ore M	ine: Archaeological Im	pact Assessment	Report			
particular period.				-			and the second
•	pecial association with a particular comm ense of place).	unity or cultural group for socia	al, cultural or			X	
It has strong or spe the history of South	ecial association with the life or work of a n Africa.	person, group or organisation	of importance in			X	
It has significance t developed as a tou	through contributing towards the promoti rist destination.	on of a local sociocultural iden	tity and can be			X	
It has significance	relating to the history of slavery in South	Africa.				X	
t has importance to patterns and huma	o the wider understanding of temporal ch n occupation.	anges within cultural landscap	bes, settlement		x		
FIELD REGI	STER RATING						
National/Grade 1 [s	should be registered, retained]						
-	[should be registered, retained]						
	ould be registered, mitigation not advise	d]					
-	igh significance; mitigation, partly retaine	-					
-	d A [High/Medium significance, mitigatio						
-	d B [Medium significance, to be recorded						
	d C [Low significance, no further action]					X	
-	DF SIGNIFICANCE		High	Medi	um	Low	
International							
Vational							
Provincial							
ocal						X	
Specific community	/						
E. GENERAL	STATEMENT OF SITE SIGN						
_0W						X	
/edium						<b>^</b>	
ligh							
-	F POTENTIAL IMPACT OF I						
		E OF IMPACT: HISTORICAL	& SCIENTIFIC				
	APPROXIMATE	DISTANCE FROM DEVELO	PMENT: 0 - 30METERS	;			
			Without Manageme	ent*	With Ma	anagement	k
		Extent	Local		Local		
		Duration	Sort Term: Low		Sort Te	rm: Low	
General assessme Refer to Section	ent of impacts on resource	Intensity	Low		Low		
Nelei to Section	1.3.1)	Probability	Improbable		Improb	able	
		Confidence	High		High		
		Impact Significance	Low		Low		
Diment laws of	None (the potential development doe		fect the heritage resource	ce)			
Direct impact on resource	Peripheral / Indirect (the heritage reso		÷	,	ential deve	elopment)	
	Destruction / Direct (the heritage reso					. ,	X
•	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a	a heritage resource occurs outside the in	npact matrix of the	Moder	ate herita	ge impact	
G. RECOMMI	ENDED MANAGEMENT* (RE	FER TO SECTION 7	.3.3)				
Monitoring							
	ommended management						
f further impact is	s envisaged:						
AGES (PTY)		-80-					

- Documentation of sites

Site monitoring during development, by an ECO or the heritage specialist.

## H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- National Heritage Resources Act (Act no. 25 of 1999)

## - Site IA06, IA07

## 1. SITE DESCRIPTION : Iron Age farmer period sites

## 1.1 General Site Description

A section of collapsed stone walling and minor terrace structure.

## 1.2 Site features / artefacts / Other

Site Location								
Province / Dsitr	ict	Limpopo Province		Map Number	2329	DA, 2329CB		
Farm Name		Kalkfontein 615LS		Co-ordinates		41'41.26" 41'26.60"		
Site Type								
Surface sites		X		Caves and rock sh	nelters			
Larger open-aii	rsites			Sealed sites (depo	osits			
River deposits				Other				
Site Function								
Living / habitat	ion			Kill				
Ceremonial				Burial				
Trading / Barte	r			Art				
Quarry / Mining	/ Smeltin	g		Other		X	– unknown	
Site Placemen	t							
Valley floor		Hill top		Vlei/swamp		Ri	ver Mouth	
Dam		River Bank		Slope	X	Pla	ains	
Other / Comme	ents							
Vegetation								
Riverine forest		Bushveld		Savannah		М	ountain forest	
Thornveld	X	Grassland	X	Cultivated	X	Ot	her	
Age Classifica	ition							
Stone Age		Early Iron Age		Middle Iron Age		La	ter Iron Age	X
Historical		Other						
Material Cultu	re							
Midden		House Remains		Stone Walling		St	one Structures	X
Granary		Grinding Stone (		Grinding Stone (U	)	Gr	anary Stand	
Metal		Ceramics (Potte	ry)	Ceramics (Porcela	ain)	St	one (non-lithic)	
Metal slag		Tuyere		Fauna		Be	ead (Glass)	
Bead (OES / SI	hell)	Glass		Lithics		Sr	nelting Residue	S
Other:				Other:				
1.3 Site Co	onditio	n						
The site integr	rity has b	een severely compromised b	by surface deg	rading and vegetation. S	tructures h	nave collapse	d.	
2. SITE EV	-		-	-				
		ALUE (NHRA, Sectio	on 2 [3])			High	Mediun	n Lov
						- ingii	meanun	

Wayland Iron Ore N	line: Archaeological Impa	act Assessment	Report	
It has importance to the community or pattern of South Afri				X
It possesses unique, uncommon, rare or endangered aspe		1		X
It has potential to yield information that will contribute to an				
natural and cultural heritage.	5		X	
It is of importance in demonstrating the principle characteri natural or cultural places or objects.	stics of a particular class of South	Africa's		X
It has importance in exhibiting particular aesthetic characte cultural group.	ristics valued by a particular com	munity or		X
It has importance in demonstrating a high degree of creativ particular period.	e or technical achievement at a		x	
It has marked or special association with a particular comm spiritual reasons (sense of place).	nunity or cultural group for social,	cultural or		X
It has strong or special association with the life or work of a the history of South Africa.		-		x
It has significance through contributing towards the promot developed as a tourist destination.		and can be		x
It has significance relating to the history of slavery in South				X
It has importance to the wider understanding of temporal cl patterns and human occupation.	nanges within cultural landscapes	, settlement	X	
FIELD REGISTER RATING				
National/Grade 1 [should be registered, retained]				
Provincial/Grade 2 [should be registered, retained]				
Local/Grade 3A [should be registered, mitigation not advise				
Local/Grade 3B [High significance; mitigation, partly retained	-			
Generally Protected A [High/Medium significance, mitigatio	-			
Generally protected B [Medium significance, to be recorded	[[			
Generally Protected C [Low significance, no further action]				X
C. SPHERE OF SIGNIFICANCE		High	Medium	Low
International				
National				
Provincial				
Local				X
Specific community				
E. GENERAL STATEMENT OF SITE SIGI				······
				X
Medium				
Medium High				
Medium High F. RATING OF POTENTIAL IMPACT OF I				
Medium High F. RATING OF POTENTIAL IMPACT OF I	DEVELOPMENT Re of Impact: Historical &	SCIENTIFIC		
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUR				
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUF	RE OF IMPACT: HISTORICAL &		t* Vith M	lanagement*
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUR	RE OF IMPACT: HISTORICAL &	ENT: 0 - 30METERS	it* With M Local	lanagement*
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUR APPROXIMATE	RE OF IMPACT: HISTORICAL &	ENT: 0 - 30METERS Without Managemer	Local	lanagement*
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUR APPROXIMATE General assessment of impacts on resource	RE OF IMPACT: HISTORICAL &	ENT: 0 - 30METERS Without Managemer Local	Local	-
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUR APPROXIMATE	RE OF IMPACT: HISTORICAL & DISTANCE FROM DEVELOPM Extent Duration	ENT: 0 - 30METERS Without Managemer Local Sort Term: Low	Local Sort Te	erm: Low
Medium High F. RATING OF POTENTIAL IMPACT OF I NATUR APPROXIMATE General assessment of impacts on resource	E OF IMPACT: HISTORICAL & DISTANCE FROM DEVELOPM Extent Duration Intensity	ENT: 0 - 30METERS Without Managemer Local Sort Term: Low Low	Local Sort Te	erm: Low

Way	land Iron	Ore	Mine:	Archaeologic	al Impact	Assessment	Report

				<u>I</u>
	Wayland Iron Ore Mine: Archaeological Impact Assessment Re	eport		
on resource	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint o	f the potential development)		
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the	potential development)	X	
•	ting (Refer to Section 7.3.2) e or no heritage impact expected" value applies where a heritage resource occurs outside the impact matrix of the	Moderate heritage impact		
G. RECOMN	IENDED MANAGEMENT* (REFER TO SECTION 7.3.3)			
Monitoring				
Comments on re	commended management			
	is envisaged: imentation of sites monitoring during development, by an ECO or the heritage specialist.			
H. APPLICA	BLE LEGISLATION AND LEGAL REQUIREMENTS			
- Nati	onal Heritage Resources Act (Act no. 25 of 1999)			

#### Site IA08, IA09 -

1. SITE DES	SCRIP	TION : I	ron Age farme	er per	iod sites	S						
1.1 General	Site [	Descript	ion									
			Iron	Age oc	cupation are	eas occuring on high	ridges.					
1.2 Site feat	tures /	artefac	ts / Other									
Site Location												
Province / Dsitric	t	Limpop	o Province			Map Number	2	2329DA, 2329	СВ			
Farm Name		Kalkfor	tein 615LS			Co-ordinates		523°41'37.51" 523°41'56.24"		E29°27 E29°27		
Site Type										·		
Surface sites			X			Caves and rock s	helters					
Larger open-air s	sites		X			Sealed sites (dep	osits					
River deposits						Other						
Site Function												
Living / habitatio	n		X			Kill						
Ceremonial						Burial						
Trading / Barter						Art						
Quarry / Mining /	Smelting	]				Other			X – unkr	nown		
Site Placement												
Valley floor			Hill top			Vlei/swamp			River Mo	outh		
Dam			River Bank			Slope	X		Plains		X	
Other / Commen	ts											
Vegetation												
Riverine forest			Bushveld			Savannah			Mountair	n forest		
Thornveld	X		Grassland	X		Cultivated			Other			
Age Classificati	on											
Stone Age			Early Iron Age			Middle Iron Age			Later Iro	n Age	X	
Historical			Other									
Material Culture	)											
Midden		X	House Remains			Stone Walling		X	Stone St	ructures		X
Granary			Grinding Stone (L	_)	X	Grinding Stone (L	J)		Granary	Stand		
Metal			Ceramics (Potter	y)		Ceramics (Porcel	ain)		Stone (n	on-lithic)		X

19

Metal slag	Tuyere	e: Archaeological Impact			d (Glass)	
Bead (OES / Shell)	Glass				Iting Residues	
Other: X - terracing		Other:				
1.3 Site Condition						
	promised and structures are not	intact				
2. SITE EVALUATIO	-					
	UE (NHRA, Section 2 [3			High	Medium	Low
	nmunity or pattern of South Africa's				X	
	imon, rare or endangered aspects o		I heritage.		X	
It has potential to yield infon natural and cultural heritage	mation that will contribute to an und e.	lerstanding of South Africa's			x	
It is of importance in demon natural or cultural places or	strating the principle characteristics objects.	of a particular class of South Afr	ica's		x	
It has importance in exhibitir cultural group.	ng particular aesthetic characteristic	cs valued by a particular commun	ity or			X
It has importance in demons particular period.	strating a high degree of creative or	technical achievement at a			X	
lt has marked or special ass spiritual reasons (sense of p	sociation with a particular communit blace).	y or cultural group for social, cultu	ural or		x	
It has strong or special asso the history of South Africa.	ociation with the life or work of a per	son, group or organisation of imp	ortance in			X
It has significance through c developed as a tourist desti	contributing towards the promotion on a nation.	of a local sociocultural identity and	d can be			X
t has significance relating to	o the history of slavery in South Afri	ca.				X
It has importance to the wide patterns and human occupa	er understanding of temporal chang tion.	ges within cultural landscapes, se	ttlement		X	
FIELD REGISTER	RATING					
National/Grade 1 [should be	e registered, retained]					
Provincial/Grade 2 [should b						
Local/Grade 3A [should be i	registered, mitigation not advised]					
Local/Grade 3B [High signifi	icance; mitigation, partly retained]					
Generally Protected A [High	/Medium significance, mitigation]					X
Generally protected B [Medi	ium significance, to be recorded]					
Generally Protected C [Low	significance, no further action]					
C. SPHERE OF SIG	NIFICANCE		High	Med	lium	Low
International						
National						
Provincial						
Local				X		
Specific community						
E. GENERAL STAT	EMENT OF SITE SIGNIF	ICANCE				
Low						
Medium						X
High						
F. RATING OF POT	ENTIAL IMPACT OF DE	VELOPMENT				
	NATURE C	OF IMPACT: HISTORICAL & SCI	ENTIFIC			
		STANCE FROM DEVELOPMEN	· 0 - 30METER	S		

						1
	Wayland Iron Ore Mine	: Archaeological Im	pact Assessment Rep	ort	and the second	
			Without Management*	With Management*		
		Extent	Local	Local		
		Duration	Sort Term: Medium	Sort Term: Low	CONTRACT .	
General assessme (Refer to Section 7	ent of impacts on resource 7.3.1)	Intensity	Medium	Low		
(		Probability	Probable	Improbable		
		Confidence	High	High		
		Impact Significance	Medium	Low		
Direct impact	None (the potential development does no	t adversely or positively af	fect the heritage resource)			
on resource	Peripheral / Indirect (the heritage resource	e or its setting is located in	proximity to the footprint of the	he potential development)		
	Destruction / Direct (the heritage resource	e or site is physically locate	ed within the footprint of the p	otential development)	X	
· ·	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a heri	tage resource occurs outside the im	pact matrix of the development.	High heritage impact		
G. RECOMME	ENDED MANAGEMENT* (REFE	ER TO SECTION 7.	3.3)			
Mitigation						

Comments on recommended management

## If further impact is envisaged:

- Documentation of sites.
- Further desktop study to more accurately ascertain context of sites.
- Limited Phase 2 Site Sampling. -
- Relevant Permitting from Heritage Resources Authority. -

## H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- National Heritage Resources Act (Act no. 25 of 1999) -
- Site HP01 -

1. SITE DESCRIP	FION : H	listorical Period S	Structures	i			
1.1 General Site D	)escript	ion					
		The house of the	he Lutheran Na	ative Association Mi	ssion Station.		
1.2 Site features /	artefac	ts / Other					
Site Location							
Province / Dsitrict	Limpop	o Province		Map Number	2329DA, 2329	СВ	
Farm Name	Makoto	pong 1200LS		Co-ordinates	S23°39'13.10	" E29°	36'37.59
Site Type							
Surface sites		X		Caves and rock s	shelters		
Larger open-air sites				Sealed sites (dep	oosits		
River deposits				Other			
Site Function							
Living / habitation		X		Kill			
Ceremonial		X		Burial			
Trading / Barter				Art			
Quarry / Mining / Smelting	1			Other			
Site Placement							
Valley floor		Hill top		Vlei/swamp		River Mouth	
Dam		River Bank		Slope		Plains	X
Other / Comments							
Vegetation							
Riverine forest		Bushveld		Savannah		Mountain forest	



Thornveld	X		Grassland	X		Cultivated	X		Othe	er	1000
Age Classific			1				1				
Stone Age			Early Iron Age			Middle Iron Age			Late	er Iron Age	
Historical	X		Other			0				0	
Material Cultu			1								
Midden			House Remains		X	Stone Walling			Stor	ne Structures	
Granary			Grinding Stone (	L)		Grinding Stone	(U)		Gra	nary Stand	
Metal		X	Ceramics (Potte			Ceramics (Porc		X		ne (non-lithic)	X
Metal slag			Tuyere	,,		Fauna	,	X		d (Glass)	
Bead (OES / S	Shell)		Glass		X	Lithics				elting Residues	
Other:	,					Other:					
1.3 Site Co	onditio	n			1	1					I
			rely compromised b	v the im	noot of n	atural alamanta an	d the etru	oturo io na	t maint	ainad	
-	-		rely compromised b	y ule illi	ipact of fi		i ille silu		n manna	ameu.	
2. SITE E\											
2.1 HERIT	AGE V	ALUE	(NHRA, Sectio	n 2 [3]	])			Hi	gh	Medium	Low
It has importar	nce to the	communit	y or pattern of South	Africa's h	nistory or p	pre-colonial history.				X	
It possesses u	nique, un	common, r	are or endangered as	spects of	South Af	ica's natural or cultu	ral heritag	je.		X	
			that will contribute to	an unde	erstanding	of South Africa's				x	
natural and cu		U									
It is of importa natural or cultu			g the principle charac S.	teristics	of a partic	ular class of South A	frica's			x	
It has importar cultural group.		ibiting part	icular aesthetic chara	acteristics	s valued b	y a particular commu	unity or			x	
It has importar	nce in den	nonstrating	a high degree of cre	ative or t	echnical a	achievement at a				x	
particular perio						Lances for a state of	It and an				
spiritual reaso	ns (sense	of place).	on with a particular co							X	
It has strong o the history of S			with the life or work	of a pers	on, group	or organisation of in	nportance	in		X	
It has significa developed as		-	iting towards the pror	motion of	f a local so	ociocultural identity a	nd can be	)			x
It has significa	nce relatir	ng to the h	istory of slavery in Sc	outh Afric	a.						X
It has importar patterns and h			erstanding of tempora	al change	es within c	ultural landscapes, s	ettlement			X	
FIELD RE		•	NG								
National/Grade	e 1 [shoul	d be regist	ered, retained]								
Provincial/Gra	de 2 [shoi	uld be regi	stered, retained]								
Local/Grade 3	A [should	be registe	red, mitigation not ad	vised]							X
Local/Grade 3	B [High si	gnificance	; mitigation, partly reta	ained]							
Generally Prot	ected A [H	High/Mediu	ım significance, mitig	ation]							
Generally prot	ected B [N	Aedium sig	nificance, to be recor	rded]							
Generally Prot	ected C [I	Low signifi	cance, no further acti	on]							
C. SPHER	E OF S	GNIFI					High	۱	Mec	lium L	.ow
International											
International National											
									X		

	Wayland Iron Ore Mir	ne: Archaeological Im	pact Assessment F	Report		
Specific communit						and the second
E. GENERAL	STATEMENT OF SITE SIGNI	FICANCE	1			and the second second
Low						a strates
Medium					X	1
High						
F. RATING O	F POTENTIAL IMPACT OF DE	EVELOPMENT				
	NATURE OF IMPACT: HISTORICA	L, AESTHETIC, SOCIAL, SO	CIENTIFIC, ARCHITECTU	JRAL & VIS	UAL.	
	APPROXIMATE D	ISTANCE FROM DEVELOF	PMENT: 2000+ METERS			
			Without Managemen	t*	With Management	*
		Extent	Local		Local	
Conorol accocom	ent of impacts on resource	Duration	Sort Term: Medium		Sort Term: Low	
(Refer to Section		Intensity	Medium		Low	
		Probability	Probable		Improbable	
		Confidence	High		High	
		Impact Significance	Medium	<u> </u>	Low	
Direct impact	None (the potential development does n	, , ,	ő	,	tial davalage at the	X
on resource	Peripheral / Indirect (the heritage resou Destruction / Direct (the heritage resour	-				<b>^</b>
Direct impact rati	ing (Refer to Section 7.3.2)					
	or no heritage impact expected" value applies where a h	eritage resource occurs outside the in	npact matrix of the	Medium	heritage impact	
G. RECOMM	ENDED MANAGEMENT* (REF	ER TO SECTION 7	.3.3)			
Avoidance						
Comments on rec	commended management					
If further impact i	s envisaged: mentation of sites					
	er desktop study to more accurately asc	ertain context of sites.				
	mentation of Site Management Plan in o					

- National Heritage Resources Act (Act no. 25 of 1999) Local and regional provisions, laws and by-laws -
- -
- Site HP02 -

1. SITE DESCRIP	TION : H	listorical Period Structures	;					
1.1 General Site D	Descript	ion						
		The dilapidated remains of a la	arge number of mud bric	k houses.				
1.2 Site features /	artefac	ts / Other						
Site Location								
Province / Dsitrict	Limpop	o Province	Map Number	2329DA, 2329CB				
Farm Name	Makoto	pong 1200LS	Co-ordinates	S23°39'20.64"         E29°36'48.66"           S23°39'01.82"         E29°36'52.83"				
Site Type								
Surface sites		X	Caves and rock shelte	ers				
Larger open-air sites			Sealed sites (deposits	;				
River deposits			Other					
Site Function								
Living / habitation		X	Kill					

		Wa	ayland Iron Ore	e wine.	Archae	ological illipaci	A3563	sment	Report			and the second
Ceremonial			X			Burial						
Trading / Barter						Art						
Quarry / Mining	/ Smelti	ng				Other						and the second second
Site Placement	:		·			·						
Valley floor			Hill top			Vlei/swamp			Rive	r Mouth		
Dam			River Bank			Slope			Plair	IS	X	
Other / Commer	nts											
Vegetation			·									
Riverine forest			Bushveld			Savannah			Mou	ntain forest		
Thornveld	X		Grassland	X		Cultivated	X		Othe	r		
Age Classificat	tion											
Stone Age			Early Iron Age			Middle Iron Age			Late	r Iron Age		
Historical	X		Other			1				_	1	
Material Culture	e		1									
Midden			House Remains		X	Stone Walling		X	Ston	e Structures		X
Granary			Grinding Stone (	(L)		Grinding Stone (	U)		Gran	ary Stand		
Metal		X	Ceramics (Potter			Ceramics (Porce		X		e (non-lithic)		X
Metal slag			Tuyere			Fauna		X	Bead	d (Glass)		
Bead (OES / Sh	ell)		Glass		X	Lithics			Sme	Iting Residue	es	
Other:	,		1			Other:		1				
1.3 Site Co	nditic	on			1							1
			ly compromised a									
			ay compromised a	ana struc	ctures hav	e almost completely	/ collaps	ed.				
2. SITE EVA	-		ny compromised a	and struc	ctures hav	e almost completely	/ collaps	ed.				
2. SITE EV	ALUA	TION	NHRA, Sectio			e almost completely	y collaps		igh	Mediu	m	Low
2. SITE EV 2.1 HERITA	ALUA AGE V	TION ALUE (I		on 2 [3]	])		y collaps		igh	Mediur X	m	Low
2. SITE EVA 2.1 HERITA It has importance	ALUA GE V e to the	TION ALUE (I	NHRA, Sectio	on 2 [3] Africa's h	]) history or p			H	igh		m	Low
2. SITE EV/ 2.1 HERITA It has importance It possesses uni	ALUA GE V te to the ique, un	ATION ALUE (I community common, rai	NHRA, Sectio	on 2 [3] Africa's h spects of	]) history or p South Afri	re-colonial history. ca's natural or cultura		H	igh	X	m	Low
2. SITE EVA 2.1 HERITA It has importance It possesses uni It has potential to natural and culture	ALUA GE V e to the ique, un o yield i ural heri ce in de	TION ALUE (I community of common, ran nformation th tage. monstrating	NHRA, Sectio or pattern of South re or endangered as hat will contribute to	on 2 [3] Africa's h spects of o an unde	]) history or p South Afri erstanding o	re-colonial history. ca's natural or cultura	al heritag	H	igh	X X	m	Low
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultu It is of importance natural or cultura It has importance	ALUA GE V e to the ique, un o yield i ural heri ce in dei al place	TION ALUE (I community of common, rai nformation th tage. monstrating s s or objects.	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac	on 2 [3] Africa's h spects of o an unde cteristics o	) history or p South Afri erstanding o of a particu	re-colonial history. ca's natural or cultura of South Africa's	al heritag rica's	H	igh	X X X	m	Low
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultu It is of importance natural or cultura It has importance cultural group. It has importance	ALUA GE V e to the ique, un o yield i ural heri ce in der al place te in exh te in der	TION ALUE (I community of common, ran nformation th tage. monstrating s or objects. nibiting partic	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac	on 2 [3] Africa's r spects of o an unde cteristics of acteristics	) istory or pi South Afri erstanding o of a particu	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afr a particular commun	al heritag rica's	H	igh	X X X	m [	
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultu It is of importance natural or cultura It has importance cultural group. It has importance particular period It has marked or	ALUA GE V ee to the ique, un o yield i ural heri ce in der al place ee in exh ee in der l. r specia	TION ALUE (I community of common, rai nformation the tage. monstrating is s or objects. nibiting partic nonstrating a	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre	on 2 [3] Africa's h spects of o an unde cteristics acteristics eative or t	I) istory or pr South Afri erstanding of a particu s valued by rechnical ac	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afr a particular commun	al heritag rica's hity or	H	igh	X X X	m	x
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultu It is of importance cultural group. It has importance particular period It has marked or spiritual reasons	ALUA GE V ee to the ique, un o yield i ural heri al place in der al place ie in der al place ie in der al place ie in der i. r specia s (sense	TION ALUE (I community of common, rai nformation the tage. monstrating of s or objects. nibiting partic monstrating a l association of place).	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre with a particular co	on 2 [3] Africa's f spects of o an unde cteristics o acteristics eative or t	) istory or p south Afri of a particu of a particu s valued by echnical ac	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afr a particular commun chievement at a	al heritag rica's hity or ural or	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X	m [	x
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultural It is of importance natural or cultural It has importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or s the history of So	ALUA GE V e to the ique, un o yield i ural heri ce in der al place in exh e in exh e in der l. r special s (sense special a outh Afri	TION ALUE (I community of common, ran nformation the tage. monstrating of s or objects. ibiting partice monstrating a l association w ca.	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre with a particular co with the life or work	on 2 [3] Africa's h spects of o an unde cteristics o acteristics eative or t ommunity of a pers	istory or priving of a south Afriving of a particular of a particular of a particular of a particular of a contract and the source of the	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afri a particular commun chievement at a group for social, cult or organisation of imp	al heritag rica's hity or ural or portance	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X	m [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [	x x
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultural It is of importance natural or cultural It has importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or s the history of So	ALUA GE V e to the ique, un o yield i ural heri ce in der al place in exh e in der l. r special s (sense special i cuth Afri ce throu	TION ALUE (I community of common, ran nformation the tage. monstrating is s or objects. ibiting partice monstrating a I association v ca. igh contributi	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre with a particular co with the life or work	on 2 [3] Africa's h spects of o an unde cteristics o acteristics eative or t ommunity of a pers	istory or priving of a south Afriving of a particular of a particular of a particular of a particular of a contract and the source of the	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afri a particular commun chievement at a group for social, cult	al heritag rica's hity or ural or portance	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X	m [	x
2. SITE EV/ 2.1 HERITA It has importance It possesses unit It has potential to natural and cultur It is of importance natural or cultural It has importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or st the history of So It has significance developed as a f	ALUA GE V e to the ique, un o yield i ural heri ce in der al place ie in exh e in der i. r specia s (sense special i outh Afri ce throu tourist o	TION ALUE (I community of common, ran nformation the tage. monstrating is s or objects. hibiting partice monstrating a l association of o of place). association of ca. gh contributi lestination.	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre with a particular co with the life or work	Africa's f spects of o an unde cteristics acteristics eative or t ommunity of a pers motion of	inistory or privice of a south Afriver of a particular of a content of a content of a local south of the south of t	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afri a particular commun chievement at a group for social, cult or organisation of imp	al heritag rica's hity or ural or portance	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X	m	x x
2. SITE EV/ 2.1 HERITA It has importance It possesses unit It has potential to natural and culturation It is of importance natural or culturation It has importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or so the history of So It has significance developed as a filt	ALUA GE V ee to the ique, un o yield i ural heri ce in der al place e in exh e in der l. r specia s (sense special a outh Afri ce throu tourist c ce relati e to the	TION ALUE (I community of common, ran nformation the tage. monstrating a s or objects. nibiting partice nonstrating a l association we ca. gh contributi lestination. ng to the hisise wider under	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac cular aesthetic chara a high degree of cre with a particular co with the life or work ing towards the pror tory of slavery in Sc	on 2 [3] Africa's f spects of o an unde cteristics o acteristics eative or t ommunity of a pers motion of puth Afric	<ol> <li>istory or pi South Afri erstanding of a particul s valued by technical ad or cultural on, group of f a local soot a.</li> </ol>	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afri a particular commun chievement at a group for social, cult or organisation of imp	al heritag rica's nity or ural or portance d can be	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X	m	x x x
2. SITE EV/ 2.1 HERITA It has importance It possesses unit It has potential to natural and cultura It is of importance cultural or cultura It has importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or so the history of So It has significance developed as a filt has significance It has importance	ALUA GE V e to the ique, un o yield i ural heri ce in der al place in exh e in exh e in der l. r special s special s special s special s ce throu tourist of ce relati man occ	TION ALUE (I community of common, ran nformation that tage. monstrating is s or objects. ibiting partic monstrating a I association v ca. igh contributi lestination. ng to the hisi wider under cupation.	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre with a particular co with the life or work ing towards the pro- tory of slavery in Sc rstanding of tempore	on 2 [3] Africa's f spects of o an unde cteristics o acteristics eative or t ommunity of a pers motion of puth Afric	<ol> <li>istory or pi South Afri erstanding of a particul s valued by technical ad or cultural on, group of f a local soot a.</li> </ol>	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afr r a particular commun chievement at a group for social, cult or organisation of imp ciocultural identity an	al heritag rica's nity or ural or portance d can be	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X X X X	m	x x x
2. SITE EV/ 2.1 HERITA It has importance It possesses unit It has potential to natural and cultural It is of importance cultural group. It has importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or st the history of So It has significance developed as a full It has importance patterns and hur	ALUA GE V e to the ique, un o yield i ural heri ce in der al place e in exh e in exh e in der i. r special s (sense special a outh Afri ce throu tourist c ce relati ie to the man occ GISTE	TION ALUE (I community of common, ran nformation the tage. monstrating is s or objects. ibiting partice monstrating a l association version association version gh contribution lestination. Ing to the hisise wider under cupation. RRATIN	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charace sular aesthetic chara a high degree of cre with a particular co with the life or work ing towards the pror tory of slavery in Sc standing of tempora	on 2 [3] Africa's f spects of o an unde cteristics o acteristics eative or t ommunity of a pers motion of puth Afric	<ol> <li>istory or pi South Afri erstanding of a particul s valued by technical ad or cultural on, group of f a local soot a.</li> </ol>	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afr r a particular commun chievement at a group for social, cult or organisation of imp ciocultural identity an	al heritag rica's nity or ural or portance d can be	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X X X X	m	x x x
2. SITE EV/ 2.1 HERITA It has importance It possesses uni It has potential to natural and cultural It is of importance cultural group. It has importance particular period It has marked or spiritual reasons It has strong or s the history of So It has significance developed as a fi It has importance patterns and hur FIELD REC	ALUA GE V e to the ique, un o yield i ural heri ce in der al place ie in exh e in exh e in exh e in der l. r special s special s special s special s ce throu tourist of ce relati ce to the man occ GISTE 1 [shoul	TION ALUE (I community of common, ran nformation that tage. monstrating is s or objects. ibiting partic monstrating a l association v ca. igh contributi lestination. Ing to the hisis wider under cupation. <b>ER RATIN</b> Id be register	NHRA, Sectio or pattern of South re or endangered as hat will contribute to the principle charac sular aesthetic chara a high degree of cre with a particular co with the life or work ing towards the pro- tory of slavery in Sc rstanding of tempora <b>IG</b>	on 2 [3] Africa's f spects of o an unde cteristics o acteristics eative or t ommunity of a pers motion of puth Afric	<ol> <li>istory or pi South Afri erstanding of a particul s valued by technical ad or cultural on, group of f a local soot a.</li> </ol>	re-colonial history. ca's natural or cultura of South Africa's lar class of South Afr r a particular commun chievement at a group for social, cult or organisation of imp ciocultural identity an	al heritag rica's nity or ural or portance d can be	н е. С. С. С. С. С. С. С. С. С. С. С. С. С.	igh	X X X X X X X	m	x x x

	Wayland Iron Ore N	/ine: Archaeological In	npact Assessment	Report		
Local/Grade 3B [H	ligh significance; mitigation, partly retain	ed]				
Generally Protecte	ed A [High/Medium significance, mitigation	on]			X	
Generally protecte	d B [Medium significance, to be recorde	d]				1
Generally Protecte	ed C [Low significance, no further action]					-/-/-
C. SPHERE	OF SIGNIFICANCE		High	Medium	Low	
International						
National						
Provincial						
Local				X		
Specific communit	у					
E. GENERAL	. STATEMENT OF SITE SIG	NIFICANCE				
Low						
Medium					X	
High						
F. RATING O	F POTENTIAL IMPACT OF	DEVELOPMENT				
	NATURE OF IMPACT: HISTORI	CAL, AESTHETIC, SOCIAL, S	CIENTIFIC, ARCHITECT	URAL & VISUAL.		
		DISTANCE FROM DEVELO				
			Without Manageme	nt* With I	Management	*
		Extent	Local	Local		
		Duration	Sort Term: Medium	Sort T	erm: Low	
General assessm (Refer to Section	ent of impacts on resource	Intensity	Medium	Low		
	1.3.1)	Probability	Probable	Impro	bable	
		Confidence	High	High		
		Impact Significance	Medium	Low		
Direct impact	None (the potential development doe	es not adversely or positively a	ffect the heritage resourc	e)		
on resource	Peripheral / Indirect (the heritage res	ource or its setting is located in	n proximity to the footprin	t of the potential dev	velopment)	X
	Destruction / Direct (the heritage res	ource or site is physically locat	ed within the footprint of	the potential develop	oment)	
•	ing (Refer to Section 7.3.2) or no heritage impact expected" value applies where	a heritage resource occurs outside the in	npact matrix of the	Medium herita	ge impact	
G. RECOMM	ENDED MANAGEMENT* (R	EFER TO SECTION 7	.3.3)			
Mitigation						
-	commended management					
If fourth and have a fit	s envisaged:					
- Furth	mentation of sites er desktop study to more accurately a ant Permitting from Heritage Resource					
- Docu - Furth - Relev	mentation of sites er desktop study to more accurately a	es Authority.	S			

## - Site HP03

# 1. SITE DESCRIPTION : Historical Period Structures 1.1 General Site Description The remains of the old Ruigedraai homestead, consisting out of an intact farm house and the ruins of a smaller house and hut. 1.2 Site features / artefacts / Other

Site Location			,			eological Impac						ACCESS NO. 1999 AND
Province / Dsitr	rict	Limpor	o Province			Map Number	23	329DA, 232	29CB			
Farm Name			pong 1200LS			Co-ordinates		23°37'17.6		F20°3	6'40.14"	
Site Type		Makoto	polig 1200E0			00-ordinates		20 01 11.0	•		0 40.14	
Surface sites			X			Caves and rock	( shaltars					_
arger open-air	r eitee					Sealed sites (d						
River deposits	1 31103					Other	eposits					
ite Function						outor						
_iving / habitat	tion		X			Kill						
Ceremonial						Burial						
Frading / Barter	r					Art						
Quarry / Mining		q	1			Other						
Site Placemen			I									
Valley floor			Hill top	X		Vlei/swamp			River N	/louth		
Dam			River Bank			Slope			Plains		X	
Other / Comme	ents			[		Ciope			1 101115		~	
/egetation	0110											
Riverine												
orest			Bushveld			Savannah			Mounta	ain forest		
Thornveld	X		Grassland	X		Cultivated	X		Other			
ge Classifica	ation											
itone Age			Early Iron Age			Middle Iron Age	•		Later I	ron Age		
listorical	X		Other									
laterial Cultur	re		·									
lidden			House Remains		X	Stone Walling			Stone	Structures		Х
iranary			Grinding Stone (	L)		Grinding Stone	(U)		Granar	ry Stand		
letal		X	Ceramics (Potter	ry)		Ceramics (Por	ælain)	X	Stone	(non-lithic)		X
Aetal slag			Tuyere			Fauna			Bead (	Glass)		
ead (OES / Sł	hell)		Glass		X	Lithics		X	Smeltir	ng Residue	s	
ther:						Other:						
.3 Site Co	onditio	n										
The site integr	rity has be	een somew	/hat compromised	by the	impact of	natural elements.						
2. SITE EV	ALUA1	TION		-								
			NHRA, Sectio	n 2 [3	1\			Hig	h	Mediur	n   I	ow
								піу				UW
•		•	•			pre-colonial history.				X		
			-			rica's natural or cultu	iral heritage	). 		X		
atural and cult	tural herita	age.	nat will contribute to							X		
atural or cultur	ral places	or objects.				ular class of South A				X		
ultural group.						y a particular comm	unity or			X		
		onstrating a	high degree of cre	ative or	technical a	achievement at a				X		
t has important particular period	α.											
particular period	or special a		with a particular co	mmunity	or cultura	al group for social, cu	Iltural or			Х		

Wayland Iron Ore Mi	ne: Archaeological Im	pact Assessment	Report	
the history of South Africa.				
It has significance through contributing towards the promotio developed as a tourist destination.	n of a local sociocultural ider	tity and can be		x
It has significance relating to the history of slavery in South A	Africa.			X
It has importance to the wider understanding of temporal cha patterns and human occupation.	anges within cultural landscap	pes, settlement	x	
FIELD REGISTER RATING				
National/Grade 1 [should be registered, retained]				
Provincial/Grade 2 [should be registered, retained]				
Local/Grade 3A [should be registered, mitigation not advised	]			
Local/Grade 3B [High significance; mitigation, partly retained	]			
Generally Protected A [High/Medium significance, mitigation]				X
Generally protected B [Medium significance, to be recorded]				
Generally Protected C [Low significance, no further action]				
C. SPHERE OF SIGNIFICANCE		High	Medium	Low
International				
National				
Provincial				
Local			X	
Specific community				
E. GENERAL STATEMENT OF SITE SIGN	IFICANCE			
Low				
Medium				X
High				
-				
•	EVELOPMENT			
F. RATING OF POTENTIAL IMPACT OF D		CIENTIFIC, ARCHITECT	URAL & VISUAL.	
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA				
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA	AL, AESTHETIC, SOCIAL, SO		; 	nagement*
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA	AL, AESTHETIC, SOCIAL, SO	MENT: 1000+ METERS	; 	inagement*
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D	AL, AESTHETIC, SOCIAL, SO DISTANCE FROM DEVELOF	PMENT: 1000+ METERS	nt* With Ma	
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D	AL, AESTHETIC, SOCIAL, SO	PMENT: 1000+ METERS Without Managemen Local	nt* With Ma	
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D	AL, AESTHETIC, SOCIAL, SO DISTANCE FROM DEVELOF Extent Duration	WENT: 1000+ METERS Without Managemen Local Sort Term: Medium	nt* With Ma Local Sort Te	rm: Low
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium	i With Ma Local Sort Te Low	rm: Low
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D	AL, AESTHETIC, SOCIAL, SO DISTANCE FROM DEVELOF Extent Duration Intensity Probability	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable	nt* With Ma Local Sort Te Low Improb	rm: Low
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D General assessment of impacts on resource (Refer to Section 7.3.1)	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium	nt* With Ma Local Sort Ter Low Improbe High Low	rm: Low
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D General assessment of impacts on resource (Refer to Section 7.3.1) Direct impact None (the potential development does	AL, AESTHETIC, SOCIAL, SO DISTANCE FROM DEVELOF Extent Duration Intensity Probability Confidence Impact Significance not adversely or positively af	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium ffect the heritage resource	nt* With Ma Local Sort Te Low Improb High Low e)	rm: Low able
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE E General assessment of impacts on resource (Refer to Section 7.3.1) Direct impact None (the potential development does	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium ifect the heritage resource n proximity to the footprin	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential deve	rm: Low able
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE E General assessment of impacts on resource (Refer to Section 7.3.1) Direct impact None (the potential development does Peripheral / Indirect (the heritage resou Destruction / Direct (the heritage resou Direct impact rating (Refer to Section 7.3.2)	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of t	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able
F. RATING OF POTENTIAL IMPACT OF D NATURE OF IMPACT: HISTORICA APPROXIMATE D General assessment of impacts on resource (Refer to Section 7.3.1) Direct impact on resource Peripheral / Indirect (the heritage resou Destruction / Direct (the heritage resou Direct impact rating (Refer to Section 7.3.2) Note that a default "Little or no heritage impact expected" value applies where a	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of t	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential deve	able
F. RATING OF POTENTIAL IMPACT OF D         NATURE OF IMPACT: HISTORICA         APPROXIMATE D         General assessment of impacts on resource         Direct impact         Direct impact on resource         Peripheral / Indirect (the heritage resource)         Destruction / Direct (the heritage resource)         Direct impact rating (Refer to Section 7.3.2)         Note that a default "Little or no heritage impact expected" value applies where a todevelopment.	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of the	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able
F. RATING OF POTENTIAL IMPACT OF D         NATURE OF IMPACT: HISTORICA         APPROXIMATE D         General assessment of impacts on resource         Operation of the potential development does         Peripheral / Indirect (the heritage resound Destruction / Direct (the heritage resound Destruction / Direct (the heritage resound Direct impact rating (Refer to Section 7.3.2)         Note that a default "Little or no heritage impact expected" value applies where a ladevelopment.         G. RECOMMENDED MANAGEMENT* (RE	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of the	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able
F. RATING OF POTENTIAL IMPACT OF D         NATURE OF IMPACT: HISTORICA         APPROXIMATE D         General assessment of impacts on resource         Original Provide the Potential development does         Peripheral / Indirect (the heritage resound to be provide the potential development does on resource         Direct impact       Peripheral / Indirect (the heritage resound to be provide the providet the provide the provide the providet the providet the provide t	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of the	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able
F. RATING OF POTENTIAL IMPACT OF D         NATURE OF IMPACT: HISTORICA         APPROXIMATE D         General assessment of impacts on resource         General assessment of impacts on resource         General assessment of impacts on resource         Output         Direct impact on resource         None (the potential development does Peripheral / Indirect (the heritage resou Destruction / Direct (the heritage resou         Direct impact rating (Refer to Section 7.3.2)         Note that a default "Little or no heritage impact expected" value applies where a ladevelopment.         G. RECOMMENDED MANAGEMENT* (REE         Mitigation       Comments on recommended management         If further impact is envisaged:       If further impact is envisaged:	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of the	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able
F. RATING OF POTENTIAL IMPACT OF D         NATURE OF IMPACT: HISTORICA         APPROXIMATE E         General assessment of impacts on resource (Refer to Section 7.3.1)         Direct impact on resource (Refer to Section 7.3.1)         Direct impact on resource       None (the potential development does Peripheral / Indirect (the heritage resour Destruction / Direct (the heritage resour Destruction / Direct (the heritage resour Destruction / Direct (the heritage resour Direct impact rating (Refer to Section 7.3.2)         Note that a default "Little or no heritage impact expected" value applies where a ladevelopment.         G. RECOMMENDED MANAGEMENT* (REE Mitigation         Mitigation         Comments on recommended management	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of the	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able
F. RATING OF POTENTIAL IMPACT OF D         NATURE OF IMPACT: HISTORICA         APPROXIMATE E         General assessment of impacts on resource (Refer to Section 7.3.1)         Direct impact on resource (Refer to Section 7.3.1)         Direct impact on resource       None (the potential development does Peripheral / Indirect (the heritage resou Destruction / Direct (the heritage resou Destruction / Direct (the heritage resou Direct impact rating (Refer to Section 7.3.2)         Note that a default "Little or no heritage impact expected" value applies where a ladevelopment.         G. RECOMMENDED MANAGEMENT* (RE         Mitigation         Comments on recommended management         If further impact is envisaged:         -       Documentation of sites	AL, AESTHETIC, SOCIAL,	PMENT: 1000+ METERS Without Managemen Local Sort Term: Medium Medium Probable High Medium fect the heritage resource proximity to the footprint ed within the footprint of the	int* With Ma Local Sort Te Low Improbe High Low e) t of the potential developed	able

- National Heritage Resources Act (Act no. 25 of 1999)
- Local and regional provisions, laws and by-laws

## - Site HP04, Site HP05, Site HP06, Site HP08

## 1. SITE DESCRIPTION : Ruins of brick and mud structures

## 1.1 General Site Description

A large number of poorly preserved brick and mud structures, stone wall enclosures and middens.

Province / Dsitrict	Limr										
		oopo Province			Map Number		2329DA, 23	29CB			
Farm Name	Mak	otopong 1200LS			Co-ordinates		S23°38'22.2 S23°38'24.6 S23°39'00.7 S23°37'27.2	.60" E .71" E		E29°36'04.91" E29°35'43.53" E29°35'04.52" E29°34'46.01"	
Site Type											
Surface sites		X			Caves and rock sh	nelters	6				
Larger open-air sites					Sealed sites (depo						
River deposits					Other						
Site Function											
Living / habitation		X			Kill						
Ceremonial					Burial						
ading / Barter				Art							
Quarry / Mining / Sme	lting				Other						
Site Placement											
Valley floor		Hill top			Vlei/swamp			River M	louth		
Dam		River Bank			Slope	X		Plains		X	
Other / Comments											
Vegetation											
Riverine forest		Bushveld			Savannah			Mounta	in forest		
Thornveld X		Grassland	X		Cultivated	X		Other			
Age Classification											
Stone Age		Early Iron Age			Middle Iron Age			Later Ir	on Age		
Historical X		Other	X – r	recent							
Material Culture											
Midden	X	House Remains		X	Stone Walling			Stone S	Structures		X
Granary		Grinding Stone (I	L)		Grinding Stone (U	)		Granar	y Stand		
Metal	X	Ceramics (Potter	ry)		Ceramics (Porcela	ain)		Stone (	non-lithic)		X
Metal slag		Tuyere			Fauna			Bead (	Glass)		
Bead (OES / Shell)		Glass		X	Lithics		X	Smeltin	g Residue	es	
Other:					Other:						

Wayland Iron Ore Mine	: Archaeological Ir	npact Assessm	ent Repor	t		and the second
2.1 HERITAGE VALUE (NHRA, Section 2 [3	])		High	Medi	um	Low
It has importance to the community or pattern of South Africa's I	history or pre-colonial his	tory.		_		X
It possesses unique, uncommon, rare or endangered aspects of	f South Africa's natural o	r cultural heritage.		X		1000
t has potential to yield information that will contribute to an unden natural and cultural heritage.	erstanding of South Africa	a's				x
It is of importance in demonstrating the principle characteristics natural or cultural places or objects.	of a particular class of So	outh Africa's		x		
It has importance in exhibiting particular aesthetic characteristic cultural group.	s valued by a particular o	community or				X
It has importance in demonstrating a high degree of creative or particular period.	technical achievement at	a				x
It has marked or special association with a particular community spiritual reasons (sense of place).	or cultural group for soc	ial, cultural or		X		
It has strong or special association with the life or work of a pers the history of South Africa.	son, group or organisatio	n of importance in				x
It has significance through contributing towards the promotion or developed as a tourist destination.	f a local sociocultural ide	ntity and can be				x
It has significance relating to the history of slavery in South Afric	ca					X
It has importance to the wider understanding of temporal change patterns and human occupation.	es within cultural landsca	ipes, settlement		x		
FIELD REGISTER RATING						
National/Grade 1 [should be registered, retained]						
Provincial/Grade 2 [should be registered, retained]						
_ocal/Grade 3A [should be registered, mitigation not advised]						
Local/Grade 3B [High significance; mitigation, partly retained]						
Generally Protected A [High/Medium significance, mitigation]						
Generally protected B [Medium significance, to be recorded]						X
Generally Protected C [Low significance, no further action]						
C. SPHERE OF SIGNIFICANCE		High	Me	edium	Lo	w
International						
National						
Provincial						
Local					X	
Specific community						
E. GENERAL STATEMENT OF SITE SIGNIFI						
Low						X
Medium						
High						
F. RATING OF POTENTIAL IMPACT OF DEV						
NATURE OF IMPACT: H						
APPROXIMATE DIST	ANCE FROM DEVELOR					
		Without Manag	ement*	With M	lanagei	ment"
	Extent	Local		Local		
General assessment of impacts on resource (Refer to Section 7.3.1)	Duration	Sort Term: Lov	V	Sort Te	erm: LO	W
		Low		Low	able	
	Probability	Improbable High		Improb High	able	
	Confidence					

	Wayland Iron Ore Mine: Archaeological Impact Assessment Report	in the
	Impact Significance Low Low	attentions recal
Direct impact	None (the potential development does not adversely or positively affect the heritage resource)	
on resource	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)	1
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)	X
•	rating (Refer to Section 7.3.2) ittle or no heritage impact expected" value applies where a heritage resource occurs outside the impact matrix of the Moderate heritage impact	t
G. RECOM	MENDED MANAGEMENT* (REFER TO SECTION 7.3.3)	
Monitoring		
	recommended management	
	ct is envisaged: cumentation of sites	
	e monitoring during development, by an ECO or the heritage specialist.	
H. APPLIC	ABLE LEGISLATION AND LEGAL REQUIREMENTS	
	tional Heritage Resources Act (Act no. 25 of 1999) cal and regional provisions, laws and by-laws	

## - Site HP07

## 1. SITE DESCRIPTION : Historical Period Structures

## 1.1 General Site Description

The recent Roodewal farmstead, farm buildings and sheds as well as a large labourer's hostel compound.

## 1.2 Site features / artefacts / Other

Province / Dsitrict	Limpopo Provi	nce		Map Number	2329	DA, 2329CB		
Farm Name	Makotopong 12	200LS		Co-ordinates		39'22.12" 38'30.86"	E29°35'4 E29°36'1	
Site Type								
Surface sites	X			Caves and rock sh	nelters			
Larger open-air sites				Sealed sites (depo	osits			
River deposits				Other				
Site Function								
Living / habitation	X			Kill				
Ceremonial				Burial				
Trading / Barter				Art				
Quarry / Mining / Sme	Iting			Other				
Site Placement								
Valley floor	Hill to	р		Vlei/swamp		River	Mouth	
Dam	River	Bank		Slope		Plains		X
Other / Comments								
Vegetation								
Riverine forest	Bush	veld		Savannah		Mount	ain forest	
Thornveld X	Grass	sland	X	Cultivated	X	Other		
Age Classification								
Stone Age	Early	Iron Age		Middle Iron Age		Later	Iron Age	
Historical	Other		X - recent					

M* 1.1		Wayland Iron Ore Min							
Midden	X	House Remains	X	Stone Walling	X		one Structures	X	
Granary	X	Grinding Stone (L) Ceramics (Pottery)		Grinding Stone (U) Ceramics (Porcela			anary Stand	X	
Metal	•			Fauna	m) <b>^</b>		one (non-lithic) ad (Glass)	<b>^</b>	and the second second
Metal slag Bead (OES / Shell)		Tuyere	X	Lithics			elting Residue		
Other:		Gidss	<b>^</b>	Other:		311	leilling Residue		
	<b></b>			Other.					
1.3 Site Conditi									
		tructures are currently mai	ntained.						
2. SITE EVALUA	ATION								
2.1 HERITAGE	VALUE	(NHRA, Section 2 [	3])			High	Mediu	m Low	
		ity or pattern of South Africa's		pre-colonial history.				X	
It possesses unique, u heritage.	ncommon,	rare or endangered aspects	of South A	frica's natural or cultural			X		
It has potential to yield natural and cultural he		n that will contribute to an un	derstandin	g of South Africa's				x	
It is of importance in de natural or cultural place		ng the principle characteristic ts.	s of a parti	cular class of South Afric	a's		x		
It has importance in ex cultural group.	hibiting pa	rticular aesthetic characterist	ics valued	by a particular communit	y or			x	
It has importance in de particular period.	monstratin	g a high degree of creative c	r technical	achievement at a			x		
It has marked or specia spiritual reasons (sens		ion with a particular commun	ity or cultur	al group for social, cultur	alor			x	
It has strong or special in the history of South		n with the life or work of a pe	erson, grou	p or organisation of impo	rtance			x	
It has significance thro developed as a tourist	-	outing towards the promotion n.	of a local s	sociocultural identity and	can be			x	
It has significance rela	ting to the	history of slavery in South Af	rica.					X	
It has importance to the patterns and human or		derstanding of temporal chan	iges within	cultural landscapes, sett	lement		X		
FIELD REGIST									
National/Grade 1 [shou	-	-							
Provincial/Grade 2 [sho	-	-							
		ered, mitigation not advised]							
	-	e; mitigation, partly retained]							
		ium significance, mitigation]							
, ,	•	ignificance, to be recorded]						X	
-		ficance, no further action]							
C. SPHERE OF	SIGNIF	ICANCE			High	Me	dium	Low	
International									
National									
Provincial									
Local						X			
Specific community									
E. GENERAL S	ГАТЕМ	ENT OF SITE SIGNII	FICANC	E					
Low									

NA NA	TURE OF IMPACT: HISTORICAL, AES	STHETIC, SOCIAL, SCIENTIFI	C, ARCHITECTURAL, ASSOC	ATIONAL & VISUAL	C. Storage
	APPROXIMATE	E DISTANCE FROM DEVELOR	PMENT: 1000+ METERS		1
			Without Management*	With Management	*
		Extent	Local	Local	
		Duration	Sort Term: Medium	Sort Term: Low	
General assessm (Refer to Section	ent of impacts on resource	Intensity	Medium	Low	
		Probability	Probable	Improbable	
		Confidence	High	High	
		Impact Significance	Medium	Low	
Direct impact	None (the potential development do	es not adversely or positively a	ffect the heritage resource)		
on resource	Peripheral / Indirect (the heritage re-	source or its setting is located i	n proximity to the footprint of th	e potential development)	X
	Destruction / Direct (the heritage res	source or site is physically locat	ted within the footprint of the po	tential development)	
Note that a default "Little development.	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where ENDED MANAGEMENT* (R	-		dium heritage impact	
Monitoring					
Comments on rec	commended management				
	s envisaged: nentation of sites				

#### Site HP09, HP10, HP11 -

1. SITE DESCRIP	tion : I	Ruins of brick and mud	structures		
1.1 General Site	Descrip	tion			
	A nı	mber of poorly preserved brick an	d mud structures, stone wall	enclosures and middens.	
1.2 Site features /	artefac	ets / Other			
Site Location					
Province / Dsitrict	Limpor	o Province	Map Number	2329DA, 2329CB	
Farm Name	Kalkfor	ntein 615LS	Co-ordinates	S23°41'55.79" S23°41'46.39" S23°41'49.02"	E29°27'33.74" E29°28'47.54" E29°29'20.76"
Site Type					
Surface sites		X	Caves and rock shell	ters	
Larger open-air sites			Sealed sites (deposit	S	
River deposits			Other		
Site Function					
Living / habitation		X	Kill		
Ceremonial			Burial		
Trading / Barter			Art		
Quarry / Mining / Smelting	g		Other		
Site Placement					



Valley												
Valley floor			Hill top			Vlei/swamp			River I	Nouth		and the second
Dam			River Bank			Slope	X		Plains		X	
Other / Comme	ents											in the second
Vegetation												
Riverine forest			Bushveld			Savannah			Mount	ain forest		
Thornveld	X		Grassland	X		Cultivated	X		Other			
Age Classifica	ation											
Stone Age			Early Iron Age			Middle Iron Age			Later I	ron Age		
Historical	X		Other	X – r	recent							
Material Cultu	ire											
Midden		X	House Remains		X	Stone Walling			Stone	Structures		X
Granary			Grinding Stone (I	L)		Grinding Stone (U)	)		Grana	ry Stand		
Metal		X	Ceramics (Potter	гу)		Ceramics (Porcela	ain)		Stone	(non-lithic)		X
Metal slag			Tuyere			Fauna			Bead (	(Glass)		
Bead (OES / S	hell)		Glass		X	Lithics		X	Smelti	ng Residues		
Other:						Other:						
1.3 Site Co	onditic	n										
The site integ	rity has l	been sever	ely compromised a	s sites	have been	ruined almost entire	ly.					
2. SITE EV	/ALUA	TION										
2.1 HERIT	AGE V	ALUE (	(NHRA, Sectio	n 2 [3	])			High		Medium	ļ	_ow
It has importar	ice to the	community	or pattern of South	Africa's	history or pr	e-colonial history.					X	(
It possesses u	nique, un	common, ra	are or endangered as	spects of	f South Afrid	ca's natural or cultural	heritage.			X		
It has potential natural and cu	-		that will contribute to	an unde	erstanding c	of South Africa's					X	(
It is of importan natural or cultu		-		teristics	of a particu	lar class of South Afric	ca's			x		
It has importar cultural group.	ice in exh	ibiting partio	cular aesthetic chara	acteristic	s valued by	a particular communit	ty or				X	(
		nonstrating	a high dagras of an	ative or	technical ac	chievement at a						
It has importan particular peric	u.	5	a nigh degree of cre								X	C
particular perio	or specia	l associatior			y or cultural	group for social, cultur	ral or			x	)	( 
particular period It has marked spiritual reason	or specia ns (sense r special a	l association of place).	n with a particular co	ommunity						X	x	
particular period It has marked spiritual reason It has strong of the history of S	or specia ns (sense r special a South Afri nce throu	l association of place). association ca. gh contribut	n with a particular co with the life or work o	ommunity of a pers	son, group c	group for social, cultur	ortance in			X		(
particular period It has marked spiritual reason It has strong of the history of S It has significan developed as a	or specia ns (sense r special a South Afri nce throu a tourist d	l association of place). association ca. gh contribut lestination.	n with a particular co with the life or work o	ommunity of a pers motion o	son, group c	group for social, cultur	ortance in			X	x	(
particular peric It has marked spiritual reason It has strong of the history of S It has significat developed as a It has significat	or specia ns (sense r special a South Afri nce throu a tourist o nce relati nce to the	I association of place). association ca. gh contribut lestination. ng to the his wider unde	n with a particular co with the life or work o ting towards the pror story of slavery in So	ommunity of a pers motion o puth Afric	son, group c of a local soc ca.	group for social, cultur	ortance in can be			x	x	(
particular peric spiritual reason It has strong of the history of S It has significan developed as a It has significan It has importar	or specia r special South Afri nce throu a tourist c nce relati nce to the uman occ	I association e of place). association ca. gh contribut lestination. ng to the his wider unde cupation.	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora	ommunity of a pers motion o puth Afric	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be				x	(
particular peric lt has marked spiritual reasor It has strong of the history of S It has significan developed as a It has significan It has importar patterns and h FIELD RE	or special r special a South Afri nce throu a tourist o nce relati ince to the uman occ	I association of place). association ca. gh contribut destination. ng to the his wider unde cupation.	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora	ommunity of a pers motion o	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be				x	(
particular peric It has marked spiritual reason It has strong of the history of S It has significan developed as a It has significan It has significan It has importar patterns and h <b>FIELD RE</b> National/Grade	or specia ns (sense r special a South Afri nce throu a tourist c nce relati nce to the uman occ GISTE a 1 [shoul	I association e of place). association ca. gh contribut lestination. ng to the his wider unde cupation. <b>ER RATII</b> d be registe	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora	ommunity of a pers motion o	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be				x	(
particular peric spiritual reasor It has strong of the history of S It has significan developed as a It has significan It has significan It has importar patterns and h FIELD RE National/Grade	or special as (sense r special a South Afri nce throu a tourist c nce relati nce to the uman occ GISTE a 1 [shoul de 2 [shoul	I association of place). association ca. Igh contribut lestination. Ing to the his wider unde cupation. <b>ER RATII</b> Id be registe uld be registe	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora NG ered, retained]	ommunity of a pers motion o outh Afric al change	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be				x	(
particular peric spiritual reasor It has strong of the history of S It has significan developed as a It has significan It has significan It has importar patterns and h <b>FIELD RE</b> National/Grade Provincial/Grade 3/	or specia ns (sense r special s South Afri nce throu a tourist c nce relati ice to the uman occ GISTE 2 I [should de 2 [should	I association of place). association ca. gh contribut destination. ng to the his wider unde cupation. <b>ER RATII</b> d be register uld be register	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora NG ered, retained] tered, retained]	ommunity of a pers motion o puth Afric al chang	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be				x	(
particular peric lt has marked of spiritual reasor It has strong of the history of S It has significan developed as a It has significan It has significan It has importar patterns and h <b>FIELD RE</b> National/Grade Drovincial/Grade 3/ Local/Grade 3/	or special as (sense r special a South Afri nce throu a tourist of nce relati ace to the uman occ GISTE a 1 [shoul de 2 [sho A [should B [High si	I association e of place). association ca. gh contribut lestination. ng to the his wider unde cupation. <b>ER RATII</b> Id be register uld be register ignificance;	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora NG ered, retained] stered, retained] ed, mitigation not ad	ommunity of a pers motion o outh Afric al change [vised] ained]	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be				x	(
particular peric spiritual reasor It has marked spiritual reasor It has strong of the history of S It has significan developed as a It has significan It has importar patterns and h <b>FIELD RE</b> National/Grade Provincial/Grade Jocal/Grade 3 Generally Prot	or specia ns (sense r special a South Afri nce throu a tourist o nce relati nce to the uman occ GISTE e 1 [should de 2 [sho A [should B [High si ected A [	I association of place). association ca. gh contribut lestination. Ing to the his wider unde cupation. <b>ER RATII</b> Id be register uld be register ignificance; High/Mediur	n with a particular co with the life or work of ting towards the pror story of slavery in So erstanding of tempora NG ered, retained] etered, retained] ed, mitigation not admitigation, partly retained	ommunity of a pers motion o outh Afric al change vised] ained] ation]	son, group c of a local soc ca.	group for social, cultur or organisation of impo ciocultural identity and	ortance in can be					(

							and the second s
	Wayland Iron Ore Mine	: Archaeological Im		-	•	1	
	OF SIGNIFICANCE		High	Medi	lum	Low	
International							
National							
Provincial							
Local						X	
Specific community							
E. GENERAL	STATEMENT OF SITE SIGNIFI	CANCE					
Low						X	
Medium							
High							
F. RATING O	F POTENTIAL IMPACT OF DEV	ELOPMENT					
	NATURE OF IMPACT: H	ISTORICAL, SOCIAL, IN	TRINSIC, ASSOCIATION	IAL			
	APPROXIMATE DIST	ANCE FROM DEVELOP	MENT: 0 – 500 METERS				
			Without Managemer	it*	With M	lanagement*	*
		Extent	Local		Local		
		Duration	Sort Term: Low		Sort Te	erm: Low	
	ent of impacts on resource	Intensity	Low		Low		
(Refer to Section	7.3.1)	Probability	Improbable		Improt	able	
		Confidence	High		High		
		Impact Significance	Low		Low		
Disections	None (the potential development does not		fect the heritage resource	)			
Direct impact on resource	Peripheral / Indirect (the heritage resource		-		ential dev	elopment)	
	Destruction / Direct (the heritage resource	-					X
	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a herit	age resource occurs outside the in	npact matrix of the	Modera	ate herita	ge impact	
G. RECOMM	ENDED MANAGEMENT* (REFE	R TO SECTION 7.	.3.3)	1			
Monitoring	(		,				
	commended management						
If further impact is	s envisaged:						
	mentation of sites	ou the heuitene enerieli	- 1				
	nonitoring during development, by an ECO	• •					
	BLE LEGISLATION AND LEGAL						
	nal Heritage Resources Act (Act no. 25 of 1						
- Local	and regional provisions, laws and by-laws	•					
_ Cito	BP01						
- Sile							
1. SITE DESC	CRIPTION : Large cemetery.						
1.1 General S	Site Description						
	-	kotopong community cem	ietery.				
1.2 Site featu	ires / artefacts / Other		• 				
Site Location							
Province / Dsitrict	Limpopo Province	Map Numb	er 2329DA. 23	2000			

Farm Name	Makotopong 1200LS	Co-ordinates <b>\$23°38'52.05"</b>	E29°37'03.55"
Site Type			
Surface sites	X	Caves and rock shelters	

Larger open-air sites			Sealed sites (deposits					Section 1	
River deposits				Other					
Site Function								- None-core	
Living / habitatio	n			Kill					7
Ceremonial				Burial		X			
Trading / Barter			Art	Art					
Quarry / Mining / Smelting			Other						
Site Placement									
Valley floor		Hill top		Vlei/swamp		Riv	er Mouth		
Dam		River Bank		Slope		Pla	ins	X	
Other / Commen	ts								
Vegetation									
Riverine		Bushveld		Savannah		Мо	untain forest		
forest Thornveld	X	Grassland	X	Cultivated	X	Oth	ier		
Age Classificati		Graddiana	_ <b>^</b>	Guillivited	~				
Stone Age		Early Iron Age		Middle Iron Age		Lat	er Iron Age		
Historical	X	Other	X – recen	-			0		
Material Culture	; ;		1						
Midden		House Remains		Stone Walling		Sto	ne Structures	X	_
Granary		Grinding Stone (I	_)	Grinding Stone (	U)	Gra	anary Stand		_
Metal		Ceramics (Potter	y)	Ceramics (Porce	lain)	Sto	ne (non-lithic)		_
Metal slag		Tuyere		Fauna		Bea	ad (Glass)		_
Bead (OES / She	ell)	Glass		Lithics		Sm	elting Residues		
Other: X – grave	dressing			Other:					
1.3 Site Cor	ndition								
The site integrit	y is good a	as the burials are of recent	age.						_
2. SITE EVA	LUATIO	ON							
2.1 HERITA	GE VAL	UE (NHRA, Section	n 2 [3])			High	Medium	Low	
It has importance	e to the con	nmunity or pattern of South A	Africa's histor	ry or pre-colonial history.			X	_	_
It possesses unio	que, uncom	mon, rare or endangered as	pects of Sou	uth Africa's natural or cultura	al heritage.	X			
		mation that will contribute to	an understa	nding of South Africa's			X		_
natural and cultu	•	strating the principle charact	eristics of a	particular class of South Af	rica's	1			
natural or cultura	l places or	objects.				X			
It has importance cultural group.	e in exhibiti	ng particular aesthetic chara	cteristics val	ued by a particular commun	nity or			x	
It has importance particular period.	e in demonstrating a high degree of creative or technical achievement at a						X	_	
	special ass	sociation with a particular co	mmunity or c	cultural group for social, cult	ural or	x			
It has strong or s	pecial asso	polace).	of a person, g	group or organisation of imp	portance in			x	
the history of Sou		ontributing towards the pron	notion of a lo	ocal sociocultural identity an	d can be	 			
developed as a t	ourist desti	nation.						X	
-		the history of slavery in So						X	
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.							x		

				_		The second second
	Wayland Iron Ore Min	e: Archaeological Im	pact Assessment	Report		Sec. Ma
FIELD REGI	STER RATING					
National/Grade 1 [s	should be registered, retained]					
Provincial/Grade 2	[should be registered, retained]					CONTRACT 1
Local/Grade 3A [sh	nould be registered, mitigation not advised]					1-6
Local/Grade 3B [Hi	igh significance; mitigation, partly retained]					X
Generally Protecter	d A [High/Medium significance, mitigation]					
Generally protected	d B [Medium significance, to be recorded]					
Generally Protecter	d C [Low significance, no further action]					
C. SPHERE C	OF SIGNIFICANCE		High	Medium	ı Low	
International						
National						
Provincial						
Local			X			
Specific community	/					
E. GENERAL	STATEMENT OF SITE SIGNI					
Low						
Medium						
High						X
•	F POTENTIAL IMPACT OF DE					
NAT				ATIONIAL & CO		
NA	TURE OF IMPACT: HISTORICAL, AESTHE				NTEXTUAL	
NA		ETIC, SOCIAL, SCIENTIFIC STANCE FROM DEVELOP	MENT: 2000+ METERS	3		-4*
NA		STANCE FROM DEVELOP	MENT: 2000+ METERS	nt*	ith Manageme	nt*
NA		STANCE FROM DEVELOP	MENT: 2000+ METERS Without Manageme Local	nt* W	ith Manageme	nt*
		STANCE FROM DEVELOP Extent Duration	MENT: 2000+ METERS Without Manageme Local Sort Term: High	S nt* W Lo So	ith Manageme ocal ort Term: Low	nt*
General assessm	APPROXIMATE DI	STANCE FROM DEVELOP Extent Duration Intensity	MENT: 2000+ METERS Without Manageme Local Sort Term: High High	S Nt* W	ith Manageme ocal ort Term: Low ow	nt*
General assessm	APPROXIMATE DI	STANCE FROM DEVELOP Extent Duration Intensity Probability	MENT: 2000+ METERS Without Manageme Local Sort Term: High High Probable	S nt* W Lu S Lu In	ith Manageme ocal ort Term: Low ow nprobable	nt*
General assessm	APPROXIMATE DI	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence	MENT: 2000+ METERS Without Manageme Local Sort Term: High High Probable High	S nt* W Lo S Lo In In H	ith Manageme ocal ort Term: Low ow nprobable igh	nt*
General assessm	APPROXIMATE DI ent of impacts on resource 7.3.1)	STANCE FROM DEVELOP         Extent         Duration         Intensity         Probability         Confidence         Impact Significance	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High	S nt* W Cu Su Lu In H	ith Manageme ocal ort Term: Low ow nprobable	nt*
General assessme (Refer to Section )	APPROXIMATE Di ent of impacts on resource 7.3.1)	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High High iect the heritage resource	S nt* W S S L L L I N H L C e)	ith Managemen ocal ort Term: Low ow nprobable igh	
General assessme (Refer to Section ) Direct impact	APPROXIMATE DI ent of impacts on resource 7.3.1)	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High High iect the heritage resource	S nt* W S S L L L I N H L C e)	ith Managemen ocal ort Term: Low ow nprobable igh	nt*
General assessm	APPROXIMATE Di ent of impacts on resource 7.3.1) None (the potential development does no Peripheral / Indirect (the heritage resource	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High iect the heritage resourc proximity to the footprin	s nt* W Lu Su Lu Su Lu	ith Managemen ocal ort Term: Low ow nprobable igh ow	
General assessm (Refer to Section ) Direct impact on resource Direct impact ratio	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not Peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource ng (Refer to Section 7.3.2)	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically located	MENT: 2000+ METERS Without Manageme Local Sort Term: High High Probable High High Fiect the heritage resourc proximity to the footprint of the distribution of the distributication of the distribution of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratin Note that a default "Little	APPROXIMATE Di ent of impacts on resource 7.3.1) None (the potential development does no Peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically located	MENT: 2000+ METERS Without Manageme Local Sort Term: High High Probable High High Fiect the heritage resourc proximity to the footprint of the distribution of the distributication of the distribution of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratio Note that a default "Little development.	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not be development) Destruction / Direct (the heritage resource development) Destruction / Direct (the heritage resource ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a heritage impact expected of the section 7.3.2)	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratii Note that a default "Little development. G. RECOMMI	APPROXIMATE Di ent of impacts on resource 7.3.1) None (the potential development does no Peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ' Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource on heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ' Direct impact on resource Direct impact ration Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not Peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance commended management	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docum	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource and (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance commended management s envisaged: mentation of site.	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docum - Exhum	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource and (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance commended management s envisaged: mentation of site. mation and reburial	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docum - Exhun - Full sc	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource and (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance commended management s envisaged: mentation of site.	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate writage resource occurs outside the in ER TO SECTION 7.	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ' Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docum - Exhun - Full so - Possil	APPROXIMATE Different of impacts on resource 7.3.1) None (the potential development does not peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource and (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance commended management s envisaged: mentation of site. mation and reburial pocial consultation.	STANCE FROM DEVELOP	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High Get the heritage resourc proximity to the footprint of the heat matrix of the	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docur - Exhun - Full so - Possii - Releva	APPROXIMATE Di- ent of impacts on resource 7.3.1) None (the potential development does no Peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he ENDED MANAGEMENT* (REF ance commended management s envisaged: mentation of site. mation and reburial pocial consultation. ble conservation management and prote	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance of adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the int ER TO SECTION 7.	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High ict the heritage resourc proximity to the footprint within the footprint of f	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ) Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docur - Exhun - Full sc - Possii - Releva H. APPLICAE	APPROXIMATE Distribution of site. nation and reburial consultation. ble conservation management and prote ant Peripheral / Indirect (the heritage resource development) Destruction / Direct (the heritage resource of the section 7.3.2) or no heritage impact expected" value applies where a heritage impact expected value applies where a heritage impact	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the im ER TO SECTION 7.	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High ict the heritage resourc proximity to the footprint within the footprint of f	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	
General assessme (Refer to Section ' Direct impact on resource Direct impact ratin Note that a default "Little development. G. RECOMMI Mitigation / Avoid Comments on rec If further impact is - Docur - Exhun - Full so - Possii - Releva H. APPLICAE - Human - Remov	APPROXIMATE Discrete Service And Peripheral / Indirect (the heritage resource 7.3.1)           None (the potential development does not peripheral / Indirect (the heritage resource development)           Destruction / Direct (the heritage resource development)           Destruction / Direct (the heritage resource on heritage impact expected" value applies where a heritage impact expected value applies where a heritage impact expected service and the service of t	STANCE FROM DEVELOP Extent Duration Intensity Probability Confidence Impact Significance ot adversely or positively aff ce or its setting is located in the or site is physically locate ritage resource occurs outside the in ER TO SECTION 7. Ction measures. Authority. AL REQUIREMENTS 1). ce (Ordinance no. 7 of 192	MENT: 2000+ METERS Without Manageme Local Sort Term: High High High High iect the heritage resourc proximity to the footprint of f apact matrix of the 3.3)	s nt* W Lu Su Lu Su Lu	fith Managemen ocal ort Term: Low ow hprobable igh ow	

# National Heritage Resources Act (Act no. 25 of 1999) Permit from SAHRA for removal

## - Site BP02

## 1. SITE DESCRIPTION : Informal Burial Place

## 1.1 General Site Description

Large informal cemetery.

1.2 Site fe	atures /	artefacts / Other		Large informal cemetery.					
Site Location									
Province / Dsit	rict	Limpopo Province		Map Number	23291	DA, 2329CB			
Farm Name		Makotopong 1200LS		Co-ordinates	S23°	37'14.37"	E29°36'2	6.97"	
Site Type					1		1		
Surface sites X				Caves and rock	shelters				
Larger open-air sites				Sealed sites (dep	oosits				
River deposits				Other					
Site Function									
Living / habita	tion			Kill					
Ceremonial				Burial		X			
Trading / Barte	r			Art					
Quarry / Mining	g / Smelting	J		Other					
Site Placemer	it								
Valley floor		Hill top		Vlei/swamp		River	Mouth		
Dam		River Bank		Slope		Plain	s )	(	
Other / Comme	ents								
Vegetation									
Riverine		Bushveld		Savannah		Mour	tain forest		
forest							Mountain forest		
Thornveld	X	Grassland	X	Cultivated	Cultivated X		Other		
Age Classifica	ation								
Stone Age		Early Iron Ag		Middle Iron Age			Iron Age		
Historical	X	Other	X - re	cent					
Material Cultu	re						<u>.</u>		
Midden		House Rema		Stone Walling			Stone Structures		
Granary		Grinding Sto			Grinding Stone (U)		Granary Stand		
Metal		Ceramics (P	ottery)		Ceramics (Porcelain)		e (non-lithic)		
Metal slag		Tuyere			Fauna		Bead (Glass) Smelting Residues		
Bead (OES / S		Glass			Lithics				
Other: X – gra		-		Other:					
1.3 Site Co									
		d as the burials are of re	latively rec	nt age.					
2. SITE EV	ALUAT	ION							
2.1 HERIT	AGE VA	LUE (NHRA, Sec	tion 2 [3	)		High	Medium	Low	
				istory or pre-colonial history.			X		
It possesses u	nique, unco	ommon, rare or endangere	ed aspects of	South Africa's natural or cultura	al heritage.	X			
		ormation that will contribu					X		

	Wayland Iron Ore N	line: Archaeological I	mpact Assessm	ent Report			
natural and cultura	Il heritage.						anonco de la
It is of importance natural or cultural	in demonstrating the principle characteri places or objects.	stics of a particular class of S	South Africa's	x			
It has importance i cultural group.	n exhibiting particular aesthetic characte	ristics valued by a particular	community or			x	1
It has importance i particular period.	in demonstrating a high degree of creativ	e or technical achievement a	at a			x	
It has marked or s spiritual reasons (s	pecial association with a particular comm sense of place).	cial, cultural or	x				
It has strong or spotted the history of Sout	ecial association with the life or work of a h Africa.	a person, group or organisatio	on of importance in			x	
It has significance developed as a tou	through contributing towards the promot urist destination.	ion of a local sociocultural id	entity and can be			x	
It has significance	relating to the history of slavery in South	Africa.				X	
It has importance t patterns and huma	to the wider understanding of temporal cl an occupation.	hanges within cultural landsc	apes, settlement		x		
FIELD REGI	STER RATING						
National/Grade 1 [	should be registered, retained]						
	[should be registered, retained]						
	hould be registered, mitigation not advise	ed]					
Local/Grade 3B [H	ligh significance; mitigation, partly retained	ed]				X	
Generally Protecte	ed A [High/Medium significance, mitigatio	n]					
Generally protecte	d B [Medium significance, to be recorded	d]					
Generally Protecte	ed C [Low significance, no further action]						
C. SPHERE	OF SIGNIFICANCE		High	Med	ium	Low	
International							
National							
Provincial							
Local			X				
Specific communit	у						
E. GENERAL	STATEMENT OF SITE SIGI	NIFICANCE					
Low							
Medium							
High						X	
•	F POTENTIAL IMPACT OF I	DEVELOPMENT					
NA	TURE OF IMPACT: HISTORICAL, AES	THETIC, SOCIAL, SCIENTIF	IC, , INTRINSIC, AS	SOCIATIONAL	& CONTEX	TUAL	
		DISTANCE FROM DEVELO					
			Without Manag	ement*	With Ma	anagement*	
		Extent	Local		Local		
		Duration	Sort Term: Hig	h	Sort Te	rm: Low	
General assessm (Refer to Section	ent of impacts on resource	Intensity	High		Low		
		Probability	Probable		Improb	able	
		Confidence	High		High		
		Impact Significance	High		Low		
	None (the potential development doe	s not adversely or positively	affect the heritage res	ource)			
Direct impact on resource	Peripheral / Indirect (the heritage reso development)	-					X
	Destruction / Direct (the heritage reso	ource or site is physically loca	ated within the footprin	nt of the potenti	al developn	nent)	

Direct impact rating (Refer to Section 7.3.2)	
Note that a default "Little or no heritage impact expected" value applies where a heritage resource occurs outside the impact matrix of the	
development.	

## G. RECOMMENDED MANAGEMENT\* (REFER TO SECTION 7.3.3)

#### Avoidance / Enhancement

#### Comments on recommended management

#### If further impact is envisaged:

- Documentation of site.
- Full social consultation.
- Possible conservation management and protection measures.
- Relevant Permitting from Heritage Resources Authority.

#### H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- Human Tissue Act (Act 65 of 1983 as amended).
- Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925)
- Ordinance on Excavations (Ordinance no. 12 of 1980)
- Local and regional provisions, laws and by-laws
- National Heritage Resources Act (Act no. 25 of 1999)
- Permit from SAHRA for removal

#### - Site BP03

## 1. SITE DESCRIPTION : Ruigedraai Family Cemetery

#### **1.1 General Site Description**

Ruigedraai family cemetery.

## 1.2 Site features / artefacts / Other

Site Location											
Province / Dsite	rict	Limpop	o Province			Map Number		2329DA, 2329	СВ		
Farm Name		Makoto	pong 1200LS			Co-ordinates	tes \$23°37'19.82		•	E29°3	6'36.01"
Site Type										<u> </u>	
Surface sites			X			Caves and rock s	helte	rs			
Larger open-ai	r sites					Sealed sites (dep	osits				
River deposits						Other					
Site Function											
Living / habitat	tion					Kill					
Ceremonial						Burial			X		
Trading / Barte	r					Art					
Quarry / Mining	g / Smeltin	g				Other					
Site Placemer	nt										
Valley floor			Hill top			Vlei/swamp			River Mo	outh	
Dam			River Bank			Slope			Plains		X
Other / Comme	ents										
Vegetation											
Riverine forest			Bushveld			Savannah			Mountair	n forest	
Thornveld	X		Grassland	X		Cultivated	X		Other		
Age Classifica	ation										
Stone Age			Early Iron Age			Middle Iron Age			Later Iro	n Age	
Historical	X		Other	X - rec	cent						
Material Cultu	re										
Midden			House Remains			Stone Walling			Stone St	ructures	

AGES (PTY) LTD

High heritage impact



Granary	Grinding Stone (L)	Grinding Stone (U)		Granary Stand	
Metal	Ceramics (Pottery)	Ceramics (Porcelain)		Stone (non-lithic)	
Metal slag	Tuyere	Fauna		Bead (Glass)	in the
Bead (OES / Shell)	Glass	Lithics		Smelting Residues	3
Other: X- grave dressing		Other:			
1.3 Site Condition					
The site integrity is good a	is the burials are of recent age.				
2. SITE EVALUATIO	DN				
2.1 HERITAGE VAL	UE (NHRA, Section 2 [3])		High	Medium	ו Low
It has importance to the com	munity or pattern of South Africa's histo	ry or pre-colonial history.		X	
It possesses unique, uncom	mon, rare or endangered aspects of Sou	uth Africa's natural or cultural heritage	. X		
It has potential to yield inforr natural and cultural heritage	nation that will contribute to an understa	inding of South Africa's		x	
It is of importance in demons natural or cultural places or	strating the principle characteristics of a objects.	particular class of South Africa's	x		
cultural group.	ng particular aesthetic characteristics val				x
particular period.	trating a high degree of creative or tech				x
spiritual reasons (sense of p			X		
It has strong or special asso the history of South Africa.	ciation with the life or work of a person,	group or organisation of importance i	1		X
It has significance through c developed as a tourist destir	ontributing towards the promotion of a lo nation.	ocal sociocultural identity and can be			x
It has significance relating to	the history of slavery in South Africa.				X
It has importance to the wide patterns and human occupa	er understanding of temporal changes w tion.	ithin cultural landscapes, settlement		X	
FIELD REGISTER	RATING				
National/Grade 1 [should be	registered, retained]				
Provincial/Grade 2 [should b	• •				
Local/Grade 3A [should be r	egistered, mitigation not advised]				
	cance; mitigation, partly retained]				X
	/Medium significance, mitigation]				
	um significance, to be recorded]				
	significance, no further action]				
C. SPHERE OF SIG	NIFICANCE	High		Medium	Low
International					
National					
Provincial					
Local		X			
Specific community					
E. GENERAL STAT	EMENT OF SITE SIGNIFICA	NCE			
Low					
Medium					
High					X
	ENTIAL IMPACT OF DEVEL				

	Wayland Iron Ore Mi	ne: Archaeological In	nact Accessment I	Penort	
	*		•	•	
NA	TURE OF IMPACT: HISTORICAL, AESTH			ATIONAL & CONTEXTUAL	
	APPROXIMATE	DISTANCE FROM DEVELO			
			Without Managemen		ent*
		Extent	Local	Local	
		Duration	Sort Term: High	Sort Term: Low	
(Refer to Section	ent of impacts on resource 7.3.1)	Intensity	High	Low	
(	,	Probability	Probable	Improbable	
		Confidence	High	High	
		Impact Significance	High	Low	
	None (the potential development does	not adversely or positively at	fect the heritage resource	a)	
Direct impact on resource	Peripheral / Indirect (the heritage resoldevelopment)	rce or its setting is located ir	n proximity to the footprint	of the potential	X
	Destruction / Direct (the heritage resou	rce or site is physically locate	ed within the footprint of th	ne potential development)	
	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a	neritage resource occurs outside the in	npact matrix of the	High heritage impact	
G. RECOMM	ENDED MANAGEMENT* (RE	FER TO SECTION 7	.3.3)		
Avoidance / Enha	incement				
Comments on ree	commended management				
If further impact i					
	mentation of site.				
	ocial consultation. ble conservation management and prot	ection measures			
	ant Permitting from Heritage Resources				
H. APPLICA	BLE LEGISLATION AND LEG		S		
- Remo - Ordin - Local	In Tissue Act (Act 65 of 1983 as amende val of Graves and Dead Bodies Ordinar ance on Excavations (Ordinance no. 12 and regional provisions, laws and by-la nal Heritage Resources Act (Act no. 25	nce (Ordinance no. 7 of 192 of 1980) aws	25)		

Permit from SAHRA for removal -

#### Site BP04, BP05, BP07, BP08, BP09 -

## 1. SITE DESCRIPTION : Informal Burial Places

**1.1 General Site Description** 

Informal cemeteries, graves are unmarked but demarcated with stone heaps.

### 1.2 Site features / artefacts / Other

Site Location				
Province / Dsitrict	Limpopo Province	Map Number	2329DA, 2329CB	
Farm Name	Makotopong 1200LS	Co-ordinates	\$23°38'34.89" \$23°38'30.00" \$23°38'25.32" \$23°38'28.55" \$23°39'12.45"	E29°36'15.25" E29°36'06.71" E29°35'39.45" E29°35'04.91" E29°35'19.40"
Site Type				
Surface sites	X	Caves and rock sl	nelters	
Larger open-air sites		Sealed sites (dep	osits	
River deposits		Other		
Site Function				
Living / habitation		Kill		



Ceremonial				Burial		X			and the second sec
Trading / Barte	r			Art					
Quarry / Mining	g / Smelting			Other					- Start
Site Placemen	ıt								
Valley floor		Hill top		Vlei/swamp		Rive	r Mouth		
Dam		River Bank		Slope		Plair	าร	X	
Other / Comme	ents		1		1			1	
Vegetation									
Riverine forest		Bushveld		Savannah		Mou	ntain forest		
Thornveld	X	Grassland	X	Cultivated	X	Othe	er		
Age Classifica	tion		1	1	1	1			
Stone Age		Early Iron Age		Middle Iron Age		Late	r Iron Age		
Historical	X	Other	X - recent						
Material Cultu	re	1	1						
Midden		House Remains		Stone Walling		Ston	e Structures		
Granary		Grinding Stone (	L)	Grinding Stone (L	J)	Grar	nary Stand		
Metal		Ceramics (Potte		Ceramics (Porcel			ie (non-lithic)		
Metal slag		Tuyere		Fauna	,		d (Glass)		
Bead (OES / S	hell)	Glass		Lithics			Iting Residue	es	
Other: X – grav	,			Other:			0		
1.3 Site Co	ondition								1
The site integ									
-	-								
	ALUATION								
2.1 HERIT	AGE VALU	E (NHRA, Sectio	n 2 [3])			High	Mediu	m L	.ow
It has importan	ce to the comm	unity or pattern of South	Africa's history or	r pre-colonial history.			X		
It possesses ur	nique, uncommo	on, rare or endangered as	spects of South A	frica's natural or cultura	l heritage.	X			
It has potential natural and cul	-	tion that will contribute to	an understandin	g of South Africa's			X		
	nce in demonstra ral places or obj	ating the principle charac ects.	teristics of a parti	icular class of South Afri	ca's	x			
It has importan cultural group.	ce in exhibiting	particular aesthetic chara	cteristics valued	by a particular commun	ity or			x	
• •		ting a high degree of cre	ative or technical	achievement at a		-		x	
It has marked o	or special associ	iation with a particular co	mmunity or cultu	ral group for social, cultu	ural or	X			
•	is (sense of plac	,	-f		automon in				
the history of S	outh Africa.	tion with the life or work						X	
-	nce through cont tourist destinat	tributing towards the pror ion.	notion of a local s	sociocultural identity and	l can be			x	
It has significar	nce relating to th	e history of slavery in Sc	uth Africa.					X	
	ce to the wider u uman occupation	understanding of tempora	al changes within	cultural landscapes, set	ttlement		x		
FIELD RE	GISTER RA	ATING							
		gistered, retained]							
		registered, retained]							
	-	istered, mitigation not ad	vised]						

								1
	Wayland Iron Ore Min	e: Archaeological Im	pact Assessment	Report				
Local/Grade 3B [H	ligh significance; mitigation, partly retained]						x	
Generally Protecte	ed A [High/Medium significance, mitigation]							
Generally protecte	d B [Medium significance, to be recorded]						- Files	
Generally Protecte	ed C [Low significance, no further action]						17	
C. SPHERE (	OF SIGNIFICANCE		High	Med	ium	Low		
International								
National								
Provincial								
Local			X					
Specific communit								
E. GENERAL	. STATEMENT OF SITE SIGNI	ICANCE						
Low								
Medium								
High							Х	
F. RATING O	F POTENTIAL IMPACT OF DE	VELOPMENT						
NA	TURE OF IMPACT: HISTORICAL, AESTHE	ETIC, SOCIAL, SCIENTIFIC	, , INTRINSIC, ASSOCI	ATIONAL 8	& CONTEX	TUAL		
	APPROXIMATE DI	STANCE FROM DEVELOP	MENT: 0-100 METERS					
			Without Managemen	nt*	With Ma	anageme	ent*	
		Extent	Local		Local			
0		Duration	Sort Term: High		Sort Te	rm: Low		
(Refer to Section	ent of impacts on resource 7.3.1)	Intensity	High		Low			
		Probability	Probable		Improb	able		
		Confidence	High		High			
		Impact Significance	High		Low			
Direct impact	None (the potential development does no		•	,				
on resource	Peripheral / Indirect (the heritage resourd development)	ce or its setting is located in	proximity to the footprint	t of the pot	ential			
	Destruction / Direct (the heritage resource	e or site is physically locate	d within the footprint of t	he potentia	al developn	nent)	X	
•	ing (Refer to Section 7.3.2) or no heritage impact expected" value applies where a he	ritage resource occurs outside the im	apact matrix of the	Very hi	gh heritag	e impact	t	
G. RECOMM	ENDED MANAGEMENT* (REF	ER TO SECTION 7.	3.3)					
Avoidance / Enha	ancement							
Comments on red	commended management							
	mentation of site.							
	ocial consultation. ible conservation management and prote	ction measures.						
	ant Permitting from Heritage Resources							
H. APPLICA	BLE LEGISLATION AND LEGA	L REQUIREMENTS	6					
- Remo - Ordin - Local - Nation	In Tissue Act (Act 65 of 1983 as amended yeal of Graves and Dead Bodies Ordinance ance on Excavations (Ordinance no. 12 of and regional provisions, laws and by-law nal Heritage Resources Act (Act no. 25 of it from SAHRA for removal	e (Ordinance no. 7 of 192 f 1980) vs	5)					

#### - Site BP06

#### 1. SITE DESCRIPTION : Informal Burial Place **1.1 General Site Description** Informal cemetery containing 3 graves marked with cement headstones and grave dressing. 1.2 Site features / artefacts / Other Site Location Province / Dsitrict Limpopo Province Map Number 2329DA, 2329CB Farm Name Kalkfontein 615LS S23°38'24.38" E29°35'58.69 Co-ordinates Site Type X Surface sites Caves and rock shelters Larger open-air sites Sealed sites (deposits River deposits Other Site Function Living / habitation Kill Ceremonial Burial Х Trading / Barter Art Quarry / Mining / Smelting Other Site Placement Valley floor Hill top Vlei/swamp **River Mouth** Dam **River Bank** Plains Х Slope Other / Comments Vegetation Riverine Bushveld Savannah Mountain forest forest Thornveld Х Grassland Х Cultivated Х Other Age Classification Stone Age Middle Iron Age Later Iron Age Early Iron Age Historical Х Other X - recent Material Culture Midden House Remains Stone Walling Stone Structures Grinding Stone (L) Grinding Stone (U) Granary Stand Granary Metal Ceramics (Pottery) Ceramics (Porcelain) Stone (non-lithic) Metal slag Tuyere Fauna Bead (Glass) Bead (OES / Shell) Glass Lithics Smelting Residues Other: X - grave dressing Other: **1.3 Site Condition** The site integrity is fair as graves have been maintained. 2. SITE EVALUATION 2.1 HERITAGE VALUE (NHRA, Section 2 [3]) Low High Medium It has importance to the community or pattern of South Africa's history or pre-colonial history. Χ It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage. Х It has potential to yield information that will contribute to an understanding of South Africa's Х natural and cultural heritage. It is of importance in demonstrating the principle characteristics of a particular class of South Africa's Х natural or cultural places or objects.

									- Contraction
	Wayland Iron Ore Min	e: Archaeological Im	pact Assessme	ent R	Report				is de
t has importance i cultural group.	n exhibiting particular aesthetic characterist	ics valued by a particular co	mmunity or				)	(	
lt has importance i particular period.	in demonstrating a high degree of creative o	r technical achievement at a	l				)	(	1
It has marked or s spiritual reasons (s	pecial association with a particular communi sense of place).	ty or cultural group for socia	l, cultural or	x					
It has strong or spo the history of Sout	ecial association with the life or work of a pe h Africa.	rson, group or organisation	of importance in				)	(	
It has significance developed as a tou	through contributing towards the promotion urist destination.	of a local sociocultural ident	ity and can be				)	(	
t has significance	relating to the history of slavery in South Afr	ica.					)	(	
It has importance t patterns and huma	to the wider understanding of temporal chan an occupation.	ges within cultural landscap	es, settlement			X			
FIELD REGI	STER RATING								
National/Grade 1 [	should be registered, retained]								
Provincial/Grade 2	[should be registered, retained]								
Local/Grade 3A [sl	hould be registered, mitigation not advised]								
Local/Grade 3B [H	ligh significance; mitigation, partly retained]							X	
Generally Protecte	ed A [High/Medium significance, mitigation]								
Generally protecte	d B [Medium significance, to be recorded]								
Generally Protecte	ed C [Low significance, no further action]								
C. SPHERE (	OF SIGNIFICANCE		High		Medi	um	Low		
nternational									
ational									
rovincial									
ocal			X						
pecific communit	у								
. GENERAL	. STATEMENT OF SITE SIGNI								
-0W									
/ledium									
High								X	
-	F POTENTIAL IMPACT OF DE								
	TURE OF IMPACT: HISTORICAL, AESTHE					CONTEX	TUAL		
NA		STANCE FROM DEVELOP				CONTEX	TUAL		
			Without Manag		<b>!</b> *	With Me	anageme	nt*	
		Extent	Local	enen	•	Local	anageme		
		Duration	Sort Term: High	h			rm: Low		
	ent of impacts on resource	Intensity	High	•		Low			
Refer to Section	7.3.1)	Probability	Probable			Improb	able		
		Confidence	High			High			
		Impact Significance	High			Low			
	None (the potential development does no		-	ource					
Direct impact on resource	Peripheral / Indirect (the heritage resource development)		<sup>c</sup>	,		ntial			
	Destruction / Direct (the heritage resource	e or site is physically locate	d within the footprin	nt of th	e potentia	developm	nent)		x
•	ing (Refer to Section 7.3.2)								
Note that a default "Little development.	or no heritage impact expected" value applies where a he	ritage resource occurs outside the im	pact matrix of the		very hiç	jh heritag	e impact		

## G. RECOMMENDED MANAGEMENT\* (REFER TO SECTION 7.3.3)

#### Avoidance / Enhancement

#### Comments on recommended management

#### If further impact is envisaged:

- Documentation of site.
- Full social consultation.
- Possible conservation management and protection measures.
- Relevant Permitting from Heritage Resources Authority.

## H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- Human Tissue Act (Act 65 of 1983 as amended).
- Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925)
- Ordinance on Excavations (Ordinance no. 12 of 1980)
- Local and regional provisions, laws and by-laws
   National Heritage Resources Act (Act no. 25 of 1999)
- National Heritage Resources Act (Act no
   Permit from SAHRA for removal
- Fermit from SARKA for fermo

### - Site BP10, BP11

### **1. SITE DESCRIPTION : Informal Burial Place**

## **1.1 General Site Description**

Informal burials, graves demarcated with marked cement grave dressing and stone heaps.

## 1.2 Site features / artefacts / Other

Site Location										
Province / Dsiti	rict	Limpop	o Province		Map Number	_	2329DA, 2329	СВ		
Farm Name		Kalkfon	tein 615LS		Co-ordinates		S23°41'47.34' S23°41'46.95'			28'41.39" 8'41.46"
Site Type										
Surface sites			X		Caves and rock sh	nelte	rs			
Larger open-ai	sites				Sealed sites (depo	osits				
River deposits					Other					
Site Function										
Living / habitat	ion				Kill					
Ceremonial					Burial			X		
Trading / Barte	r				Art					
Quarry / Mining	/ Smelting	9			Other					
Site Placemen	t									
Valley floor			Hill top		Vlei/swamp			River Mo	outh	
Dam			River Bank		Slope			Plains		X
Other / Comme	ents									
Vegetation										
Riverine forest			Bushveld		Savannah			Mountair	n forest	
Thornveld	X		Grassland	X	Cultivated	X		Other		
Age Classifica	ition									
Stone Age			Early Iron Age		Middle Iron Age			Later Iro	n Age	
Historical	X		Other	X - recent						
Material Cultu	re									
Midden			House Remains		Stone Walling			Stone St	ructures	
Granary			Grinding Stone (	L)	Grinding Stone (U	)		Granary	Stand	

letal	Ceramics (Pottery)	Ceramics (Porcelain)	Sto	ne (non-lithic)	the start
letal slag	Tuyere	Fauna		ad (Glass)	
ead (OES / Shell)	Glass	Lithics	Sm	elting Residues	
other: X - grave dressing		Other:			
.3 Site Condition					
he site integrity fair but t	he concrete grave dressing have colla	apsed in places.			
. SITE EVALUATIO					
	UE (NHRA, Section 2 [3])		High	Medium	Low
		nuer neo colonial history	riigii		LOW
•	nmunity or pattern of South Africa's histo		X	X	
	nmon, rare or endangered aspects of Sou mation that will contribute to an understa	-	<b>^</b>		
atural and cultural heritage	9.	-		X	
is of importance in demon atural or cultural places or	strating the principle characteristics of a objects.	particular class of South Africa's	x		
has importance in exhibiti ultural group.	ng particular aesthetic characteristics val	ued by a particular community or			X
has importance in demons articular period.	strating a high degree of creative or tech	nical achievement at a			X
has marked or special ass piritual reasons (sense of p	sociation with a particular community or o place).	cultural group for social, cultural or	X		
has strong or special asso ne history of South Africa.	ociation with the life or work of a person,	group or organisation of importance in			x
has significance through c eveloped as a tourist desti	contributing towards the promotion of a lo nation.	ocal sociocultural identity and can be			x
has significance relating to	o the history of slavery in South Africa.				X
has importance to the wid atterns and human occupa	er understanding of temporal changes w ation.	ithin cultural landscapes, settlement		X	
FIELD REGISTER	RATING				1
lational/Grade 1 [should be					
rovincial/Grade 2 [should b					
ocal/Grade 3A [should be i	registered, mitigation not advised]				
ocal/Grade 3B [High signifi	icance; mitigation, partly retained]				X
enerally Protected A [High	n/Medium significance, mitigation]				
enerally protected B [Med	ium significance, to be recorded]				
enerally Protected C [Low	significance, no further action]				
. SPHERE OF SIG		High	Me	dium Lo	ow
iternational					
ational					
rovincial					
ocal		X			
pecific community		1			
-	EMENT OF SITE SIGNIFICA				
w					
edium					



		DISTANCE FROM DEVELO			
			Without Management*	With Managemen	it*
		Extent	Local	Local	1000
		Duration	Sort Term: High	Sort Term: Low	
General assessn (Refer to Section	nent of impacts on resource	Intensity	High	Low	
		Probability	Probable	Improbable	
		Confidence	High	High	
		Impact Significance	High	Low	
	None (the potential development does	s not adversely or positively af	fect the heritage resource)		
Direct impact on resource	Peripheral / Indirect (the heritage reso development)	ource or its setting is located in	proximity to the footprint of the	potential	X
	Destruction / Direct (the heritage reso	urce or site is physically locate	ed within the footprint of the pote	ntial development)	
Note that a default "Little development.	ing (Refer to Section 7.3.2) a or no heritage impact expected" value applies where a	a heritage resource occurs outside the in	npact matrix of the High	n heritage impact	
Note that a default "Little development. G. RECOMM	ing (Refer to Section 7.3.2) e or no heritage impact expected" value applies where a	a heritage resource occurs outside the in	npact matrix of the High	, ,	
Note that a default "Little development. G. RECOMM Avoidance / Enh	ing (Refer to Section 7.3.2) e or no heritage impact expected" value applies where a	a heritage resource occurs outside the in	npact matrix of the High	, ,	
Note that a default "Little development. G. RECOMM Avoidance / Enh: Comments on re	ing (Refer to Section 7.3.2) a or no heritage impact expected' value applies where a IENDED MANAGEMENT* (RE ancement commended management	a heritage resource occurs outside the in	npact matrix of the High	, ,	
Note that a default "Little development.	ing (Refer to Section 7.3.2) a or no heritage impact expected' value applies where a IENDED MANAGEMENT* (RE ancement commended management is envisaged: imentation of site.	a heritage resource occurs outside the in	npact matrix of the High	, ,	
Note that a default "Little development. Avoidance / Enh. Comments on re If further impact - Docu - Full s	ing (Refer to Section 7.3.2) a or no heritage impact expected' value applies where a IENDED MANAGEMENT* (RE ancement commended management is envisaged: imentation of site. social consultation.	a heritage resource occurs outside the in	npact matrix of the High	, ,	
Note that a default "Little development.	ing (Refer to Section 7.3.2) a or no heritage impact expected' value applies where a IENDED MANAGEMENT* (RE ancement commended management is envisaged: imentation of site.	a heritage resource occurs outside the in EFER TO SECTION 7	npact matrix of the High	, ,	
Note that a default "Little development.	ing (Refer to Section 7.3.2) a or no heritage impact expected' value applies where a IENDED MANAGEMENT* (RE ancement commended management is envisaged: mentation of site. social consultation. ible conservation management and pro-	a heritage resource occurs outside the in EFER TO SECTION 7 Direction measures. es Authority.	npact matrix of the High	, ,	

#### Site BP12 -

## 1. SITE DESCRIPTION : Informal Burial Place

1.1 General Site Description

Single grave, marked with inscribed headstone and grave dressing.

## 1.2 Site features / artefacts / Other

Site Location					
Province / Dsitrict	Limpop	Province	Map Number	2329DA, 2329	СВ
Farm Name	Kalkfon	ein 615LS	Co-ordinates	S23°41'57.69"	E29°29'24.32"
Site Type					
Surface sites		Х	Caves and rock sh	elters	
Larger open-air sites			Sealed sites (depo	osits	
River deposits			Other		
Site Function					
Living / habitation			Kill		
Ceremonial			Burial		X
Trading / Barter			Art		
Quarry / Mining / Smelting			Other		
Site Placement					



Valley floor		Hill top		Vlei/swamp			River Mouth		Recorder The second se
Dam		River Bank		Slope			Plains	X	
Other / Comme	ents				1				1000
Vegetation									
Riverine forest		Bushveld		Savannah			Mountain fores	st	
Thornveld	X	Grassland	X	Cultivated	X		Other	İ	
Age Classifica	ation								
Stone Age		Early Iron Age		Middle Iron Age			Later Iron Age	•	
Historical	X	Other							
Material Cultu	re								
Midden		House Remains		Stone Walling			Stone Structur	res	
Granary		Grinding Stone (	(L)	Grinding Stone (U	J)		Granary Stand	ł	
Metal		Ceramics (Potte	ry)	Ceramics (Porcela	ain)		Stone (non-lith	nic)	
Metal slag		Tuyere		Fauna			Bead (Glass)		
Bead (OES / SI	hell)	Glass		Lithics			Smelting Resi	dues	
Other: <b>X – grav</b>	ve dressing			Other:					
1.3 Site Co	ondition								
The site integr	rity is fair.								
2. SITE EV	ALUATION								
		(NHRA, Sectio	on 2 [3])			High	Med	ium	Low
		ity or pattern of South		re-colonial history.			X		
		• •	5 1	,					
	ique, uncommon,	rare or endangered a	spects of South Afri	ca's natural or cultura	l heritage.	X			
•	to yield informatio	n that will contribute to	•		I heritage.	X	X		
It has potential natural and cult It is of importan	to yield informatio tural heritage.	n that will contribute to	o an understanding o	of South Africa's	-	X X	X		
It has potential natural and cult It is of importan natural or cultur	to yield informatio tural heritage. nce in demonstratir ral places or objec	n that will contribute to	cteristics of a particu	of South Africa's Ilar class of South Afri	ca's				x
It has potential natural and cult It is of importan natural or cultur It has importan cultural group. It has importan	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin	n that will contribute to ng the principle charac	o an understanding o cteristics of a particu acteristics valued by	of South Africa's Ilar class of South Afri a particular communi	ca's				X X
It has potential natural and culi It is of importan natural or cultur It has importan cultural group. It has importan particular perior It has marked c	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d.	n that will contribute to ng the principle charac tts. rticular aesthetic chara ng a high degree of cre ion with a particular co	teristics of a particulateristics valued by acteristics valued by acteristics or technical acteristics of a technical acteristics or technical act	of South Africa's lar class of South Afri a particular communi chievement at a	ca's				
It has potential natural and cult It is of importan natural or cultur It has importan cultural group. It has importan particular perior It has marked c spiritual reason It has strong or	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special association r special association	n that will contribute to ng the principle charac tts. rticular aesthetic chara ng a high degree of cre ion with a particular co	teristics of a particulateristics of a particulateristics valued by acteristics or technical acteristive or technical acteristive or technical acteristive or cultural	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu	ca's ity or ıral or	X			
It has potential natural and cull It is of importan natural or cultur It has importan cultural group. It has importan particular perior It has marked c spiritual reason It has strong or the history of S It has significar	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special associations (sense of place) special associations outh Africa.	n that will contribute to ng the principle charac its. rticular aesthetic chara ng a high degree of cre ion with a particular co bon with the life or work	o an understanding o cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group o	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp	ca's ity or iral or ortance in	X			X
It has potential natural and cult it is of importan natural or cultur it has importan cultural group. It has importan particular perior It has marked c spiritual reason It has strong or the history of S It has significar developed as a	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special associatio south associatio outh Africa. Ince through contrib a tourist destination	n that will contribute to ng the principle charac its. rticular aesthetic chara ng a high degree of cre ion with a particular co bon with the life or work	o an understanding o cteristics of a particu acteristics valued by eative or technical ac pommunity or cultural of a person, group o motion of a local soo	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp	ca's ity or iral or ortance in	X			X X
It has potential natural and cult it is of importan natural or cultur it has importan cultural group. It has importan particular period it has marked c spiritual reason it has strong or the history of S it has significar developed as a it has importan	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special association south association outh Africa. The through contribu- a tourist destination nee relating to the l	n that will contribute to ng the principle charac its. rticular aesthetic chara ng a high degree of cre ion with a particular co n with the life or work puting towards the pron n.	o an understanding o cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group o motion of a local soo puth Africa.	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X
t has potential natural and cult t is of importan natural or cultur t has importan- cultural group. t has importan- particular perior t has marked c spiritual reason t has strong or the history of S t has significan developed as a t has significan t has mportan- patterns and hu	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special associatio south associatio outh Africa. Ince through contrib a tourist destination nce relating to the l	n that will contribute to ng the principle charac its. rticular aesthetic chara ing a high degree of cre ion with a particular co ion with the life or work puting towards the pro- n. history of slavery in Sc derstanding of tempore	o an understanding o cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group o motion of a local soo puth Africa.	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X
t has potential natural and cult t is of importan natural or cultur t has importan cultural group. t has importan particular perior t has marked c spiritual reason t has strong or he history of S t has significan developed as a t has significan t has significan t has significan t has significan t has significan t has significan	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special associatio south Africa. Ince through contribut a tourist destination nee relating to the ce to the wider und uman occupation.	n that will contribute to ng the principle charac ets. rticular aesthetic chara ing a high degree of creation an with a particular co box with the life or work putting towards the promo- history of slavery in So derstanding of tempora	o an understanding o cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group o motion of a local soo puth Africa.	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X
It has potential natural and cult it is of importan natural or cultur it has importan- cultural group. It has importan- particular perior It has marked c spiritual reason It has strong or the history of S It has significar developed as a It has significar developed as a It has significar developed as a It has mportan- patterns and hu FIELD RE National/Grade	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special associations (sense of place) special associations outh Africa. Ince through contribute a tourist destination ince relating to the line ce to the wider undo uman occupation. <b>GISTER RAT</b>	n that will contribute to ng the principle charac its. rticular aesthetic chara ing a high degree of creation an with a particular co in with the life or work puting towards the pro- h. history of slavery in Sc derstanding of tempora <b>FING</b> stered, retained]	o an understanding o cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group o motion of a local soo puth Africa.	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X
t has potential hatural and cult t is of importan hatural or cultur t has importanc cultural group. t has importanc barticular perior t has marked c spiritual reason t has strong or the history of S t has significan developed as a t has significan t has importanc batterns and hu <b>FIELD RE</b> National/Grade Provincial/Grade	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa- ce in demonstratin d. or special associatio outh Africa. Ince through contribu- to tourist destination ince relating to the ce to the wider unduran occupation. <b>GISTER RAT</b> a 1 [should be registed de 2 [should be registed	n that will contribute to ng the principle charac its. rticular aesthetic chara ing a high degree of creation an with a particular co in with the life or work puting towards the pro- h. history of slavery in Sc derstanding of tempora <b>FING</b> stered, retained]	o an understanding o cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group o motion of a local soo puth Africa. al changes within cu	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X
t has potential natural and cult t is of importan natural or cultur t has importan cultural group. It has importan particular perior t has marked c spiritual reason t has strong or the history of S t has significan developed as a t has significan t has signific	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special association south Africa. Ince through contribut a tourist destination ince relating to the line ce to the wider unduran occupation. <b>GISTER RAT</b> a 1 [should be registed a [should be registed]	n that will contribute to ng the principle charac its. rticular aesthetic chara ing a high degree of cre ion with a particular co ion with the life or work puting towards the pron history of slavery in So derstanding of tempora <b>FING</b> stered, retained] gistered, retained]	to an understanding of cteristics of a particul acteristics valued by eative or technical ac ommunity or cultural of a person, group of motion of a local soor puth Africa. al changes within cu	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X
t has potential natural and cult t is of importan natural or cultur t has importan- cultural group. t has importan- particular perior t has marked c spiritual reason t has strong or he history of S t has significar developed as a t has significar t has importan- patterns and hu <b>FIELD RE</b> National/Grade Provincial/Grade 3P Local/Grade 3P	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa- ce in exhibiting pa- ce in demonstratin d. or special association south Africa. The through contribu- to the wider und uman occupation. <b>GISTER RAT</b> a 1 [should be regist a [should be regist a [should be regist] a [High significance]	n that will contribute to ng the principle charac its. rticular aesthetic chara ig a high degree of creation ion with a particular co bon with the life or work puting towards the promo- history of slavery in Sc derstanding of tempora <b>FING</b> stered, retained] gistered, retained] gistered, retained]	teristics of a particulateristics of a particulateristics of a particulateristics valued by eative or technical adommunity or cultural of a person, group of a person, group of a local sociouth Africa. al changes within cultural changes within cultural additional changes within cultural additional changes within cultural changes within cultu	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X X
t has potential natural and cult t is of importan natural or cultur t has importanco cultural group. t has importanco particular period t has marked c spiritual reason t has strong or he history of S t has significan developed as a t has significan t has signif	to yield informatio tural heritage. Ince in demonstratin ral places or object ce in exhibiting pa ce in demonstratin d. or special associatio south association outh Africa. Ince through contrib a tourist destination ince relating to the line ce to the wider undo uman occupation. <b>GISTER RAT</b> a 1 [should be registed a [High significance ected A [High/Med	n that will contribute to ng the principle charac its. rticular aesthetic chara ing a high degree of creation ion with a particular co ion with a particular co ion with the life or work puting towards the pro- h. history of slavery in Sc derstanding of temporation <b>FING</b> stered, retained] gistered, retained] ered, mitigation not ad e; mitigation, partly ret	b an understanding of cteristics of a particu acteristics valued by eative or technical ac ommunity or cultural of a person, group of motion of a local soo buth Africa. al changes within cu dvised] tained] tation]	of South Africa's lar class of South Afri a particular communi chievement at a group for social, cultu or organisation of imp ciocultural identity and	ca's ity or iral or ortance in d can be	X			X X X X X

							£.
	Wayland Iron Ore Mine	: Archaeological Im	pact Assessment F	Report			
C. SPHERE C	OF SIGNIFICANCE		High	Medium	Low		
International							
National						Contradia -	
Provincial						10	
Local			X				
Specific community							
E. GENERAL	STATEMENT OF SITE SIGNIFI						
Low							
Medium							
High					X		
F. RATING O	F POTENTIAL IMPACT OF DEV	/ELOPMENT					
NA	FURE OF IMPACT: HISTORICAL, AESTHET	TIC, SOCIAL, SCIENTIFIC	, , INTRINSIC, ASSOCIA	TIONAL & CONTEX	TUAL		
	APPROXIMATE DIS	TANCE FROM DEVELOP					
			Without Managemen	t* With Ma	nagement	+	
		Extent	Local	Local			
General assessm	ent of impacts on resource	Duration	Sort Term: High	Sort Ter	m: Low		
(Refer to Section		Intensity	High	Low			
		Probability	Probable	Improba	able		
		Confidence	High	High			
		Impact Significance	High	Low			
Direct impact	None (the potential development does not			,			
on resource	Peripheral / Indirect (the heritage resource development)	-		•		X	
	Destruction / Direct (the heritage resource	or site is physically locate	d within the footprint of th	e potential developm	ient)		
	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a herit	age resource occurs outside the im	pact matrix of the	High heritage imp	act		
G. RECOMM	ENDED MANAGEMENT* (REFE	R TO SECTION 7.	3.3)				
Avoidance / Enha	ncement						
Comments on rec	ommended management						
If further impact is	s envisaged: nentation of site.						
	ocial consultation.						
	ble conservation management and protect						
	ant Permitting from Heritage Resources A						
	BLE LEGISLATION AND LEGAL						
- Remo - Ordina - Local - Natior	n Tissue Act (Act 65 of 1983 as amended). val of Graves and Dead Bodies Ordinance ance on Excavations (Ordinance no. 12 of and regional provisions, laws and by-laws nal Heritage Resources Act (Act no. 25 of 4 t from SAHRA for removal	(Ordinance no. 7 of 1925 1980) S	5)				

- Site BP13

1. SITE DESCRIPTION : Old Kalkfontein Cemetery
 1.1 General Site Description
 Old Kalkfontein family cemetery containing 4 graves.

1.2 Site features / artefacts / Other

0.4			r winte. Arch	aeological Impact	A55655	пени керо	11		
Site Location		<u>.</u> .							
Province / Dsitrict		Limpopo Province		Map Number		9DA, 2329CB			
Farm Name		Kalkfontein 615LS		Co-ordinates	S2	3°42'41.36"	E29°2	9'01.31"	and the second second
Site Type									
Surface sites		X		Caves and rock					
Larger open-air si	ites			Sealed sites (de	posits				
River deposits				Other					
Site Function									
Living / habitation	า			Kill			,		
Ceremonial				Burial		X			
Trading / Barter	Omelilie			Art					
Quarry / Mining / Site Placement	omeltin	9		Other					
Site Placement									
Valley floor		Hill top		Vlei/swamp		F	River Mouth		
Dam		River Bank	X	Slope		P	lains	X	
Other / Comments	s								
Vegetation									
Riverine forest		Bushveld		Savannah		N	Iountain forest		
Thornveld		Grassland		Cultivated	X	C	Other		
Age Classification	on								
Stone Age		Early Iron Age		Middle Iron Age		L	ater Iron Age		
Historical	Х	Other							
Material Culture									
Midden		House Remains		Stone Walling		S	tone Structures		
Granary		Grinding Stone (	L)	Grinding Stone (	U)	0	Granary Stand		
Metal		Ceramics (Potte	ry)	Ceramics (Porce	elain)	S	itone (non-lithic)		
Metal slag		Tuyere		Fauna			ead (Glass)		
Bead (OES / Shel		Glass		Lithics		S	melting Residue	s	
Other: X – grave				Other:					
1.3 Site Con	ditio	1							
The site integrity	/ is poo	r as the graves have been la	rgely damaged	l.					
2. SITE EVA	LUAT	ION							
		ALUE (NHRA, Sectio	n 2 [3])			High	Mediu	n Lo	W
It has importance	to the c	ommunity or pattern of South	Africa's history c	or pre-colonial history.			X		
It possesses uniq	ue, unc	ommon, rare or endangered a	spects of South	Africa's natural or cultur	al heritage.	X			
It has potential to natural and cultura		formation that will contribute to ge.	an understandi	ng of South Africa's			X		
	in dem	onstrating the principle charac	teristics of a par	ticular class of South Af	rica's	x			
		iting particular aesthetic chara	cteristics valued	d by a particular commu	nity or			x	
	in demo	onstrating a high degree of cre	ative or technica	al achievement at a				x	
particular period.		association with a particular co	mmunity or cultu	ural group for social, cul	tural or	x			

				( <b>D</b> ) ( (			Contraction of the
	Wayland Iron Ore Mine	e: Archaeological Im	ipact Assessmen	t Report			instruction of
the history of South							
It has significance t developed as a tou	through contributing towards the promotion rist destination.	of a local sociocultural iden	itity and can be				x
It has significance i	relating to the history of slavery in South Afr	ica.					X
It has importance to patterns and huma	o the wider understanding of temporal chan n occupation.	ges within cultural landscap	pes, settlement		X		
FIELD REGIS	STER RATING						
National/Grade 1 [s	should be registered, retained]						
Provincial/Grade 2	[should be registered, retained]						
Local/Grade 3A [sh	nould be registered, mitigation not advised]						
Local/Grade 3B [Hi	igh significance; mitigation, partly retained]						Х
Generally Protecte	d A [High/Medium significance, mitigation]						
Generally protected	d B [Medium significance, to be recorded]						
Generally Protecte	d C [Low significance, no further action]						
C. SPHERE C	OF SIGNIFICANCE		High	Med	ium	Low	1
International							
National							
Provincial							
Local			X				
Specific community	1						
E. GENERAL	STATEMENT OF SITE SIGNIF	ICANCE					
Low							
Medium							
High							X
F. RATING O	F POTENTIAL IMPACT OF DE	VELOPMENT					
NAT	FURE OF IMPACT: HISTORICAL, AESTHE	TIC, SOCIAL, SCIENTIFIC	C, , INTRINSIC, ASSOC	CIATIONAL 8	CONTE	TUAL	
	APPROXIMATE DIS	STANCE FROM DEVELOF	MENT: 3000+ METER	S			
			Without Managem	ent*	With M	anageme	ent*
		Extent	Local		Local	-	
		Duration	Sort Term: High		Sort Term: Low		,
	ent of impacts on resource	Intensity	High		Low		
(Refer to Section	(.3.1)	Probability	Probable		Improb	able	
		Confidence	High		High		
		Impact Significance	Moderate		Low		
	None (the potential development does not	1 . 0	fect the heritage resour	ce)			X
Direct impact on resource	Peripheral / Indirect (the heritage resource development)			,	ential		
	Destruction / Direct (the heritage resourc	e or site is physically locate	ed within the footprint of	f the potentia	l developr	nent)	
Direct impact ratii	ng (Refer to Section 7.3.2)						
development.	or no heritage impact expected" value applies where a her	-	•	Modera	te heritag	je impac	t
G. RECOMMI	ENDED MANAGEMENT* (REF	ER TO SECTION 7	.3.3)				
	ncement						
Avoidance / Enha							
Comments on rec	ommended management						
Comments on rec If further impact is	s envisaged:						
Comments on rec If further impact is - Docum	•						
Comments on rec f further impact is - Docum - Full so - Possil	s envisaged: nentation of site. ocial consultation. ole conservation management and protect						
Comments on rec further impact is - Docum - Full so - Possil	s envisaged: nentation of site. ocial consultation.						

## H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- Human Tissue Act (Act 65 of 1983 as amended). Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) Ordinance on Excavations (Ordinance no. 12 of 1980)
- \_
- Local and regional provisions, laws and by-laws -
- National Heritage Resources Act (Act no. 25 of 1999) Permit from SAHRA for removal

#### Site BP14 \_

# 1. SITE DESCRIPTION : Informal Burial Place

## **1.1 General Site Description**

Single grave, marked with inscribed headstone and grave dressing.

Site Location								
Province / Dsitrict	Lin	npopo Province		Map Number	2329DA, 232	29CB		
arm Name	Ka	Ikfontein 615LS		Co-ordinates	S23°41'57.0	5"	E29°28'00	.68'
Site Type								
Surface sites		X		Caves and rock shell	ters			
arger open-air site	3			Sealed sites (deposit	ts			
River deposits				Other				
Site Function								
iving / habitation				Kill				
Ceremonial				Burial		X		
Frading / Barter				Art				
Quarry / Mining / Sn	nelting			Other				
Site Placement								
/alley floor		Hill top		Vlei/swamp		River Mc	uth	
Dam		River Bank	X	Slope		Plains	Plains X	
Other / Comments						1		
/egetation								
Riverine		Bushveld		Savannah		Mountair	foract	_
orest		Busilveiu		Savalinan		Wountair	liolest	
Thornveld >		Grassland	X	Cultivated	X	Other		
Age Classification			_					
Stone Age		Early Iron Age		Middle Iron Age		Later Iro	n Age	
Historical 3		Other	X - recent					
Material Culture								
Vidden		House Remains		Stone Walling		Stone St		
Granary		Grinding Stone (		Grinding Stone (U)		Granary		
Metal		Ceramics (Potter	ry)	Ceramics (Porcelain)	)	Stone (n		
Vetal slag		Tuyere		Fauna		Bead (G		
Bead (OES / Shell)		Glass		Lithics		Smelting	Residues	
Other: <b>X – grave dr</b>	essing			Other:				
1.3 Site Cond								
The site integrity is	nood as t	he burial is maintained	1					_

Wayland Iron Ore Mi	ne: Archaeological	Impact Assessm	ent Report		
2.1 HERITAGE VALUE (NHRA, Section 2	[3])		High	Mediu	m Low
It has importance to the community or pattern of South Africa	a's history or pre-colonial	history.		X	
It possesses unique, uncommon, rare or endangered aspect	s of South Africa's natura	l or cultural heritage.	X		
It has potential to yield information that will contribute to an unatural and cultural heritage.	nderstanding of South Af	rica's		X	
It is of importance in demonstrating the principle characterist natural or cultural places or objects.	ics of a particular class of	f South Africa's	x		
It has importance in exhibiting particular aesthetic characteric cultural group.	stics valued by a particula	ar community or			X
It has importance in demonstrating a high degree of creative particular period.	or technical achievement	t at a			X
It has marked or special association with a particular commu spiritual reasons (sense of place).	nity or cultural group for s	social, cultural or	x		
It has strong or special association with the life or work of a p the history of South Africa.	person, group or organisa	tion of importance in			x
It has significance through contributing towards the promotio developed as a tourist destination.		identity and can be			x
It has significance relating to the history of slavery in South A					X
It has importance to the wider understanding of temporal chapatterns and human occupation.	anges within cultural lands	scapes, settlement		X	
FIELD REGISTER RATING					
National/Grade 1 [should be registered, retained]					
Provincial/Grade 2 [should be registered, retained]					
Local/Grade 3A [should be registered, mitigation not advised	]				
Local/Grade 3B [High significance; mitigation, partly retained	]				X
Generally Protected A [High/Medium significance, mitigation	-				
Generally protected B [Medium significance, to be recorded]					
Generally Protected C [Low significance, no further action]					
C. SPHERE OF SIGNIFICANCE		High	Medi	ium	Low
International					
National					
Provincial					
Local		X			
Specific community					
E. GENERAL STATEMENT OF SITE SIGN	IFICANCE				
Low					
Medium					
High					X
F. RATING OF POTENTIAL IMPACT OF D	EVELOPMENT				
NATURE OF IMPACT: HISTORICAL, AESTH		IFIC. INTRINSIC AS	SOCIATIONAL &	CONTEXT	UAL
	DISTANCE FROM DEVE				
		Without Manag		With Mar	nagement*
	Extent	Local	-	Local	-
General assessment of impacts on resource	Duration	Sort Term: Hig	h	Sort Terr	m: Low
(Refer to Section 7.3.1)	Intensity	High		Low	
	Probability	Probable		Improba	ble
	Confidence	High		High	

				2	
	Wayland Iron Ore Mine: Archaeological In	pact Assessment Report	t		
	Impact Significance	High	Low		
_	None (the potential development does not adversely or positively at	fect the heritage resource)			
Direct impact on resource	Peripheral / Indirect (the heritage resource or its setting is located in development)	n proximity to the footprint of the	ootential	x	
	Destruction / Direct (the heritage resource or site is physically locate	ed within the footprint of the pote	ntial development)		
· ·	ing (Refer to Section 7.3.2) e or no heritage impact expected" value applies where a heritage resource occurs outside the in	npact matrix of the High	heritage impact		
G. RECOMM	ENDED MANAGEMENT* (REFER TO SECTION 7	.3.3)			
Avoidance / Enha	ancement				
Comments on re	commended management				
If further impact	is envisaged: mentation of site.				
	ocial consultation.				
- Poss	ible conservation management and protection measures.				
- Relev	ant Permitting from Heritage Resources Authority.				
H. APPLICA	BLE LEGISLATION AND LEGAL REQUIREMENT	S			
- Remo - Ordir - Loca - Natio	an Tissue Act (Act 65 of 1983 as amended). oval of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 192 nance on Excavations (Ordinance no. 12 of 1980) and regional provisions, laws and by-laws nal Heritage Resources Act (Act no. 25 of 1999) it from SAHRA for removal	25)			

Site MS01, MS02, MS03, MS04 -

## 1. SITE DESCRIPTION : Small Mica Mining Sites

# 1.1 General Site Description

The remains of small scale mica mining.

1.2 Site feature	s / artefac	ts / Other						
Site Location								
Province / Dsitrict	Limpop	o Province		Map Number	2329DA, 2329	)CB		
Farm Name	Kalkfor	tein 615LS		Co-ordinates	S23°41'28.67 S23°41'36.82	S23°41'33.75"         E29°28'32           S23°41'28.67"         E29°29'05           S23°41'36.82"         E29°27'57           S23°41'32.34"         E29°27'29		
Site Type								
Surface sites		X		Caves and rock sh	nelters			
Larger open-air sites				Sealed sites (depo				
River deposits				Other				
Site Function								
Living / habitation				Kill				
Ceremonial				Burial				
Trading / Barter				Art				
Quarry / Mining / Sme	lting	X		Other				
Site Placement								
Valley floor		Hill top	X	Vlei/swamp		River Mouth		
Dam		River Bank		Slope	X	Plains		
Other / Comments								
Vegetation								
Riverine		Bushveld		Savannah		Mountain forest		

		wayland Iron Or	e wine: Arch	aeological Impact	Assessme	ent Report	•	
forest								<b>新</b> 代初始的
Thornveld	X	Grassland	X	Cultivated	X	Oth	ner	
Age Classific	ation							
Stone Age		Early Iron Age	Middle Iron Age			Lat		
Historical	X	Other	X – recent					
Material Cultu	ure			;				
Midden		House Remains	X Stone Walling		Sto	X		
Granary		Grinding Stone		Grinding Stone (		Gra		
Metal		Ceramics (Potte	ry)	Ceramics (Porce	lain)		ne (non-lithic)	
Metal slag		Tuyere		Fauna			ad (Glass)	
Bead (OES / S	,	Glass		Lithics		Sm	elting Residues	
Other: X – ron				Other:				
1.3 Site C	ondition							
The site integ	rity cannot b	e established.						
2. SITE E\	/ALUATIC	)N						
		UE (NHRA, Sectio	on 2 [3])			High	Medium	Low
		munity or pattern of South	/	or pro-colonial history		ingii		X
•		mon, rare or endangered a		, ,	al horitago			X
		nation that will contribute to			a nentaye.			<b>∧</b>
	Itural heritage.			ng of South Anica s				X
lt is of importa	nce in demons	strating the principle charac	cteristics of a par	ticular class of South Afi	rica's			v
natural or cultu								X
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or								x
cultural group.								
it has importar particular perio		trating a high degree of cre	eative or technica	al achievement at a			X	
		ociation with a particular co	ommunity or cult	ural group for social cult	ural or			
spiritual reaso			, initiality of our	anal group for occial, call				X
		ciation with the life or work	of a person, gro	up or organisation of imp	oortance in		x	
the history of S							^	
It has significa developed as a	-	ontributing towards the pro	motion of a local	sociocultural identity an	d can be			x
		the history of slavery in So	outh Africa					X
-	-	r understanding of tempor		n oultural landaganaa	ttlomont			<b>^</b>
patterns and h		• ·	ai Grianyes Wilhi	n culturar lanuscapes, se				x
	GISTER F							
		registered, retained]						
	-	e registered, retained]						
		egistered, mitigation not ac	lvised1					
	-	cance; mitigation, partly ref	-					
		Medium significance, mitig						
		um significance, to be reco						
• •	•	significance, no further act	-					X
-	-				High	Ma	dium L	
		NIFICANCE			High	ivie		OW
International								
National								
Provincial								

		J					
Local				X	STREET, MARKEN		
Specific community	,						
E. GENERAL	STATEMENT OF SITE SIGNIF	ICANCE					
Low					X		
Medium							
High							
F. RATING O	F POTENTIAL IMPACT OF DE	VELOPMENT					
	NATURE OF IMPACT: AESTH	ETIC, SOCIAL, ARCHITEC	TURAL, CONTEXTUAL	& VISUAL			
	APPROXIMATE D	ISTANCE FROM DEVELO	PMENT: 50METERS				
			Without Managemen	t* With	Managemen	t*	
		Extent	Local	Loca	I		
		Duration	Sort Term: Medium	Sort	Sort Term: Low		
General assessme (Refer to Section 3	ent of impacts on resource 7.3.1)	Intensity	Medium	Low	Low		
(	,	Probability	Probable		Improbable		
		Confidence	High		High		
		Impact Significance	Medium				
Direct immed	None (the potential development does not adversely or positively affect the heritage resource)						
Direct impact on resource	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)						
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)						
Note that a default "Little development.	ng (Refer to Section 7.3.2) or no heritage impact expected" value applies where a her	-		Moderate herit	age impact		
G. RECOMM	ENDED MANAGEMENT* (REFI	ER TO SECTION 7.	3.3)				
Monitoring.							
Comments on rec	ommended management						
If further impact is	s envisaged: nentation of sites						
	onitoring during development, by an EC	O or the heritage specialis	st.				
	LE LEGISLATION AND LEGA	÷ .					
	al Heritage Resources Act (Act no. 25 of						
	and regional provisions, laws and by-law	,					

## 7.4 Discussion: Evaluation of Results and Impacts

Previous studies conducted in this section of the Limpopo Province all infer a rich and diverse archaeological landscape, representative of most phases of human and cultural development in southern Africa. The following assessment impact discussion more clearly describes to extent of heritage significance and impact on resources, cognisant of this rich larger archae-historical landscape.

The Kalkfontein Stone Age occurrence at **Site SA01** and its cultural context might be of notable research value and these occurrences are therefore of medium significance. The impact on the site by the proposed activity will be local, and of permanent duration where in essence, the impact will result the possible confusing of the archaeological context and potential loss of archaeological structures and material. The site will be also sterilized of any future heritage research opportunities. However, the threshold of the impact can be limited by the implementation of mitigation measures for the site. The MSA debris flakes noted elsewhere in the study area are of low significance.

The Iron Age farmer sites on Makotopong at **Site IA01** and **Site IA02** is of medium significance as the sites might yield an understanding of the development and spread of the later Farmer Period in the larger landscape and in the Limpopo Province. The impact on the sites by the proposed activity will be local, and of permanent duration where in essence, the impact will result the possible confusing of the archaeological context and potential loss of archaeological structures and material. The sites might also be also sterilized of any future heritage research opportunities. However, the threshold of the impact can be limited by the implementation of mitigation measures for the sites.

The scientific value and significance of the Iron Age occurrences at **Site IA03**, **Site IA04** and **Site IA05** on Makotopong is probably limited, due to the absence of related archaeological material in these loci. However, the provenance of the sites is not known and its significance rating might change according to further investigations of the sites. The impact of the proposed activity will be local, and of permanent duration, but of relatively low significance. The essence of the impact in archaeological terms will be the potential loss of archaeological structures and material, as well as the sterilization of any of the site in terms of future heritage research opportunities.

Similarly, the Iron Age occurrences at **Site IA06** and **Site IA07** on Kalkfontein are probably limited, due to the absence of related archaeological material. Since the provenances of the structures are not known, their significance ratings might change according to further investigations of the sites. The impact of the proposed activity will be local, and of permanent duration, but of relatively low significance. The essence of the impact in archaeological terms will be the potential loss of archaeological structures and material, as well as the sterilization of any of the site in terms of future heritage research opportunities.

At Kalkfontein, the Iron Age farmer sites at **Site IA08** and **Site IA09** is also of medium significance as the sites might add to our current knowledge of the later Farmer Period in the larger landscape and in the Limpopo Province. The impact on the sites by the proposed activity will be local, and of permanent duration where in essence, the impact will result the possible confusing of the archaeological context and potential loss of archaeological structures and material. The sites will be also sterilized of any future heritage research opportunities. However, the threshold of the impact can be limited by the implementation of mitigation measures for the sites.

The Historical Period Mission Station structure at **Site HP01** on Mokotopong is of high significance as the site might yield a valuable understanding of the Missionary history of the Limpopo Province, as well as historical architectural and settlement developments in the larger landscape. According to indications, the proposed development will occur some distance from the site and the impact on the site by the proposed mining activities will be peripheral. Nonetheless, it is essential that the threshold of the impact be limited by the implementation of management measures for the site, if / when required.

The remains of mud brick houses occurring around the Mission house at **Site HP02** on Mokotopong are of medium significance since these structures can be related to the historical context of the Mission. The proposed development will occur some distance from the site and the impact on the sites by the proposed mining activities will be peripheral. However, the threshold of the impact on these structures should be limited by the implementation of mitigation measures for the sites, if / when required.

The poorly preserved Ruigedraai homestead at Site HP03 on Mokotopong is of medium significance as the site

might yield more information on historical architectural and settlement developments in the larger landscape. According to indications, the proposed mining development will occur some distance from the site and the impact on the site by the proposed mining activities will be peripheral. Nonetheless, the threshold of possible impacts should be limited by the implementation of mitigation and conservation measures for the site, if / when required.

The poorly preserved brick and mud structures, stone wall enclosures and middens scattered across Makotopong and Kalkfontein at **Site HP04**, **Site HP05**, **Site HP06**, **Site HP08**, **Site HP09**, **Site HP10** and **Site HP11** are of medium-low significance due to the poor preservation of the sites. The impact on the sites by the proposed activity will be local, and of permanent duration where in essence, the impact will result the potential damage / loss of the sites.

The recent Roodewal farmstead, farm buildings and sheds as well as the labourer's hostel compound at **Site HP07** are of recent age and they carry a low significance rating. The site is situated some distance from the proposed mining activities and impact on this structure is not significant the impact is deemed to be of low significance.

The cemeteries on the outskirts of Makotopong at **Site BP01**, **Site BP02** and **Site BP03**, as well as graves further away from proposed mining activities on Kalkfontein at **Site BP12** and **Site BP13** are of heritage priority and carry high significance ratings. However, the proposed development will occur some distance from the sites and the impact on the sites by the proposed mining activities will be peripheral. However, the threshold of the impact on these structures should be limited by the implementation of mitigation / management measures for the sites, if / when required.

Similarly, Site BP04, Site BP05, Site BP06, Site BP07, Site BP08 and Site BP09 on Makotopong and Site BP10, Site BP11 and Site BP14 on Kalkfontein, are heritage priority and carry a high significance ratings. The impact on the sites by the proposed activity will be local, and of permanent duration where in essence, the impact might result the destruction / disturbance of the burials. It is essential that the threshold of the impact be managed by means of the implementation of mitigation / avoidance measures for the sites.

The scientific and research value of the small scale mining sites on Kalkfontein (Site MS01, MS02, MS03 and MS04) is probably limited, due to the relative recent age of the sites and the poor preservation of the sites. However, a more detailed provenance of the sites is not known and its significance rating might change according to further investigations of the sites. The impact of the proposed activity will be local, and of permanent duration, but of relatively low significance. The essence of the impact in archaeological terms might be stated as the potential loss of heritage resources and material, as well as the sterilization of any of the site in terms of future heritage research opportunities.

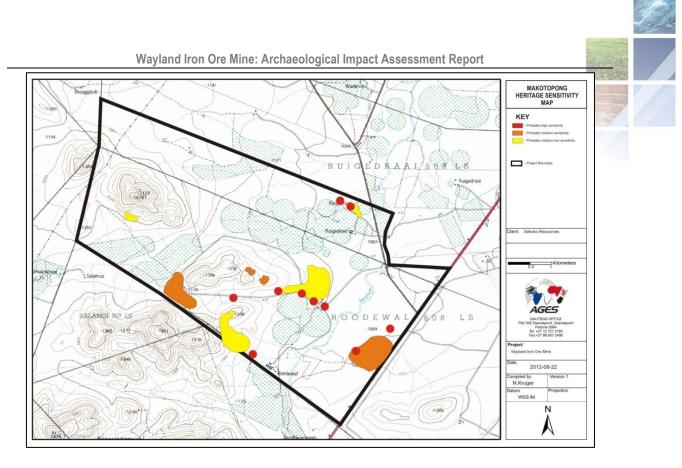


Figure 7-1: Heritage sensitivity map for the farm Makotopong.

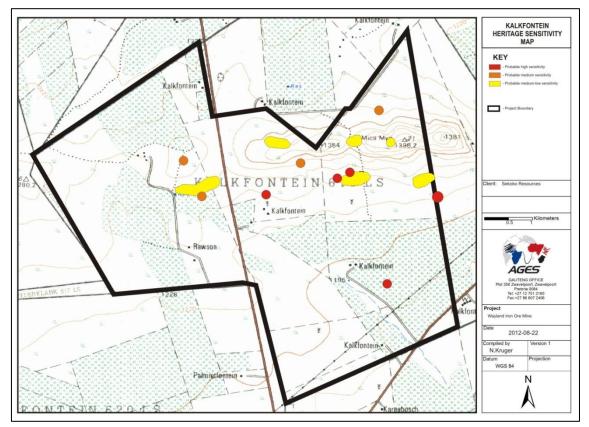
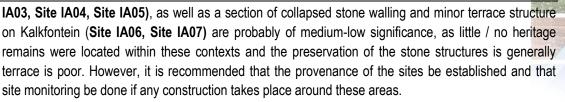


Figure 7-2: Heritage sensitivity map for the farm Kalkfontein.

## 8 RECOMMENDATIONS

The larger landscape around Mokotopong and Kalkfontein is rich in pre-historical and historical remnants. Cognisant of this historically significant landscape and the need for the conservation of its heritage resources, the following recommendations are made based on general observations in the proposed Wayland Iron Ore Mine Project Area:

- Since the palaeontological sensitivity of rock units within the study area is generally low the impact significance of the proposed prospecting activities as far as fossil heritage is concerned, is likely to be small. However, a Palaeontological Impact Assessment is recommended and, should fossil remains such as fossil fish, reptiles or petrified wood be exposed during construction, these objects should carefully safeguarded and the relevant heritage resources authority (SAHRA) should be notified immediately so that the appropriate action can be taken by a professional palaeontologist.
- Access onto a portion of Mokotopong (formerly Portion 5 of the farm Ruigedraai 809LS) could not be obtained and consequently these area could not be surveyed. It is recommended that this Portion be archaeologically surveyed in order to accurately establish the presence of heritage resources, if the area were to be included in mining development areas.
- Considering the large extent of the Study Area and the localised nature of heritage remains, a careful watching brief monitoring process is recommended for all stages of the project, specifically around heritage sensitive areas i.e. MSA scatters, Iron Age sites, historical period structures and graves. Should any subsurface palaeontological, archaeological or historical material be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately
- The MSA quartz stone lithic scatter on Kalkfontein (Site SA01) is of medium significance and it is recommended that a limited Phase 2 Specialist Study be conducted prior to the commencement of development in this area. This process should minimally include the recording of the larger MSA cultural context by means of a more comprehensive area survey, surface sampling and consequent analysis of the stone artefacts by a suitably qualified Stone Age archaeologist. The Specialist should obtain the necessary permits from the relevant heritage resources authority (SAHRA) for the in-situ analysis, possible collection and photography of the artefacts during the study. A small number of MSA debris flakes noted on the farm Makotopong 1200LS, scattered in low concentrations. The occurrences are of low significance.
- The two Iron Age Farmer period sites on Makotopong (Site IA01, Site IA02) are of medium significance and it is recommended that a further Phase 2 Specialist Study be conducted prior to the commencement of development in this area. This process should include the recording of the larger Farmer Period cultural context by means of a comprehensive area survey, surface and subsurface sampling of the sites, and the analysis of material culture from archaeological horizons at the sites. In addition, two similar Iron Age occupation areas on high ridges on the farm Kalkfontein (Site IA08, Site IA09) are of medium significance and it is recommended that the provenance of the sites be established by means of limited Phase 2 mitigation measures. These measures should minimally investigate the nature and context of the sites by means of site recording and mapping, surface and sub-surface sampling (limited STP [Shovel Test Spit] excavations) and local social consultation by a suitably qualified archaeological. An all instances, the Specialist should obtain the necessary permits from the relevant heritage resources authority (SAHRA) for the in-situ analysis, possible collection and photography of the artefacts during the study. Smaller sites possibly dating to the Iron Age, specifically two vitrified cattle dung deposits on a ridge and a large disturbed area to the west on Makotopong (Site



- The old house of the Lutheran Native Association Mission Station (Site HP01) on the farm Roodewal (now part of Makotopong) is of importance in terms of the regional Missionary history of the Limpopo Province. In addition, the structure is older than 60 years is therefore protected under the NHRA (Act 25 of 1999). It is recommended that the site be maintained and that a site management plan be implemented to restore and conserve the structure. The dilapidated remains of a large number of mud brick houses (Site HP02) are of medium significance but the sites are poorly preserved and it is recommended that the structures be carefully documented and the detailed provenance of the sites be established by means of a desktop study and social consultation and participation, if the sites were to be impacted on by the proposed mining project. If this were to be the case, a destruction permit from the relevant heritage resources authority (SAHRA) would be mandatory. The remains of the old Ruigedraai homestead on Makotopong (Site HP03) are older than 60 years and they are protected under heritage legislation. It is recommended that the buildings be carefully documented and the detailed provenance of the farmstead be established by means of a desktop study. If the sites were to be impacted on by the proposed mining project, a destruction permit from the relevant heritage resources authority (SAHRA) would be mandatory. The number of poorly preserved brick and mud structures, stone wall enclosures and middens scattered across Makotopong (Site HP04, Site HP05, Site HP06, Site HP08) and Kalkfontein (Site HP09, Site HP10, Site HP11) are of medium-low significance and site monitoring of these structures are recommended when development commences, as graves are likely to occur around the structures. If the sites were to be impacted on by the mining development, destruction permits should be obtained from the relevant heritage resources authority (SAHRA). The recent Roodewal farmstead, farm buildings and sheds as well as a large labourer's hostel compound (Site HP07) carry a low significance rating. It is recommended that the sites and surroundings be monitored when the mining development commences.
- All cemeteries and burials on Makotopong (Site BP01, Site BP02, Site BP03, Site BP04, Site BP05, Site BP06, Site BP07, Site BP08, Site BP09) and Kalkfontein (Site BP10, Site BP11, Site BP12, Site BP13, Site BP14) are of high significance and since they are structurally stable, the resources will require management or mitigation if impact cannot be avoided. A conservation buffer zone of at least 20m around the graves, as well as the fencing off of all cemeteries and graves on the farms Makotopong and Kalkfontein are recommended. However, should the graves or the proposed 20m buffer zone be impacted in any way by the planned activities, full grave relocations are recommended for these burials. This measure should be undertaken by a qualified archaeologist, and in accordance with relevant legislation and subject to any local and regional provisions and laws and by-laws pertaining to human remains. A full social consultation process should occur in conjunction with the mitigation of cemeteries and burials and a concerted effort must also be made to identify all buried individuals and to contact their relatives and descendants. Other legislative measures which may be of relevance include the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), the Human Tissues Act (Act no. 65 of 1983, as amended), the Ordinance on Excavations (Ordinance no. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place. As burial locations in this area follow a general (and fairly common) pattern where graves occur around historical house structures and homestead complexes, utmost care should be taken not to disturb such resources.

- The remains of small scale mica mining at a number of sites on Kalkfontein (Site MS01, MS02, MS03, MS04) are probably of limited significance with regards to its heritage value. However, it is recommended that the relevant resources agency be consulted prior to the disturbance or alteration of these sites.
- Due cognisance should be taken of the larger palaeontological, archaeological and historical landscape of the area in order to avoid the destruction of previously undetected heritage sites in the area. Here, care should be taken around sandstone outcrops and rock faces, as rock art is known to occur on such features. Water sources such as drainage lines, springs and pans should also be regarded as potentially sensitive in terms of possible Stone Age and Iron Age deposits. The existence of Historical Period and recent resources deriving from the area's contemporary farming history should also be considered.

In addition to these site-specific recommendations, careful cognizance should be taken of the following:

- Archaeological traces of Iron Age settlements in this area are sometimes ephemeral unless the characteristic ash deposits, cattle dung deposits and stone-wall towns are identified or surface scatters of pottery or related material culture are identified.
- Rock art is known to exist in sandstone overhangs and rock faces in the larger landscape. Such geological features occur in the landscape but no rock art or markings were identified. Such sandstone outcrops and rock faces should nonetheless be regarded as potentially sensitive in terms of rock markings.
- Water sources such as drainage lines, fountains and pans would often have attracted human activity in the past. As Stone Age material seems to originate from below present soil surfaces in eroded areas, the larger landscape should be regarded as potentially sensitive in terms of possible subsurface deposits.
- As Palaeontological remains occur where bedrock has been exposed, such geological features should be regarded as sensitive in terms of impacts on fossilized resources.
- The Wayland Iron Ore Mine Project Area has been occupied for many decades and places of "Living Heritage" might be present in the landscape. Here, "Living Heritage" can broadly refer to a place of cultural heritage and sacred nature; with cultural attributions that are not generally physically manifested. Such places might include initiation sites, places of ritual seclusion, old farmsteads, ritual graves and specific meeting areas. These sites and possible material residues thereof convey an intangible cultural significance beyond the site, shelter or object, where the meaning speaks directly of a sense of place and lived experience. Therefore, Historical period and recent material culture and structures should be regarded as potentially sensitive in terms of the tangible and intangible value of such resources.

## 9 GENERAL COMMENTS AND CONDITIONS

This AIA report serves to confirm the extent and significance of archaeological material in the Wayland Iron Ore Mine Project Area. In addition to heritage resources occurring here, the larger Limpopo Province encompasses a rich and diverse archaeological landscape and cognisance should be taken of heritage resources and archaeological material that might be present in surface and sub-surface deposits. If, during construction, any possible archaeological material culture are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find. Such material culture might include:

- Formal Earlier Stone Age stone tools such as handaxes, choppers and cleavers.
- Formal Middle Stone Age stone tools such as points, blades and scrapers.
- Formal Later Stone Age stone tools such a microlithic blades, points and scrapers.
- Lithic residues and debris such as stone cores and flakes.
- Decorated and undecorated potsherds.
- Iron objects.
- Beads made from ostrich eggshell and glass.
- Ash middens and cattle dung deposits and accumulations.
- Animal bones and faunal remains.
- Human remains/graves.
- Stone walling or any sub-surface structures.
- Historical glass, tin or ceramics.
- Fossils.

If such site were to be encountered or impacted by any proposed developments, recommendations contained in this report, as well as endorsement of mitigation measures as set out by SAHRA, the National Resources Act and the CRM section of ASAPA will be required. Please note that this report is an archaeological scoping study only and does not include or exempt other required heritage impact assessments.

It must be emphasised that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, represent the area's complete archaeological legacy. Many sites/features may be covered by soil and vegetation and might only be located during sub-surface investigations. If subsurface archaeological deposits, artefacts or skeletal material were to be recovered in the area during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

It must also be clear that Archaeological Specialist Reports will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

## 10 BIBLIOGRAPHY

Acocks, J.P.H. 1988. Veld types of South Africa (3<sup>rd</sup> edition). Memoirs of the Botanical Survey of South Africa 57: 1-146

Aukema, J. 1989: Rain-making: a thousand year-old ritual? South African Archaeological Bulletin 44: 70-72.

Bergh, J.S.1999. Geskiedenisatlas van Suid-Afrika: die vier noordelike provinsies. Pretoria: J.L. van Schaik

Changuion, L. 1986. *Pietersburg* 1886 – 1986. Pretoria: City Council of Pietersburg.

Coetzee, F.P.C. 2009. Cultural Heritage Survey of the Proposed Iron Ore Mine on the Farm Zandrivierspoort 851 LS, north of Polokwane, Limpopo Province. Pretoria: University of South Africa.

Deacon, J. 1996. Archaeology for Planners, Developers and Local Authorities. National Monuments Council. Publication no. P021E.

Deacon, J.1997. Report: Workshop on Standards for the Assessment of Significance and Research Priorities for Contract Archaeology. In: Newsletter No 49, Sept 1998. Association for Southern African Archaeologists.

Denbow, J.R. 1979. Cenchrus ciliaris: an ecological indicator of Iron Age middens using aerial photography in eastern Botswana. South African Journal of Science 75:405–408

De V. Pienaar, U. 1990. Neem uit die Verlede. Pretoria: National Parks Board.

Evers, T.M.1981. The Iron Age in eastern Transvaal, South Africa. In: Voigt, E.A. (ed.) Guide to archaeological sites in the northern and eastern Transvaal. Pretoria: Transvaal Museum.

Evers, T.M. 1988. The recognition of Groups in the Iron Age of Southern Africa. PhD thesis. Johannesburg: University of the Witwatersrand.

Hall, M. 1987. The Changing Past :Farmers, Kings & Traders in Southern Africa 200 – 1860 Cape Town, Johannesburg: David Philip

Hall, M. 1996. Archaeology Africa. Cape Town, Johannesburg: David Philip

Henning, B. 2012. An Environmental Report on the Ecology (flora and fauna) for the proposed Wayland Iron Ore Mine, Limpopo Province. Polokwane: AGES Limpopo.

Huffman, T.N. 2002. Regionality in the Iron Age: the case of the Sotho-Tswana. Southern African Humanities. Vol 14. Pietermaritzburg.

Huffman, T.N. 2007. Handbook to the Iron Age. Pietermaritzburg: University of Kwazulu-Natal Press

Mason, R.J. 1986. Origins of black people of Johannesburg and the southern western central Transvaal AD 350--1880. Johannesburg: Witwatersrand University Press.

Phillipson, D.W. 1985. African Archaeology (second edition). Cambridge: Cambridge University Press

Rathje, W.L & Schiffer, M.B. 1982. Archaeology. USA: Harcourt

Renfrew, C & Bahn, P. 1991. Archaeology: Theories, Methods and Practice USA: Thames & Hudson

Rubidge, B. 2009. Delta-epsilon 6x 765kv transmission power lines from Lephalale to Potchefstroom: Palaeontological Impact Assessment. BPI for Palaeontological Research: University Of the Witwatersrand.

Sharer, A.J & Ashmore, W 1979. The Nature of Archaeological Data California: Benjamin/Cummings Publishing

Swanepoel, N. et al (Eds.) 2008. Five hundred years rediscovered. Johannesburg: Wits University Press

Moabelo, Kenneth Eli. 2008. The land claims process in Limpopo province : a case study of the Makotopong community, South Africa. Master's Dissertation

Vinnicombe, P 1972. Myth, motive, and selection in southern African rock art. Africa: Journal of the International African Institute 42: 192-204

Phillipson, D.W. 1985. African Archaeology (second edition). Cambridge: Cambridge University Press Renfrew, C & Bahn, P. 1991. Archaeology: Theories, Methods and Practice USA: Thames & Hudson

Sharer, A.J & Ashmore, W 1979. The Nature of Archaeological Data California: Benjamin/Cummings Publishing

Swanepoel, N. et al (Eds.) 2008. Five hundred years rediscovered. Johannesburg: Wits University Press

Van der Ryst, M.M & Küsel, S. 2012. Phase 2 Report on Middle Stone Age localities on the farm Zandkopsdrift 357, Garies District, Northern Cape Province. Pretoria: Habitat Landscape Architects.

Van der Ryst, MM. 1996. The later Stone Age Prehistory of the Waterberg, with special reference to Goergap Shelter. MA Thesis: Department of Archaeology, University of the Witwatersrand.

Van der Ryst, MM. 1998. The Waterberg Plateau in the Northern Province, RSA, in the Later Stone Age. British Archaeological Reports (BAR) International Series 715. Oxford Press.

Van Warmelo, N.J. 1935. A Preliminary Survey of the Bantu Tribes of South Africa. Pretoria: Government Printer.

Winter, S. & Baumann, N. 2005. Guideline for involving heritage specialists in EIA processes: Edition 1. CSIR Report No ENV-S-C 2005 053 E. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Human Tissue Act and Ordinance 7 of 1925, Government Gazette, Cape Town

National Resource Act No.25 of 1999, Government Gazette, Cape Town

www.csg.dla.gov.za accessed 2012-08-20

