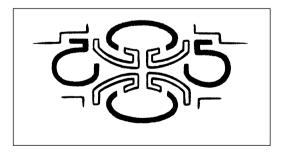
# **Cultural Heritage Impact Assessment:**

Phase 1 Investigation for the Proposed Prospecting Right Combined with Waste License Application to Prospect for Chrome Ore (Cr), LG & MG Seams Together with Platinum Group Metals (PGM) on a certain Portion of the Remaining Extent and a certain Portion of Portion 2 of the Farm Uitvalgrond 105 JQ, Rustenburg Local Municipality, Bojanala Platinum District Municipality North West Province



#### For

Project Applicant	Environmental Consultant
Acacia Resources (Pty) Ltd	Milnex CC
	P.O. Box 1086
	4 Botha Street
	Schweizer-Reneke
	2780
	Tel No: (018) 011 1925
	Fax No: (053) 963 2009
	e-mail: christiaan@milnex-sa.co.za



By Francois P Coetzee Heritage Consultant ASAPA Professional Member No: 028 99 Van Deventer Road, Pierre van Ryneveld Centurion, 0157 Tel: (012) 429 6297

Fax: (012) 429 6091 Cell: 0827077338 coetzfp@unisa.ac.za

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Version:	2 (Final Report)

HIA: Prospecting Right and Waste License Application for the Mining of Chrome Ore and Platinum Group Metals (PGM) on the Farm Uitvalgrond 105 JQ, North West Province.

## **Executive Summary**

This report contains a comprehensive heritage impact assessment investigation in accordance with the provisions of Sections 38(1) and 38(3) of the *National Heritage Resources Act* (Act No. 25 of 1999) (NHRA) and focuses on the survey results from a cultural heritage survey as requested by Milnex CC. Milnex CC was contracted by Acacia Resources (Pty) Ltd as the independent environmental consultant to undertake the Scoping and EIA Process for a proposed Prospecting Right combined with Waste License Application to prospect for Chrome Ore (Cr), LG & MG seams together with Platinum Group Metals (PGM) on a certain Portion of the Remaining Extent and a certain Portion of Portion 2 of the Farm Uitvalgrond 105 JQ, Rustenburg Local Municipality, Bojanala Platinum District Municipality North West Province. The property is situated approximately 18 kilometres north west of Rustenburg. The Scoping process for Environmental Authorisation for the proposed prospecting application is conducted in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended) we well as the National Environmental Management Act (Act No. 107 of 1998) (NEMA), Section 16(3)(b) and in terms of Section 17 (1) (c) of the EIA Regulations, 2014. Project SAMRAD Reference No: NW30/5/1/1/2/13418PR.

No archaeological (both Stone Age and Iron Age) or historical artefacts, assemblages, features, structures or settlements were recorded during the survey of the project footprint. It is well known that Late Iron Age stone-walled settlements do not usually occur in open low-lying grasslands, especially black cottons soils high in clay content.

It is therefore recommended, from a cultural heritage perspective that the proposed prospecting activities may proceed, taking into account the mitigation measures.

## Also, please note:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (cf. NHRA (Act No. 25 of 1999), Section 36 (6)).

#### **Definitions and abbreviations**

Midden: Refuse that accumulates in a concentrated heap.

Stone Age: An archaeological term used to define a period of stone tool use and

manufacture

Iron Age: An archaeological term used to define a period associated with domesticated

livestock and grains, metal working and ceramic manufacture

LIA: Late Iron Age sites are usually demarcated by stone-walled enclosures

NHRA: National Heritage Resources Act (Act No. 25 of 1999)

SAHRA: South African Heritage Resources Agency

SAHRIS: South African Heritage Resources Information System PHRA-G: Provincial Heritage Resources Authority - Gauteng

GDARD: Gauteng Department of Agriculture and Rural Development

HIA: Heritage Impact Assessment BAR: Basic Assessment Report

EMPr: Environmental Management Programme report

DMR: Department of Mineral Resources I&APs: Interested and Affected Parties

I, Francois Coetzee, hereby confirm my independence as a cultural heritage specialist and declare that I do not have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of the listed environmental processes, other than fair remuneration for work performed on this project.

Francois P Coetzee

Cultural Heritage Consultant

Accredited Archaeologist for the SADC Region

Professional Member of ASAPA (CRM Section) Reg no: 28

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## 1. Introduction and Terms of Reference

Milnex CC was contracted by Acacia Resources (Pty) Ltd as the independent environmental consultant to undertake the Scoping and EIA Process for a proposed Prospecting Right combined with Waste License Application to prospect for Chrome Ore (Cr), LG & MG seams together with Platinum Group Metals (PGM) on a certain Portion of the Remaining Extent and a certain Portion of Portion 2 of the Farm Uitvalgrond 105 JQ, Rustenburg Local Municipality, Bojanala Platinum District Municipality North West Province. The property is situated approximately 18 kilometres north west of Rustenburg. The property is situated approximately 18 kilometres north west of Rustenburg. The Scoping application process for Environmental Authorisation for the proposed prospecting activities is conducted in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended). A Cultural Heritage Impact Assessment (HIA) was requested by Milnex CC on behalf of the client to evaluate the potential impact of the proposed mining activities.

# 2. Objectives

The general objective of the cultural heritage survey is to record and document cultural heritage remains consisting of both tangible and intangible archaeological and historical artefacts, structures (including graves), settlements and oral traditions of cultural significance.

As such the terms of reference of this survey are as follows:

- Identify and provide a detailed description of all artefacts, assemblages, settlements and structures of an archaeological or historical nature (cultural heritage sites) located on the study area,
- Estimate the level of significance/importance of these remains in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value,
- Assess any impact on the archaeological and historical remains within the area emanating from the development activities, and
- Propose recommendations to mitigate heritage resources where complete or partial conservation may not be possible and thereby limit or prevent any further impact.

# 3. Description of Physical Environment of Study Area

The heritage survey focussed on an area situated approximately 18 kilometres north-west from the town of Rustenburg, near Phokeng. Situated in the survey footprint are the three townships namely, Mogono and Ga-Luka as well as the Rockwall Dam.

Farm Name(s) and Portions	The following portions and farms:		
	Uitvalgrond 105 JQ		
	<ul> <li>A certain portion of the remaining extent</li> </ul>		
	<ul> <li>A certain portion of portion 1</li> </ul>		
	<ul> <li>A certain portion of portion 2</li> </ul>		
Size of Survey Area	421.37 Ha		
Magisterial District	Rustenburg Local Municipality		
	Bojanala Platinum District Municipality		
1:50 000 Map Sheet	2527CA		
	2527AC		

Coetzee,	FP

HIA: Prospecting Right and Waste License Application for the Mining of Chrome Ore and Platinum Group Metals (PGM) on the Farm Uitvalgrond 105 JQ, North West Province.

1:250 0000 Map Sheet	2526
Central Coordinates of the	27.125758°E
Development	25.491062°S

**Table 1: Physical Environment** 

The survey area falls within the Savanna Biome, particularly the Central Bushveld Bioregion and more specifically the Zeerust Thornveld (SVcb 3). It extends along the plains from the Lobatsi River in the west via Zeerust, Groot Marico and Mabaalstad to the flats between the Pilanesberg and western end of the Magaliesberg in the east (including the valley of the lower Selons River) (Mucina & Rutherford 2006).

The survey footprint is characterised as an open and flat area dominated by clay and dark cotton soils covered mostly in grasses and sporadic clusters of trees. The landscape is dominated by extensive ploughing activities with most of the area consisting of old agricultural fields (mostly fallow). In general the region is dominated by mining activities such as old shaft headgear, workshops, processing plants, administration buildings, sewage works, dumps, dams and mining plants. Infrastructure includes dirt tracks, tar roads, fences, power lines, dams, grazing lands, railway lines associated with the surrounding mines.

Rustenburg normally receives about 513 mm of rain per year, with most rainfall occuring mainly during mid-summer. It receives the lowest rainfall (0 mm) in June and the highest (101 mm) in January. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Rustenburg range from 19.3°C in June to 29.4°C in January. The region is the coldest during July when the mercury drops to 1.7°C on average during the night (SAExplorer 2018).

Current Zoning	Mining		
	Cattle grazing (pastoralism)		
Economic activities	Farming		
	Mining		
Soil and basic geology	Sediments of the Pretoria Group (Transvaal Supergroup) in this area,		
	particularly the Silverton and Rayton Formations, are mostly shale		
	with less quartzite and conglomerate. Carbonates, volcanic rocks,		
	breccias and diamictites also occur in the Pretoria Group. Bronzite,		
	harzburgite, gabbro and norite of the Rustenburg Layered Suite		
	(Bushveld Igneous Complex) are also found. Soils are mostly deep,		
	red-yellow, apedal, freely drained with high base status also with		
	some verticor melanic clays.		
Prior activities	Livestock farming and agriculture		
Socio Economic	The Rustenburg Local Municipality is a category B municipal council		
Environment	consisting of 45 wards. It is located in the eastern parts of the North-		
	West Province and is accessible to a number of major South African		
	urban centres. The total population is 626 522 people, comprising of		
	54% males and 46% females. The significant growth in Rustenburg is		
	largely attributed to the impact of the world's four largest mines in the		
	immediate vicinity of the town, namely, Anglo Platinum, Impala		
	Platinum, Xstrata and Lonmin. Approximately 97% of the total		
	platinum production occurs in Rustenburg, with the mining sector		
	providing around 50% of all formal employment.		
Evaluation of Impact	An evaluation of the impact of the development on heritage resources		
	relative to the sustainable social and economic benefits NHRA (Act No.		
	25 of 1999, Section 38(3d)): <b>Positive</b>		

## **Table 2: Socio-economic environment**



Figure 1: Regional context of the survey footprint located northwest of Rustenburg (indicated by the red area)

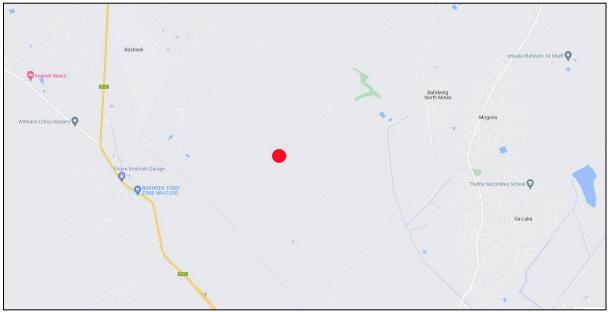


Figure 2: Local context of the survey area located north of Phokeng (indicated by the red area)

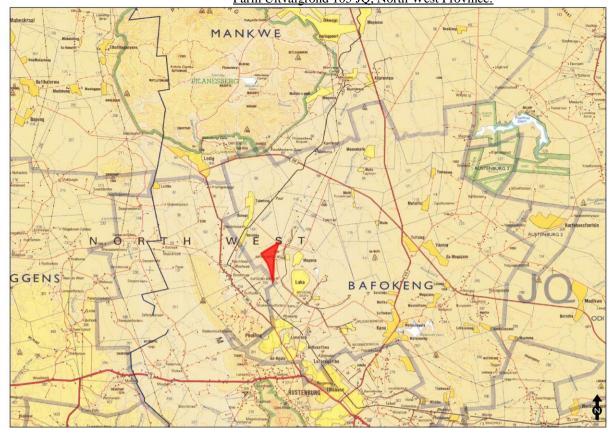


Figure 3: Local context of the survey footprint (1:250 000 Topographical Map 2526)

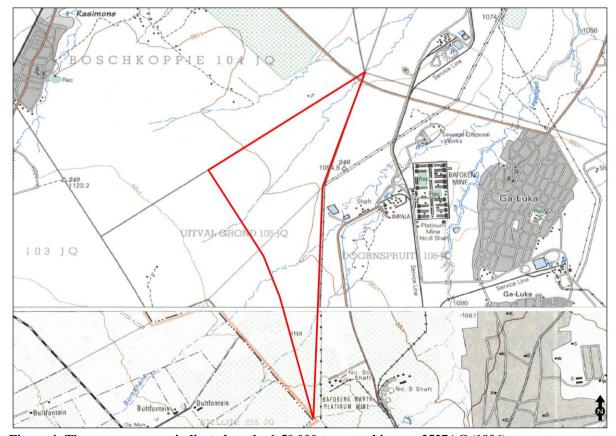


Figure 4: The survey area as indicated on the 1:50 000 topographic map 2527AC (1996)

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Figure 5: Survey area within general context (Google Earth Pro 2022)



Figure 6: Survey area within local context (Google Earth Pro 2022)



Figure 7: General view of the survey footprint (central section)



Figure 8: General view of the existing infrastructure



Figure 9: General view of the existing infrastructure



Figure 10: General view of the survey footprint (northern section)



Figure 11: General view of the existing surface disturbance



Figure 12: General view of the survey footprint (northern section)



Figure 13: General view of the survey footprint (northern section)



Figure 14: General view of the survey footprint (southern section)

## 4. Proposed Project Description

As part of the application for a prospecting permit for Chrome ore (LG and MG Seams) and Platinum Group Metals (PGM), the invasive activities will include the following:

- Phased drill boreholes Programme: A programme of at least 125 drill borehole are planned to evaluate the mining potential of the LG chromite seam. The drilling will consist of BQ core, comprising a minimum of 1890 metres of drilling. This phase of drilling will determine the continuity, competency, thickness and grades of the LG seam at depths in excess of 70m below surface. All boreholes drilled will be rehabilitated by replacing unused cores back in the hole and replacing the soft overburden in the top 2m of each hole.
- Pitting, Trenching and Bulk Sampling: Bulk sampling will include the excavation of 27 pits and 13 trenches. The dimensions of the pit will be 10 m x 4m m x 2.5 m deep. Dimensions of the trenches will be 40m x 20m x 5m deep to get a bulk sample of 153 504 tons. The floor area will be wide enough to allow access for a front-end loader/excavator to collect sample material.
- Water Supply: Water uses under section 21 a-k of the NWA may be triggered, thus a Water Use Licence Aplication (WULA) will needed in cases there will be encroachment. When needed a WULA will be lodged with the department of Water & Sanitation (DWS).
- Ablution: Chemical toilets shall be used, no french drains and pits shall be permitted.
- Storage of dangerous goods: During the prospecting activities, limited quantities of diesel and fuel, oil and lubricants if any will be stored on site. These goods should be placed in a bounded area one and a half times the volume of the total amount of goods to be stored.

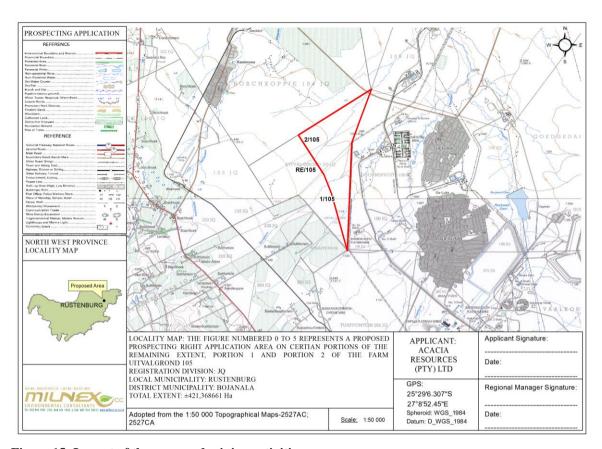


Figure 15: Layout of the proposed mining activities

## 5. Legal Framework

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE APPLIED
The Constitution of the Republic of South Africa (Act No. 108 of 1996)	
The National Environmental Management Act (Act No. 107 of 1998)	Section 24(1) Section 28(1)
The National Water Act (Act No. 36 of 1998)	Section 21 (a)(b)
Air Quality Act (Act No. 39 of 2004)	Section 21
National Forests Act, Act of 84 of 1998	-
The National Heritage Resources Act (Act No. 25 of 1999)	Section 38, 34, 35, 36
Conservation of Agricultural Resources Act (Act No. 85 of 1983)	
Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	
The National Water Act (Act No. 36 of 1998);	
Mine Health and Safety Act (Act No. 29 of 1996) (MHSA)	
Biodiversity Act (Act 10 of 2004)	
Bojanala Platinum District Municipality Integrated Development Plan (IDP)	
Rustenburg Local Municipality Integrated Development Plan (IDP) Review	

Table 3: Legal framework

Description of the	1. Listing Notice 1: GNR 327, Activity 19: The infilling or depositing of any
overall activity.	material of more than 10 cubic metres into, or the dredging, excavation, removal
(Indicate Mining Right,	or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic
Mining Permit,	metres from a watercourse;

HIA: Prospecting Right and Waste License Application for the Mining of Chrome Ore and Platinum Group Metals (PGM) on the Farm Uitvalgrond 105 JQ, North West Province.

Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, Technical co-operation permit, Additional listed activity

- **2.** Listing Notice 1, GNR 327, Activity 20 (Amended GNR 517: 2021): "Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity as contained in this Listing Notice or in Listing Notice 3 of 2014, required to exercise the prospecting right"
- **3. Listing Notice 1, GNR 327, Activity 24:** "The development of a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 meters"
- **4. Listing Notice 1, GNR 327, Activity 27:** "The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation."
- **5.** Listing Notice **2,** GNR **325,** Activity **19** (As Amended GNR **517: 2021):** "The removal and disposal of minerals which requires permission contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity as contained in this Listing Notice, Listing Notice 1 of 2014 or in Listing Notice 3 of 2014, required to exercise the permission".
- **6.** Listing Notice 3 GNR 324, Activity 12(h) (iv): The clearance of an area of 300 square metres or more of indigenous vegetation (h) North West (vi) Areas within a watercourse or wetland, or within 100 metres from the edge of a watercourse or wetland.

#### NEM:WA 59 of 2008:

7. **Residue stockpiles or residue deposits, Category A:** (15) The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a prospecting right or mining permit, in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).

Prospecting right with bulk samples for the prospecting of Chrome ore (Cr): LG & MG Seams and Platinum Group Metals (PGM) including associated infrastructure, structure and earthworks.

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etcetc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etcetc.)	Aerial extent of the Activity Ha or m <sup>2</sup>	LISTED ACTIVITY Mark with an X where applicable or affected.	APPLICAB LE LISTING NOTICE (GNR 324, GNR 325 or GNR 326)
Prospecting Right: BULK SAMPLING: 421,368661 Ha – 125 boreholes (maximum depth of 70m), 27 pits (10m x 4m x 2.5m), 13 trenches (40m x 20m x 5m).  Listing Notice 1: GNR 327, Activity 19: The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;	Extent of the proposed portions is 421,368661 Ha Concurrent backfilling will take place in order to rehabilitate	X	Listing Notice 1 (GNR 327), Activity 19

Farm Uitvalgrond 105 JQ, North West Province.			
Prospecting Right:	Extent of the proposed	X	Listing Notice 1
BULK SAMPLING:	portions are 421,368661		(GNR 327),
421,368661 Ha – 125 boreholes (maximum depth of	На		Activity 20
70m), 27 pits (10m x 4m x 2.5m), 13 trenches (40m	Concurrent backfilling		Activity 20
x 20m x 5m).	will take		
Bulk sample of 153 504 tons	place in order to		
Listing Notice 1, GNR 327, Activity 20 (Amended	rehabilitate		
GNR 517: 2021): "Any activity including the			
operation of that activity which requires a			
prospecting right in terms of section 16 of the			
Mineral and Petroleum Resources Development Act,			
as well as any other applicable activity as contained			
in this Listing Notice or in Listing Notice 3 of 2014,			
required to exercise the prospecting right"			
Clearance of indigenous vegetation:	Extent of the proposed	X	Listing Notice 1,
BULK SAMPLING:	portions are 421,368661		GNR 327,
421,368661 Ha – 125 boreholes (maximum depth of	На		Activity 24
70m), 27 pits (10m x 4m x 2.5m), 13 trenches (40m			
x 20m x 5m).	Concurrent backfilling		
Listing Notice 1, GNR 327, Activity 24: "The	will take place in order to		
development of a road – with a reserve wider than	rehabilitate.		
13,5 meters, or where no reserve exists where the road is wider than 8 metres"			
Clearance of indigenous vegetation:	Extent of the proposed	X	Listing Notice 1,
BULK SAMPLING:	portions are 421,368661		GNR 327,
421,368661 Ha – 125 boreholes (maximum depth of	Ha		Activity 27
70m), 27 pits (10m x 4m x 2.5m), 13 trenches (40m	Concurrent backfilling		
x 20m x 5m).	will take place in order to rehabilitate		
<b>Listing Notice 1, GNR 327, Activity 27:</b> "The clearance of an area of 1 hectares or more, but less	renabilitate		
than 20 hectares of indigenous vegetation."			
than 20 nectares of margenous vegetation.			
Prospecting:	Extent of the proposed	X	Tinting Nation 2
BULK SAMPLING:	portions are 421,368661	A	Listing Notice 2
421,368661 Ha – 125 boreholes (maximum depth of	Ha		GNR 325,
70m), 27 pits (10m x 4m x 2.5m), 13 trenches (40m	Concurrent backfilling		Activity 19
x 20m x 5m).	will take place in order to		
Listing Notice 2, GNR 325, Activity 19 (As	rehabilitate.		
Amended GNR 517: 2021): "The removal and			
disposal of minerals which requires permission			
contemplated in terms of section 20 of the Mineral			
and Petroleum Resources Development Act, as well			
as any other applicable activity as contained in this			
Listing Notice, Listing Notice 1 of 2014 or in Listing			
Notice 3 of 2014, required to exercise the permission			
Clearance of indigenous vegetation:	Extent of the proposed	X	Listing Notice 3
BULK SAMPLING:	portions are 421,368661		GNR 324,
421,368661 Ha – 125 boreholes (maximum depth of	Ha		Activity 12(h)
70m), 27 pits (10m x 4m x 2.5m), 13 trenches (40m	Concurrent backfilling		
	111 . 1 . 1		i
x 20m x 5m).	will take place in order to		
x 20m x 5m). Listing Notice 3 GNR 324, Activity 12(h) (iv): The	will take place in order to rehabilitate		
x 20m x 5m). Listing Notice 3 GNR 324, Activity 12(h) (iv): The clearance of an area of 300 square metres or more			
x 20m x 5m). Listing Notice 3 GNR 324, Activity 12(h) (iv): The clearance of an area of 300 square metres or more of indigenous vegetation (h) North West (vi) Areas			
x 20m x 5m). Listing Notice 3 GNR 324, Activity 12(h) (iv): The clearance of an area of 300 square metres or more			

Farm Uitvalgrond 105 JQ, North West Province.

NEM:WA 59 of 2008: Residue stockpiles or	NEM:W	'A 59 of
residue deposits, Category A: (15): The	2008	
establishment or reclamation of a residue stockpile or		y A: (15)
residue deposit resulting from activities which	Category	y A. (13)
require a prospecting right or mining permit, in terms		
of the Mineral and Petroleum Resources		
Development Act, 2002 (Act No. 28 of 2002).		

Table 4: Listed activities

Section 38 of the NHRA (Act No. 25 of 1999) stipulates that the following activities trigger a heritage survey:

Development criteria in terms of Section 38(1a-e) of the NHRA (Act No. 25 of 1999)	
Construction of road, wall, powerline, pipeline, canal or other linear form of	
development or barrier exceeding 300m in length	
Construction of bridge or similar structure exceeding 50m in length	
Development exceeding 5000 m <sup>2</sup> in extent	
Development involving three or more existing erven or subdivisions	
Development involving three or more erven or divisions that have been	
consolidated within past five years	
Rezoning of site exceeding 10 000 m <sup>2</sup>	
Any other development category, public open space, squares, parks, recreation grounds	
•	

Table 5: Activities that trigger Section 38 of the NHRA

Field rating system as recommended by SAHRA:

Field Rating	Grade	Significance	Recommended Mitigation
National Significance	Grade I	High significance	Conservation by SAHRA, national site nomination, mention any relevant international ranking.  No alteration whatsoever without permit from SAHRA.
Provincial Significance	Grade II	High significance	Conservation by provincial heritage authority, provincial site nomination. No alteration whatsoever without permit from provincial heritage authority.
Local Significance	Grade III-A	High significance	Conservation by local authority, no alteration whatsoever without permit from provincial heritage authority. Mitigation as part of development process not advised.
Local Significance	Grade III-B	High significance	Conservation by local authority, no external alteration without permit from provincial heritage authority. Could be mitigated and (part) retained as heritage register site.
Generally Protected A	Grade IV-A	High/medium significance	Conservation by local authority. Site should be mitigated before destruction. Destruction permit required from provincial heritage authority.
Generally Protected B	Grade IV-B	Medium significance	Conservation by local authority. Site should be recorded before destruction. Destruction permit required from provincial heritage authority.
Generally Protected C	Grade IV-C	Low significance	Conservation by local authority. Site has been sufficiently recorded in the Phase 1 HIA. It requires no further recording before destruction. Destruction permit required from provincial heritage authority.

Table 6: Field rating system to determine site significance

Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and they are valuable, finite, non-renewable and irreplaceable.

Farm Uitvalgrond 105 JQ, North West Province.

- All archaeological remains, features, structures and artefacts older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999, Section 34 & 35)**. The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory (see **Section 38**). No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the **South African Heritage Resources Agency (SAHRA)**. Full cognisance is taken of this Act in making recommendations in this report.
- Cognisance will also be taken of the Mineral and Petroleum Resources Development Act (Act No 28 of 2002) and the National Environmental Management Act (Act No 107 of 1998) when making any recommendations.
- Human remains older than 60 years are protected by the NHRA, with reference to Section 36. Human remains that are less than 60 years old are protected by the Regulations Relating to the Management of Human Remains (GNR 363 of 22 May 2013) made in terms of the National Health Act No. 61 of 2003 as well as local Ordinances and regulations.
- With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise.
- The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3, and the Australian ICOMOS (International Council on Monuments and Sites) Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- A copy of this report will be submitted on SAHRIS as stipulated by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), Section 38 (especially subsection 4) and the relevant Provincial Heritage Resources Authority (PHRA).
- Note that the final decision for the approval of permits, or the removal or destruction of sites, structures and artefacts identified in this report, rests with the SAHRA (or relevant PHRA).

## 6. Study Approach/Methodology

Geographical information (KML shapefiles) on the proposed prospecting activities was supplied by Milnex CC. The most up-to-date Google Earth images and topographic maps were used to indicate the survey area. Topographic maps were sources from the Surveyor General. Please note that all maps are orientated with north facing upwards (unless stated otherwise).

The strategy during this survey was to conduct a thorough investigation of the various portions of the farm that form part of the application. The aim was therefore to conduct a detailed pedestrian (foot) and predictive survey of the survey footprint, augmented by existing knowledge and aerial information of the region. Existing infrastructure was used to gain access to the area followed by detailed pedestrian investigations.

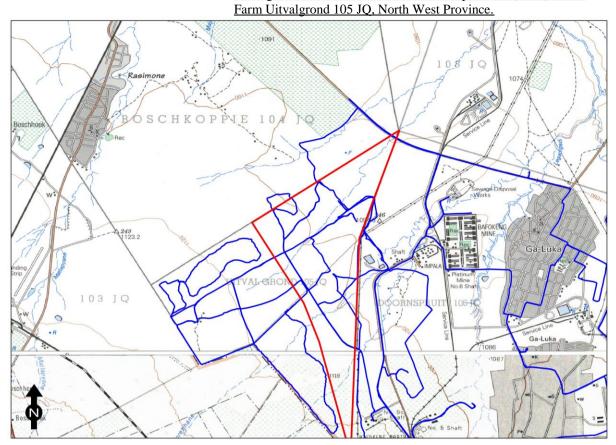


Figure 16: Recorded survey tracks for the project

## 6.1 Review of existing information/data

Additional information on the cultural heritage of the area was sourced from the following records:

- National Mapping Project by SAHRA (which lists heritage impact assessment reports submitted for South Africa);
- Environmental Potential Atlas (ENPAT);
- Online SAHRIS database;
- National Automated Archival Information retrieval System (NAAIRS):
- Maps and information documents supplied by the client; and
- Several heritage surveys have been conducted in the vicinity of the survey area (published and unpublished material on the area (Chirikure 2013, Coetzee 2015, 2018 & 2021, Pistorius 2003 & 2014, Van Schalkwyk 1996).

Several heritage surveys and research projects have been completed outside the project footprint during the last few years. Although several heritage impact assessments have been completed in the general vicinity of the survey area, no heritage sites were recorded inside or near the current survey footprint (Chirikure 2013, Coetzee 2015, 2018 & 2021, Pistorius 2003 & 2014, Van Schalkwyk 1996).

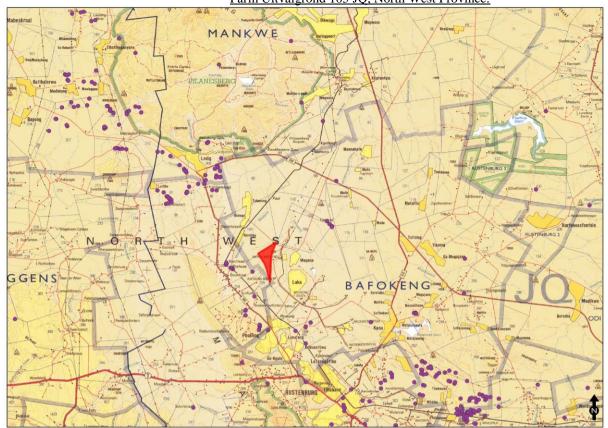


Figure 17: Recorded sites near the survey footprint as recorded on SAHRIS (as at August 2022)

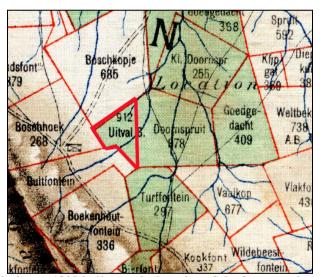


Figure 18: Jeppe's Map dating to 1899 indicates the location of the farm north west of Rustenburg

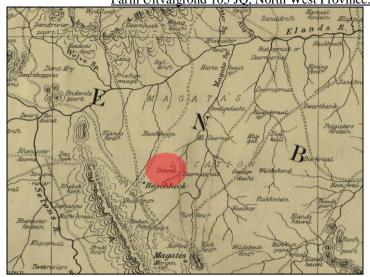


Figure 19: War Office Map indicating the location of the survey area north west of Rustenburg in 1899

The Surveyor General's map of the farm Uitvalgrond 105 JQ confirms that the farm was first surveyed in 1916, however the Deed of Transfer was already issued in September 1864 (also see Addendum 3).

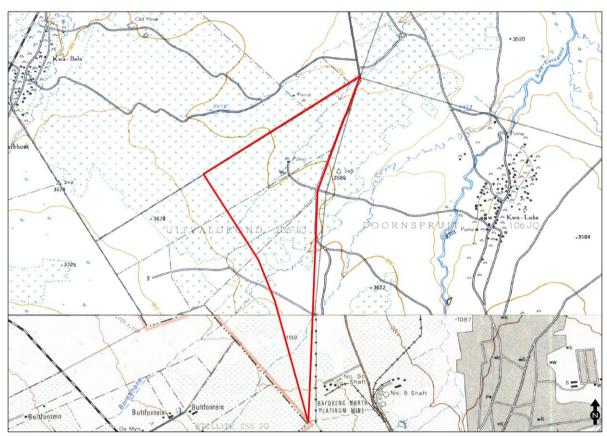


Figure 20: The survey area as indicated on the 1:50 000 topographic map 2527 AC (1963)

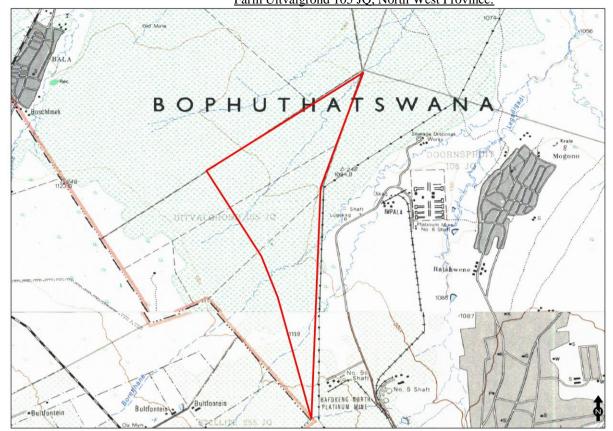


Figure 21: The survey area as indicated on the 1:50 000 topographic map 2527 AC (1986)

## 6.2 Palaeontological sensitivity

The properties are underlain by the Marginal Zone (norites), the Lower and the Upper Critical Zone (pyroxenite, norite anorthosites) and the Main Zone (gabbro-norites) of the Rustenburg Layered Suite, Bushveld Complex.

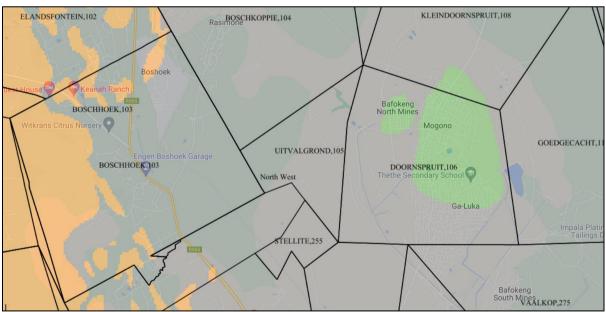


Figure 22: Palaeontological sensitivity zones as indicated for the survey footprint (SAHRIS 2021)

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW		Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	11 ( ) ( )	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO No palaeontological studies are required	
WHITE/CLEAR	Will require a minimum of a desktop study. As more UNKNOWN information comes to light, SAHRA will continue to popula the map.	

The palaeontological sensitivity map was extracted from the SAHRIS database and indicates a grey (Insignificant/zero) sensitivity. As a result no palaeontological study will be required for the survey footprint.

#### 6.3 Site visits

The field survey was conducted on 24 November 2022.

#### 6.4 Social interaction and current inhabitants

Local resident occupying the land were consulted during the survey to locate known heritage sites in the region.

## 6.5 Public Consultation and Stakeholder Engagement

An advertisement was placed in English in the local newspaper (Rustenburg Herald) notifying the public of the EIA process and requesting Interested and Affected Parties (I&APs) to register with, and submit their comments to Milnex CC. I&APs were given the opportunity to raise comments within 30 days of the advertisement. Site notices were placed (as anticipated on the coordinates below) on site in English to inform surrounding communities and immediately adjacent landowners of the proposed development.

Identified I&APs, including key stakeholders representing various sectors, are directly informed of the proposed development and the availability of the Scoping Report via registered post on 13 June 2022 and were requested to submit comments by 14 July 2022 (30 days). A copy of the report is also available at the Milnex offices in Schweizer-Reneke, 4 Botha Street, Schweizer-Reneke and Potchefstroom (Waterberry Street, Waterberry Square, 1st floor, Office 5B, Potchefstroom), between 7:30AM and 5PM, Monday to Friday. No comments were received from the I&APs.

## 6.6 Assumptions, restrictions, gaps and limitations

No severe physical restrictions were encountered as the survey area was generally accessible. However, please note that permission to access a certain portion of Portion 1 was not granted by the current landowner. However, previous surveys and aerial surveys from the region confirmed that no structures are present in this section of the survey footprint.

## 6.7 Methodology for assessment of potential impacts

All impacts identified during the EIA stage of the study will be classified in terms of their significance. Issues were assessed in terms of the following criteria:

- The **nature**, a description of what causes the effect, what will be affected and how it will be affected;
- The **physical extent**, wherein it is indicated whether:
  - o 1 the impact will be limited to the site;
  - o 2 the impact will be limited to the local area;
  - o 3 the impact will be limited to the region;
  - o 4 the impact will be national; or
  - o 5 the impact will be international.
- The **duration**, wherein it is indicated whether the lifetime of the impact will be:
  - 1 of a very short duration (0–1 years);
  - o 2 of a short duration (2-5 years);
  - o 3 of a medium-term (5–15 years);
  - o 4 of a long term (> 15 years); or
  - o 5 permanent.
- The **magnitude** of impact, quantified on a scale from 0-10, where a score is assigned:
  - o 0 small and will have no effect;
  - o 2 minor and will not result in an impact;
  - o 4 low and will cause a slight impact;
  - o 6 moderate and will result in processes continuing but in a modified way;
  - o 8 high, (processes are altered to the extent that they temporarily cease); or
  - o 10 very high and results in complete destruction of patterns and permanent cessation of processes;
- The **probability** of occurrence, which describes the likelihood of the impact actually occurring and is estimated on a scale where:
  - o 1 very improbable (probably will not happen);
  - o 2 improbable (some possibility, but low likelihood);
  - o 3 probable (distinct possibility);
  - o 4 highly probable (most likely); or
  - o 5 definite (impact will occur regardless of any prevention measures);
- The **significance**, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high;
- The **status**, which is described as either positive, negative or neutral;
  - The degree to which the impact can be reversed;
  - o The degree to which the impact may cause irreplaceable loss of resources; and
  - o The degree to which the impact can be mitigated.

The significance is determined by combining the criteria in the following formula:

- $S = (E+D+M) \times P$ ; where:
- S = Significance weighting
- E = Extent
- D = Duration
- M = Magnitude
- P = Probability

Farm Uitvalgrond 105 JQ, North West Province.

Points	Significance Weighting	Discussion
< 30 points	Low	Where this impact would not have a direct influence on
	Low	the decision to develop in the area.
31-60	Medium	Where the impact could influence the decision to
point		develop in the area unless it is effectively mitigated.
> 60 points	points High	Where the impact must have an influence on the
	High	decision process to develop in the area.

#### 7. The Cultural Heritage Sites

#### 7.1. **Isolated occurrences**

Isolated occurrences are artefacts or small features recorded on the surface with no contextual information. No other associated material culture (in the form of structures or deposits) was noted that might provide any further context. This can be the result of various impacts and environmental factors such as erosion and modern developments. By contrast archaeological sites are often complex sites with evidence of archaeological deposit and various interrelated features such as complex deposits, stone walls and middens. However, these isolated occurrences are seen as remains of erstwhile complex or larger sites and they therefore provide a broad indication of possible types of sites or structures that might be expected to occur or have occurred in the survey footprint.

Throughout the survey footprint no isolated finds were recorded.

#### 7.2 Heritage sites

None were recorded during the survey.

#### 8. **Locations and Evaluation of Sites**

None.

#### 9. **Management Measures**

Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/recorded and a management plan can be developed for future action. Those sites that are not impacted on can be written into the management plan, whence they can be avoided or cared for in the future.

#### 9.1 **Objectives**

- Protection of archaeological, historical and any other site or land considered being of cultural value within the project boundary against vandalism, destruction and theft.
- The preservation and appropriate management of new discoveries in accordance with the NHRA, should these be discovered during construction activities

The following shall apply:

Known sites should be clearly marked in order that they can be avoided during construction activities.

- The contractors and workers should be notified that archaeological sites might be exposed during the construction activities.
- Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Control Officer shall be notified as soon as possible;
- All discoveries shall be reported immediately to a heritage practitioner so that an investigation and evaluation of the finds can be made. Acting upon advice from these specialists, the Environmental Control Officer will advise the necessary actions to be taken:
- Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and
- Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the NHRA (Act No. 25 of 1999), Section 51. (1).

#### 9.2 Control

In order to achieve this, the following should be in place:

- A person or entity, e.g. the Environmental Control Officer, should be tasked to take responsibility for the heritage sites and should be held accountable for any damage.
- Known sites should be located and isolated, e.g. by fencing them off. All construction workers should be informed that these are no-go areas, unless accompanied by the individual or persons representing the Environmental Control Officer as identified above.
- In areas where the vegetation is threatening the heritage sites, e.g. growing trees pushing
  walls over, it should be removed, but only after permission for the methods proposed has
  been granted by SAHRA. A heritage official should be part of the team executing these
  measures.

## 10. Recommendations and Conclusions

No archaeological (both Stone Age and Iron Age) or historical artefacts, assemblages, features, structures or settlements were recorded during the survey of the project footprint. It is well known that Late Iron Age stone-walled settlements do not usually occur in open low-lying grasslands. Especially black cottons soils high in clay content.

It is therefore recommended, from a cultural heritage perspective that the proposed prospecting activities may proceed, taking into account the mitigation measures.

#### Also, please note:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

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## Addendum 1: Archaeological and Historical Sequence

The table provides a general overview of the chronological sequence of the archaeological periods in South Africa.

PERIOD	APPROXIMATE DATES
Earlier Stone Age	more than 2 million years ago to >200 000 years ago
Middle Stone Age	<300 000 years ago to >20 000 years ago
Later Stone Age (Includes hunter-gatherer rock art)	< 40 000 years ago up to historical times in certain areas
Early Iron Age	c. AD 200 - c. AD 900
Middle Iron Age	c. AD 900 – c. AD 1300
Late Iron Age (Stonewalled sites)	c. AD 1300 - c. AD 1840 (c. AD 1640 - c. AD 1840)

<sup>&</sup>lt; = less than; > = greater than

## **Archaeological Context**

#### **Stone Age Sequence**

Concentrations of Early Stone Age (ESA) sites are usually present on the flood-plains of perennial rivers and may date to over 2 million years ago. These ESA open sites may contain scatters of stone tools and manufacturing debris and secondly, large concentrated deposits ranging from pebble tool choppers to core tools such as handaxes and cleavers. The earliest hominins who made these stone tools, probably not always actively hunted, instead relying on the opportunistic scavenging of meat from carnivore fill sites.

Middle Stone Age (MSA) sites also occur on flood plains, but are also associated with caves and rock shelters (overhangs). 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 preserve. Limited drive-hunting activities are also associated with this period.

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.

The following chronological sequence was recently established by prominent Stone Age archaeologists (Lombard et al 2012):

### **Later Stone Age**

• Age Range: recent to 20-40 thousand years ago

General characteristics: expect variability between assemblages, a wide range of formal
tools, particularly scrapers (microlithic and macrolithic), backed artefacts, evidence of
hafted stone and bone tools, borers, bored stones, upper and lower grindstones, grooved
stones, ostrich eggshell (OES) beads and other orna ments, undecorated/decorated OES
fragments, flasks/flask fragments, bone tools (sometimes with decoration), fishing
equipment, rock art, and ceramics in the final phase.

## o Ceramic or Final Later Stone Age

- Generally < 2 thousand years ago</li>
- MIS 1
- Contemporaneous with, and broadly similar to, final Later Stone Age, but includes ceramics
- Economy may be associated with hunter-gatherers or herders

## **Technological characteristics**

- Stone tool assemblages are often microlithic
- In some areas they are dominated by long end scrapers and few backed microliths; in others formal tools are absent or rare
- Grindstones are common, ground stone artefacts, stone bowls and boat-shaped grinding grooves may occur
- Includes grit- or grass-tempered pottery
- Ceramics can be coarse, or well-fired and thin-walled; some times with lugs, spouts and conical bases; sometimes with decoration; sometimes shaped as bowls
- Ochre is common
- Ostrich eggshell (OES) is common
- Metal objects, glass beads and glass artefacts also occur

## Final Later Stone Age

- $\blacksquare$  100 4000 years ago
- MIS 1
- Hunter-gatherer economy

## **Technological characteristics**

- Much variability can be expected
- Variants include macrolithic (similar to Smithfield [Sampson 1974]) and/or microlithic (similar to Wilton) assemblages
- Assemblages are mostly informal (Smithfield)
- Often characterised by large untrimmed flakes (Smithfield)
- Sometimes microlithic with scrapers, blades and bladelets, backed tools and adzes (Wilton-like)
- Worked bone is common
- OES is common
- Ochre is common
- Iron objects are rare
- Ceramics are absent

#### Wilton

• 4000 - 8000 years ago

- MIS 1
- At some sites continues into the final Later Stone Age as regional variants (e.g. Wilton Large Rock Shelter and Cave James)

## **Technological characteristics**

- Fully developed microlithic tradition with numerous formal tools
- Highly standardised backed microliths and small convex scrapers (for definition
- of standardisation see Eerkens & Bettinger 2001)
- OES is common
- Ochre is common
- Bone, shell and wooden artefacts occur

#### o Oakhurst

- 7000 12 000 years ago
- MIS 1
- Includes Albany, Lockshoek and Kuruman as regional variants

#### **Technological characteristics**

- Flake based industry
- Characterised by round, end, and D-shaped scrapers and adzes
- Wide range of polished bone tools
- Few or no microliths

## o Robberg

- 12 000 to 18 000 years ago
- MIS 2

#### **Technological characteristics**

- Characterised by systematic bladelet (<26mm) production and the occurance of outils ecailles or scaled pieces
- Significant numbers of unretouched bladelets and bladelet cores
- Few formal tools
- Some sites have significant macrolithic elements

## • Early Late Stone Age

- o 18 000 40 000 years ago
- o MIS 2-3
- o Informal designation
- Also known as transitional MSA-LSA
- o Overlapping in time with final Middle Stone Age

#### **Technological Characteristics**

- Characterised by unstandardised, often microlithic, pieces and includes the bipolar technique
- Described at some sites, but not always clear whether assemblages represent a real archaeological phase or a mixture of LSA/MSA artefacts

## Middle Stone Age

- Age Range: 20 000 30 000 years ago
- General characteristics: Levallois or prepared core techniques (for definitions see Van Peer 1992; Boeda 1995; Pleurdeau 2005) occur in which triangular flakes with convergent dorsal scars, often with faceted striking platforms, are produced. Discoidal systems (for definition see Inizan et al. 1999) and intentional blade production from volumetric cores (for definition see Pleurdeau 2005) also occur; formal tools may include unifacially and bifacially retouched points, backed artefacts, scrapers, and denticulates (for definition see Bisson 2000); evidence of hafted tools; occasionally includes marine shell beads, bone points, engraved ochre nodules, engraved OES fragments, engraved bone fragments, and grindstones.
- In the sequence below we highlight differences or characteristics that may be used to refine interpretations depending on context.

## • Final Middle Stone Age

- $\circ$  20 000 40 000 years ago
- o MIS 3
- o Informal designation partly based on the Sibudu sequence

## **Technological characteristics**

- Characterised by high regional variability that may include, e.g. bifacial tools, bifacially retouched points, hollow-based points
- Triangular flake and blade industries (similar to Strathalan and Melikane)
- Small bifacial and unifacial points (similar to Sibudu and Rose Cottage Cave)
- Sibudu point characteristics: short, stout, lighter in mass com pared to points from the Sibudu technocomplex, but heavier than those from the Still Bay
- Can be microlithic
- Can include bipolar technology
- Could include backed geometric shapes such as segments, as well as side scrapers

#### Sibudu

- 45 000 58 000 years ago
- MIS 3
- Previously published as informal late Middle Stone Age and post-Howieson's Poort at Sibudu
- Formerly known post-Howieson's Poort, MSA 3 generally, and MSA III at Klasies River

## **Technological characteristics**

- Most points are produced using Levallois technique
- Most formal retouch aimed at producing unifacial points
- Sibudu unifacial point (type fossil) characteristics: faceted platform; shape is somewhat elongated with a mean length of 43.9 mm), a mean breadth of 26.8 mm and mean thickness of 8.8 mm (L/B ratio 1.7); their mean mass is 11.8 g (Mohapi, 2012)
- Some plain butts
- Rare bifacially retouched points
- Some side scrapers are present
- Backed pieces are rare

#### • Howieson's Poort

- 58 000 66 000 years ago
- MIS 3-4

## **Technological characteristics**

- Characterised by blade technology
- Includes small (<4 cm) backed tools, e.g. segments, scrapers, trapezes and backed blades
- Some denticulate blades
- Pointed forms are rare or absent

### • Still Bay

- o 70 000 77 000 years ago
- o MIS 4-5a

## **Technological characteristics**

- Characterised by thin (<10 mm), bifacially worked foliate or lanceolate points
- Semi-circular or wide-angled pointed butts
- Could include blades and finely serrated points (Lombard et al. 2010)

## • Pre-Still Bay

- $\circ$  72 000 96 000 years ago
- o MIS 4-5

## **Technological characteristics**

• Characteristics currently being determined / studied

#### Mossel Bay

- o 77 000 to —105 000 years ago
- o MIS 5a-4
- o Also known as MSA II at Klasies River or MSA 2b generally

#### **Technological characteristics**

- Characterised by recurrent unipolar Levallois point and blade reduction
- Products have straight profiles; percussion bulbs are prominent and often splintered or ring-cracked
- Formal retouch is infrequent and restricted to sharpening the tip orshaping the butt

#### • Klasies River

- o 105 000 to —130 000 years ago
- o MIS 5d-5e
- o Also referred to as MSA I at Klasies River or MSA 2a generally

#### **Technological characteristics**

- Recurrent blade and convergent flake production
- End products are elongated and relatively thin, often with curved profiles
- Platforms are often small with diffused bulbs
- Low frequencies of retouch
- Denticulate pieces

## • Early Middle Stone Age

- o Suggested age MIS 6 to MIS 8 (130 000 to —300 000 years ago)
- Informal designation

## **Technological characteristics**

- This phase needs future clarification regarding the designation of cultural material and sequencing
- Includes discoidal and Levallois flake technologies, blades from volumetric cores and a generalised toolkit

## • Earlier Stone Age

- o Age range: >200 000 to 2 000 000 years ago
- General characteristics: early stages include simple flakes struck from cobbles, core and pebble tools; later stages include intentionally shaped handaxes, cleavers and picks; final or transitional stages have tools that are smaller than the preceding stages and include large blades.
- o In the sequence below we highlight differences or characteristics that may be used to refine interpretations depending on context.

#### • ESA-MSA transition

- 200 to —600 thousand years ago
- MIS 7-15

## **Technological characteristics**

- Described at some sites as Fauresmith or Sangoan
- Relationships, descriptions, issues of mixing and ages yet to be clarified
- Fauresmith assemblages have large blades, points, Levallois technology, and the remaining ESA components have small bifaces
- The Sangoan contains small bifaces (<100 mm), picks, heavy and light-duty denticulated and notched scrapers
- The Sangoan is less well described than the Fauresmith

#### • Acheulean

- o 300 thousand to —1.5 million years ago
- o MIS 8-50

## **Technological characteristics**

- Bifacially worked handaxes and cleavers, large flakes > 10 cm
- Some flakes with deliberate retouch, sometimes classified as scrapers
- Gives impression of being deliberately shaped, but could indicate result of knapping strategy
- Sometimes shows core preparation
- Generally found in disturbed open-air locations

#### Oldowan

- $\circ$  1.5 to >2 million years ago
- o MIS 50-75

## **Technological characteristics**

- Cobble, core or flake tools with little retouch and no flaking to predetermined patterns
- Hammerstones, manuports, cores
- Polished bone fragments/tools

## **Iron Age Sequence**

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.

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 Ndebele (Nguni-speakers) in the northern regions of South Africa with associated sites dating between the sixteenth and 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 difaqane (or mfecane).

#### **Ethno-historical Context**

## Royal Bafokeng History

Africans who worked with copper and iron inhabited the area between AD 350 to AD 600. Linguistic and archaeological evidence indicates that these Iron Age inhabitants are most likely the ancestors of the BaTswana and BaSotho, as well as the BaFokeng. Indeed it was only after around AD 1500 that the people became distinguishable as BaTswana and BaSotho. The BaKwena were one of the people that arose out of this group. Led by Malope and later his son Masilo between AD 1440 and AD 1560, the BaKwena split into smaller groupings that eventually peopled the region from the Highveld to the Kalahari. Between AD 1440 and AD 1560 they were led by Malope and later his son Masilo. The BaKwena split into smaller groupings that eventually populated the region from the Highveld to the Kalahari.

Around 1690, a severe drought caused the BaKwena to migrate. Those that migrated to Lesotho became known as the Sotho, but many remained in the area today known as Phokeng, about 10 km north of Rustenburg.

During the Difaqane of the 1820s, the Fokeng, led by Chief Sebitwane, defeated the Tswana in the Magaliesberg. But Mzilikazi's invasion of the area saw even these conquerors defeated by the Ndebele. They, in turn, were ousted from the region by a coalition of Griqua, Tswana and Voortrekkers in 1837.

During the Difaqane of the 1820s, the Fokeng, led by Chief Sebitwane, defeated the Tswana in the Magaliesberg. However, the Fokeng were later defeated by Mzilikazi and in turn, Mzilikazi was ousted from the region by a coalition of Griqua, Tswana and Voortrekkers in 1837.

The Bafokeng people can trace their history back to c. AD 1140. Kgosi (King) Sekete III, who ruled in the early 1700s, was the first king. The current Kgosi Leruo Molotlegi is the 36<sup>th</sup> King of the Bafokeng and the 15<sup>th</sup> direct descendent in the lineage of kings. Sekete III was followed by kings Diale, Ramorwa, Sekete IV and Thethe. Arguably the most influential king in Bafokeng history, Kgosi August Mokgatle, reigned from 1834 to 1891. By pooling community resources, he started buying land which the Bafokeng had occupied for centuries. Although Kgosi Mokgatle died 33 years before the world's largest deposits of platinum group metals were discovered under Bafokeng land, he enabled his people to lease their mineral rights and eventually claim royalties, which have been invested to establish a competent administration, civil service and infrastructure.

The Bafokeng descend from the BaKwena, and were settled in the area of Phokeng from the 15th century. With the arrival of the white farmers, the Bafokeng King Mokgatle (1836-1891) decided to secure the community's rights to land.

The BaFokeng are descended from the BaKwena, and were settled in the area of Phokeng in the 15th century. With the arrival of White people in the area, the BaFokeng King Mokgatle (1836-1891) decided to secure the community's rights to land. Although the Bafokeng submitted to the rule of Mzilikazi in the early part of the 19th century, Mzilikazi's Ndebele were eventually ousted from the region, and Mokgatle unified the Bafokeng and embarked on what would today be called a development programme.

He sought out missionaries to settle in the Phokeng area to further the education of the youth, and established cordial relations with Paul Kruger and the Voortrekkers. He sent men to Kimberly to work on the diamond mines to earn cash wages, which was used to buy land. He bought land in the name of missionary ChristophPenzhorn, and the land was held in a trust by Lutheran missionaries, since Blacks were not legally allowed to buy land. The policy of land purchases continued under the reign of August Motlolegi (1896-1938), and he maintained a policy of neutrality during the South African War. When platinum was discovered on BaFokeng land in 1921, the government and mining companies made many attempts to dispossess the BaFokeng of their land and mineral rights, all of which failed. The BaFokeng were continually involved in land disputes.

During the reign of Kgosi James Manotshe Motlolegi XII (1936-1956), the National Party came to power in 1948, and apartheid legislation began to be introduced. When Motlolegi XII died in 1956, Kgosi Edward Lebone Mololegi became the leader of the Bafokeng, and embarked on major infrastructural development. In 1972, Bophuthatswana became a self-governing state, and was granted 'independence' by the apartheid regime in 1977. President Lucas Mangope's relations with the BaFokeng were tense, and he sent their leaders into exile or had them imprisoned.

Later, protracted legal battles began with Mangope and Impala Platinum Mines over land and mineral rights. When Rocky Malebane-Metsing staged a coup in February 1988, and the coup failed, Malebane-Metsing, Lebone and his wife MmeMogolo went into exile.

Lebone only returned in 1995, the date which marks the proclamation of the Royal BaFokeng Nation. Lebone died in 2000, just after the BaFokeng's legal victory over Impala in 1999. He was succeeded by Leruo Tshekedi Motlolegi (SA History on Line 2018).

2000 – to date	Kgosi Leruo Molotlegi
1995 – 2000	Kgosi Mollwane Molotlegi
1956 – 1995	Kgosi Lebone Edward Molotlegi
1938 – 1956	Kgosi Manotshe Molotlegi
1897 – 1938	Kgosi Molotlegi
1891 – 1896	Kgosi Tumagole
1834 – 1891	Kgosi Mokgatle

## Rustenburg

#### Historical timeline

1850

The Nederduitsch Hervormde Church (Nederduitsch Reformed Church) establishes a congregation in Rustenburg.

16 November, A Hervormde congregation is established in Rustenburg.

10 December, The birth of Rustenburg.

1851

Rustenburg officially founded as administrative centre for surrounding region

1852

17-19 March, a full Volksraadvergadering (People's Council) takes place in Rustenburg. To inaugurate the event a Council House is erected, with construction having begun earlier in January of the same year.

A treaty with the English is ratified to avert civil war.

The Sand River Convention.

1853

Rustenburg's first shop opens, an event mentioned in the minutes of the NGK meeting of 4 March 1853.

8 August, the first official Algemene Kerkvergadering van die Nederduitsch Hervormde Kerk (General Church Meeting of the Reformed Church) in Transvaal takes place in Rustenburg. The council debates its relation to the Cape Synod, and the majority vote to remain independent of the body, a decision that leads to the formation of the Dutch Reformed Church.

August, Reverend Dirk van der Hoff posted to Rustenburg. Van Staden, until now acting Landdrost, is appointed on a permanent basis, a position he holds for a further 27 years.

Pretorius and Potgieter agree to work together and submit to the authority of the Volksraad, at a meeting that lasts over five days. Other agreements include improvements in methods of land surveying.

Paul Kruger establishes a school on his farm Waterkloof.

A delegation is sent to Sekwate to warn him and other chiefs against 'smuggling' weapons.

Paul Kruger is appointed a Field Cornet.

1854

June, Delegates at a meeting in Rustenburg decide to establish a congregation south of Rustenburg, to be named after the father of Hendrik Pretorius. Thus Pretoria comes into being.

1855

March, elections are held by the Volksraad, with Rustenburg allocated three of the council's 16 members.

1856

March, The number of Volksraad members is increased to 23, with six for Rustenburg.

1857

9 March, the Transvaal Vierkleur (four-colour flag) is raised for the first time ever – in Rustenburg.

1858

2 February, A new Constitution is signed, bringing into being the South African Republic. Potchefstroom is made the capital.

June, Every resident possessing land is compelled to pay £6 pounds per stand in tax.

1859

10 February, Reverend Dirk Postma (1818-1890) from Holland meets with a large number of discontented members of the Hervormde Kerk in Rustenburg. More than 300 people sign up as members of a new church, the so-called Dopper Kerk (Gereformeerde Kerk).

1860

8 October, A meeting organised by Schoeman and Andries Pretorius tries to resolve issues relating to political power. Pretorius is installed as president of the Republic, and acting president JH Grobbelaar is dismissed. Schoeman is appointed as Pretorius's Transvaal deputy. By 1862, there are effectively two acting presidents, each the leader of rival groups vying for control of the Republic.

The army of Jan Viljoen Marico marches on Rustenburg, but decides to set up camp when they learn that Kruger has arrived in Rustenburg. A clash outside Rustenburg sees Kruger victorious, the opposing sides came to an agreement, and a fresh presidential election is organised.

1863

April, an earthquake damages Reverend Postma's church.

1864

The first postmaster is appointed.

1866

The first government school opens its doors in 1866 with TC Dekker as the first teacher. On 22 February 1866 the Volksraad ratifies the principle of town and district schools (farm schools).

1868

Mining begins in the vicinity when Henry Hartley's claims of ancient gold diggings are confirmed by German traveler Karl Mauch.

1873

Tenders for building a permanent school are issued. By 1881 the school is closed.

1875

A German missionary from the Hermannsburg Mission Society in Germany, Lutheran Minister Ferdinand Zimmerman, buys land just outside Rustenburg.

1877

12 April, A proclamation of annexation is announced in Pretoria's Church Square and Rustenburg becomes the first town to see the British flag hoisted.

1880

December, The Boers decide to go to war, and Paul Kruger, Piet Joubert and MW Pretorius are elected to the leadership.

13 December, The triumvirate declare the Transvaal independent and the first shots are fired in Potchefstroom.

27 December, The Siege of Rustenburg begins, to prevent British soldiers from taking part in the war. The siege begins after the British soldiers refused to surrender a fort just outside the town, at the foot of the Magaliesberg.

1881

30 March, The siege ends after a peace deal is signed. The Transvaal is granted self-government, subject to British suzerainty. The Pretoria Convention on 3 August 1881 formalises the terms of peace.

A flour mill goes into operation by Mr Glatthaar but it is destroyed in a fire in 1886. Glatthaar, however, starts a mineral water works, an industry in operation until 1976. Writer H Rider Haggard visits Rustenburg, and makes notes on the terrain, especially a cave, which he immortalised as the pulpit in his famous *King Solomon's Mines*, written a decade later.

1882

SJ du Toit is appointed superintendent of education in the ZAR.

A town council is established with JGC Wagner as first chairperson and SQ du Toit as first town clerk. The town is divided into wards and 53 residents become eligible to vote for ward representatives.

1883

Paul Kruger, a resident of Rustenburg, is elected President of the Transvaal. Indians begin to settle in Rustenburg, and Ali Ismail opens the first store owned by an Indian. The Volksraad is bombarded with complaints about the presence of Indians in Transvaal towns, but despite restrictive legislation enacted in 1885, Indians continue to settle in the Transvaal.

1885

The amalgamation of the Hervormde church and the NG Church (Nederduitsch Gereformeerde Kerk) with its strong Cape influence, causes a rift in the Afrikaner community. The church is now called Nederduitsch Hervormde of Gereformeerde Kerk (Nederduitsch Reformed or Gereformeerde Church), also known as the United Church.

1888

22 March, The first telegraph line reaches the town.

1889

Rustenburg has 22 state schools (one in town and 21 farm schools) with a total of 519 learners.

1891

Wagner & Dawes tobacco company win a silver medal for quality tobacco at the Pretoria Landbouwgenootschap.

K Machol & Co is established on the southern slopes of the Magaliesberg.

1893

Plans for a railway line to Rustenburg begin after a petition is sent to the Volksraad. Although the request is turned down, a renewed demand in 1896 finds a sympathetic response.

1894

The National Bank of the South African Republic opens its first branch.

The Hervormde Church takes the United Church to court regarding church property.

1896

Master-builder Karl Heyne, who arrived in Kroondal in the mid-1890s, completes the Kroondal Lutheran Church.

1887

A rinderpest epidemic affects the entire subcontinent. Despite joint efforts by Colonial and Republican governments, about 4,5-million cattle die, bankrupting farmers and halting transport, which is almost totally reliant on cattle.

1898

April, Swarms of locust destroy maize crops, and Rustenburg is also hit by a flu epidemic.

1899

11 October, The South African War is declared, pitting the British against the two Boer republics

1900

15 June, For two weeks Jan Smuts organises Boer resistance in the area after Col. Baden-Powell occupies Rustenburg. Ladysmith, Kimberly and Mafeking come under siege.

The concentration camps, many in the Rustenburg area, saw 26 370 White women and children and 15 000 Black people perish.

1902

The war comes to an end with the defeat of the Boers, who sign the Treaty of Vereeniging on 31 May 1902.

1905

New African Industrials Ltd begins production of Veldt Cigarettes. The company wins prizes at various agricultural exhibitions in Cape Town in 1907 and at the Rand Show in 1908. The United Tobacco Company also begins operating in the area, buying tobacco from farmers.

1910

The colonies and Republics become the Union of South Africa.

1914

When the first World War breaks out and Smuts and Botha side with the British, some Boer leaders begin a rebellion. The army's Commander in Chief, Beyers, tenders his resignation, and tries to mobilise Boer leaders like De la Rey to join his cause. Beyers was later defeated by Botha near Rustenburg.

1918

A flu epidemic ravages the area.

1919

July, the Rustenburg branch of the Suid Afrikaanse Vroue Federasie (Women's federation) convenes for the first time.

1920

The decade sees residents of Bethlehem removed to the township of Tlhabane, some 5km from the centre of town.

The Rustenburg Power Station begins producing power.

1921

The first attempts are made to mine chrome commercially. The Union Steel Corporation mines 400 tons of ore.

1922

The Vroue Federasie begins to run soup kitchens as the "poor white problem" becomes increasingly evident, and from 1938 to 1942 the federation steps up its activities.

1925

De Kroon Platinums is established.

1929

Rustenburg produces 8.2 million pounds of tobacco, which rises to 16 million pounds in 1944, and passes the 30-million pound mark in 1950.

1932

An irrigation dam at Olifant's Nek is completed. Smaller dams in Boschpoort (16km from Rustenburg) and Buffelspoort (24km from Rustenburg) are completed in 1933.

1936

The Catholics, active in the area since 1884, erect a church.

1937

The corporation sign three-year leases with the Kgafela-Kgatla to situate transit points in Saulspoort.

1938

The SPCA is established in Rustenburg, by a Miss Lilford. Rustenburg Chrome Mines established.

1940

Rustenburg Platinum Mines established.

1948

The Nationalist Party comes to power and begins to implement apartheid policy. Blacks are not allowed in the streets after 9pm, when a siren announces the beginning of the curfew every night.

1950

The Catholics establish a convent in 1950.

1954

The Rustenburg Kloof, until 1954 an open area used by locals as a picnic spot, is established as a resort for Whites.

Thabane, already established in the 1920s, begins to see further extensions. Thabane was first known as Oukasie (Old Location) and was first settled by people who were later classified as Coloured.

1960s

Boitokong and Hartebeesfontein are established in the 1960s and 1970s. Since they fall on the South African side of the border, they come under the administration of the Transvaal Provincial Authority. Other townships, such as Phokeng, and newly created townships Geelhoutpark, Meriteng and Monakato, fall under the Bophuthatswana government.

From Rustenburg itself, people are removed to an area near today's Sun City. From Twee Rivier, near Brits on the Crocodile River, people are moved to Rooikraalspruit. The Indians are moved out of the town centre to a site close to industrial areas, called Zinniaville.

1964

4 January, Sanlam opens its first branch.

New suburbs are proclaimed: Proteapark, Cashan 1 and Avondrust Extension 5.

1965

23 January, Bram Fischer goes into hiding on a farm in Rustenburg.

1972

Bophuthatswana declared a self-governing state.

1975

A new party is formed to contest elections in Bophuthatswana, the Seoposengwe Party, a front for radical forces to fight against apartheid from within the system.

1976

June, Students in the surrounding townships and in the homeland emulate their Soweto counterparts. Labour unrest and attempts to unionise mineworkers accelerate, forever changing the apparently placid temper of the region.

1977

Bophuthatswana granted "independence" in 1977 by the apartheid regime, the first homeland to have this status forced onto it. Mmabatho is made the seat of government. Lucas Mangope becomes president, and in the first election his Bophuthatswana Democratic Party gains the most seats in the 96-seat parliament. Of these, only 48 are open for election, the other 48 being reserved for local chiefs appointed by Mangope. The Seoposengwe Party win six seats.

1978

July, After securing a deal with Bophuthatswana President Lucas Mangope, Sol Kerzner's Sun International begins construction of Sun City, and the resort opens its doors on 7 December 1979.

1980s

Implats at first mines the Merensky Reef, and in the early 1980s it begins to mine the UG2 chromitite layer as the technology to smelt higher chrome ore was developed. In 1968 it had acquired a mining lease over land owned by the BaFokeng, later known as the Royal BaFokeng Nation (RBN), and in 1999 it was granted a 40-year lease.

1986

Freedom Park, an informal settlement, is established after women set up shacks to sell liquor to mineworkers.

Soya begins organising clean-up campaigns, closing down shebeens and taking up social issues.

A country-wide State of Emergency, meant to quell unrest, leads instead to increased resistance. Union strikes increase, especially by NUM and FAWU, whose members at Rainbow Chickens are particularly active.

1988

10 February, Rocky Malebane-Metsing mounts a coup in Bophuthatswana, taking over army barracks, police stations, the TV and radio stations, and the telephone exchange. Mangope and his ministers are all arrested, as are brigadiers, army generals, police officials and other strategic figures. By 6am, they are all in jail, except for the foreign minister, who manages to escape by jumping a fence, and seeks refuge in the South African embassy in Mmabatho. His defection gives the South African government a reason to put down the coup and invade Bophuthatswana. AWB leader Eugene Terre'Blanche proposes to stand for election for the Rustenburg seat, but eventually scuttles his plan.

1990

After farmers eject them from White farms, about 600 homeless people take refuge at the Catholic Church in St Joseph's, just outside Phokeng. Some 200 farmers decide to

come to the mission to eject the homeless people, but Bishop Kevin Dowling gets help from the police to keep the farmers at bay. The homeless people are eventually transferred to Boitokong in 1992.

The ANC sets up a branch in Phokeng.

1991

- 12 February, Rev Kevin Dowling is summoned to appear before Mangope and his cabinet and security force personnel.
- 15 March, All the members of the Phokeng ANC executive are arrested, including educationist Maggie Bopalamo.
- 23 November, A massive explosion at the St Joseph's mission occurs at 2am, hours before a proposed ANC meeting.

1992

April, Rev Kevin Dowling is again summoned by Mangope, and accused of fomenting unrest.

The first squatters move to Boitokong.

1994

The ANC wins the first democratic election. Popo Molefe is appointed the premier of the newly formed Northwest Province.

1996

Clashes between Sotho and Xhosa factions see 36 people killed.

1997

Establishment of Nkaneng, an informal settlement situated 40km from Phokeng next to an Amplats mine.

Rev Kevin Dowling testifies at the Truth and Reconciliation Commission (TRC). October, President Nelson Mandela delivers a speech at the Bleskop Stadium in Rustenburg.

2001

December, 1500 mineworkers hand over a memorandum to Implats accusing the company of being racist.

# **Addendum 2: Description of the Recorded Sites**

A system for grading the significance of heritage sites was established by the NHRA (Act No. 25 of 1999) and further developed by the South African Heritage Resources Agency (SAHRA 2007) and has been approved by ASAPA for use in southern Africa and was utilised during this assessment.

## Example

A. GENERAL SITE DI	ESCRIPTION					
Site type					,	
Site Period						
Physical description						
Integrity of deposits						
or structures						
Site extent						
B. SITE EVALUATION	N					
<b>B1. HERITAGE VALU</b>	JE			Yes	No	
Historic Value						
	to the community or pattern of South Africa's history or precolonial history.					
	association with the life or work of a person, group or organisation of					
importance in the history						
	ng to the history of slavery in South Afr	rica.				
Aesthetic Value					1	
It has importance in exhibiting particular aesthetic characteristics valued by a particular						
community or cultural group.						
Scientific Value			0.0 1 10: 1		1	
	t has potential to yield information that will contribute to an understanding of South Africa's					
natural and cultural heritage.						
It has importance in demonstrating a high degree of creative or technical achievement at a						
particular period.						
It has importance to the wider understanding of the temporal change of cultural landscapes,						
settlement patterns and human occupation.						
Social Value						
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).						
Tourism Value	is (sense of place).			<u> </u>		
It has significance through its contribution towards the promotion of a local sociocultural identity						
and can be developed as tourist destination.						
Rarity Value						
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural						
heritage.						
Representative Value						
It is importance in demonstrating the principle characteristics of a particular class of South						
Africa's natural or cultur		•				
B2. REGIONAL CONT						
Other similar sites in the	regional landscape.					
C. SPHERE OF SIGNI		High	Medium	L	ow	
International						
National						
Provincial						
Local						
Specific community						
D. FIELD REGISTER RATING						
National/Grade 1 [should be registered, retained]						
	ıld 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]				
Generally protected B [Medium significance, to be recorded]				
Generally Protected C [Low significance, no further action]				
E. GENERAL STATEMENT OF SITE SIGNIFICANCE				
Low				
Medium				
High				
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT				
None				
Peripheral				
Destruction				
Uncertain				
G. RECOMMENDED MITIGATION				
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS				
I. PHOTOGRAPHS				

# Addendum 3: Surveyor General Farm Diagram

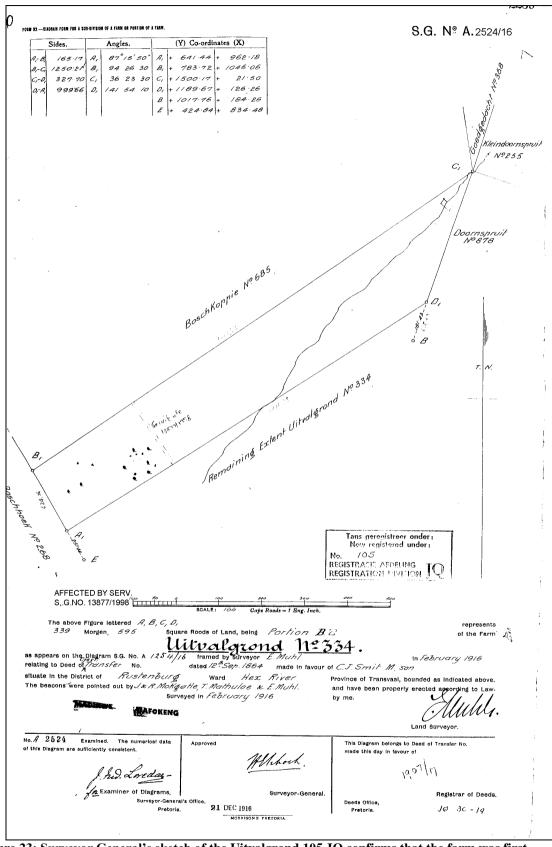


Figure 23: Surveyor General's sketch of the Uitvalgrond 105 JQ confirms that the farm was first surveyed in 1916, however the Deed of Transfer was already issued in September 1864

#### **Addendum 4: Relocation of Graves**

Marked graves younger than 60 years do not fall under the protection of the NHRA (Act No. 25 of 1999) with the result that exhumation, relocation and reburial can be conducted by an undertaker. This will include logistical aspects such as social consultation, purchasing of plots in cemeteries, procurement of coffins, etc. Other legislative measures which may be pertinent include the Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925), Regulations Relating to the Management of Human Remains (GNR 363 of 22 May 2013) made in terms of the National Health Act No. 61 of 2003, Ordinance on Exhumations (Ordinance No. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place.

Marked graves older than 60 years are protected by the NHRA (Act No. 25 of 1999) an as a result an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. Note that unmarked graves are by default regarded as older than 60 years and therefore also falls under the NHRA (Act No. 25 of 1999, Section 36).

The relocation of graves entails the following procedure:

- Notices of intent to relocate the graves must be put up at the burial site for a period of 60 days. This should contain contact information where communities and family members can register as interested and affected parties. All information pertaining to the identification of the graves must be documented for the application of a SAHRA permit. All notices must be in at least 3 languages, of which English is one. This is a requirement by law.
- These notices of intention must also be placed in at least two local newspapers and have the same information as above.
- Local radio stations can also be used to try contact family members. This is not required by law, but can be helpful.
- During this time (60 days) a suitable cemetery must be identified near to the development or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account.
- Once the 60 days have passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.
- Once the permit has been issued, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any remains and any additional objects found in the grave.

## Information needed for the SAHRA permit application

- The permit application must be done by an archaeologist.
- A map of the area where the graves have been located.
- A survey report of the area prepared by an archaeologist.
- All the information on the families that have identified graves.
- A letter of permission from the landowner granting permission to the developer to exhume and relocate the graves.

- A letter (or proof of purchase of the plots) from the new cemetery confirming that the graves will be reburied there.
- Details of the farm name and number, magisterial district and GPS coordinates of the gravesite.

Graves are generally be classified into four categories. These are:

- Graves younger than 60 years;
- Graves older than 60 years, but younger than 100 years;
- Graves older than 100 years; and
- Graves of victims of conflict or of individuals of royal descent.