

FINAL CONSOLIDATED REPORT

Heritage Impact Assessment
Proposed development of high-cost housing and filling station
Portion 9 of the farm Mooiplaats 147 JT

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Project type	Phase 1 Heritage Impact Assessment	
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Project code	ARC2007/010	
Project name	Mooiplaats HIA	
Report type	Final Consolidated Report	
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Client	GO EnviroScience cc	
Province:	Mpumalanga	
Magisterial district:	Belfast	
1: 50 000 Map number (or SAN chart):	2530AD	
Latitude and Longitude:	Between S25°29'/E30°25' & S25°29'/E30°24' and S25°28'/E30°24' & S25°27'/E30°24'	
Farm Name and No.:	Portion 9 of Mooiplaats 147 JT	
Town/Nearest Town:	Machadodorp and Nelspruit	

TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	2
2.	INTRODUCTION	3
3.	PROJECT BACKGROUND	4
4.	TERMS OF REFERENCE	Error! Bookmark not defined.
5.	LEGAL REQUIREMENTS	5
6.	AREA BACKGROUND	10
7.	GEOGRAPHICAL INFORMATION	Error! Bookmark not defined.
	Property Description	Error! Bookmark not defined.
	Survey Area Details	Error! Bookmark not defined.
	Location Data	8
8.	METHODOLOGY	11
9.	SITE DESCRIPTIONS	13
10.	SITE SIGNIFICANCE	24
11.	SITE FIELD RATINGS	Error! Bookmark not defined.
12.	CONCLUSION	50
13.	RECOMMENDATIONS	51
14.	REFERENCES	52

1. EXECUTIVE SUMMARY

Purpose

Archaic HPM was contracted by GO Enviroscience cc. to undertake a Phase 1 Heritage Impact Assessment (HIA) on areas on the Portion 9 of the Farm Mooiplaats 147 JT (refer to Site Location, p. **). These areas have been earmarked for proposed development of a high-income housing estate and a filling station.

Findings

The HIA identified the following heritage resources:

large stonewalled structures and terraces in various states of preservation

four rock engraving sites, two of which may be associated with the stonewalled structures

three Middle Stone Age sites

a rock outcrop with various usage areas, such as cupules, grinding/rubbing spots

Recommendations

Large scale, detailed survey and mapping of proposed development impact areas

Mitigation of certain sites in proposed development impact areas

Removal of three loose stones with engravings from proposed development impact areas to more appropriate locations

Detailed documentation and recording of rock engraving sites, and mitigation on parts where sites have been disturbed

Declaration of rock engraving site as a provincial heritage site

Stakeholders

Schoemanskloof Water Strome, developer

Mr. Willie Stols, landowner

GO Enviroscience, environmental impact consultants

2. INTRODUCTION

Archaic HPM acts as the Archaeological Contracts Office of the Department of Anthropology and Archaeology, University of Pretoria. The company specialises in the management of heritage projects. The field of expertise include the generation of desktop surveys, the undertaking of scoping surveys and Phase 1 Archaeological Impact Assessments and/or Specialist reports, Phase 2 Mitigation of archaeological and/or heritage sites, and Phase 3 Site Management Plans.

The parameters within which Archaic HPM operates are firstly the National Heritage Resources Act No. 25 of 1999 (NHRA) and minimum standards provided in terms of this act by the South African Heritage Resources Agency (SAHRA). Secondly, Archaic HPM endeavours to comply with the code of ethics and standards of the Association of Southern African Professional Archaeologists (ASAPA). Thirdly, complementary national and provincial legislation such as the National Environmental Management Act No. 107 of 1998 (NEMA), the Environment Conservation Act No. 73 of 1989 (ECA), and Environmental Management Plans (EMPs) required by the Department of Minerals and Energy form key components of every project.

Archaic HPM's position within the Department of Anthropology and Archaeology creates a unique environment within which heritage resources management may be undertaken. The contracts office has access to professional, qualified individuals who may assist with various projects.

As such, Archaic HPM has been contracted by GO EnviroScience cc. to undertake a Phase 1 Heritage Impact Assessment on an urban development that is being proposed on Portion 9 of the farm Mooiplaats 147 JT. The development will include approximately 100 to 150 luxury 2- and 3-bedroom houses, a shopping centre, a block of flats and fuel station. The luxury houses will be situated on top of the mountain and on small false plateaus on the slopes, down to the foot of the mountain. The proposed shopping centre, flats and fuel station will be situated on the valley floor between the N4 and the Buffelskloofspruit.

The heritage impact assessed heritage resources in the proposed development impact areas through a preliminary survey. This survey identified a number of heritage resources. Select resources were recorded and documented, and their significance rated according to the SAHRA minimum standards for HIAs. Recommendations in terms of each site's mitigation have been included.

3. BRIEF / TERMS OF REFERENCE

The brief entailed the Terms of Reference agreed to between Archaic HPM and GO EnviroScience. This included:

- General descriptions of the cultural, social and historical heritage in the area;
- Locating, identification and assessment of all structures, graves and rock art according to the Minimum Standards for HIAs as drafted by SAHRA;
- Recording and mapping of all structures notwithstanding relevant heritage significance;
- Use of local knowledge, including:
 - Land use by local communities;
 - Intangible heritage associated with sites, e.g. initiation sites, places of ritual and/or ceremonial significance;
- Compilation and presentation of comprehensive Heritage Site Management Plan (HSMP) as part of the final report that will include:
 - Recommendations for suitable buffer zones for each feature or site;
 - Description of possible impact of the proposed development on each site;
 - Recommendations regarding possible opportunities and/or constraints provided by each site;
- Submission and presentation of final technical report in printed and electronic formats;
- Recommendations in terms of possible mitigation of archaeological and/or historical sites.

4. LEGAL REQUIREMENTS

National Heritage Resources Act No. 25 of 1999 (NHRA), with specific reference to Section 38;
National Heritage Resources Act No. 25 of 1999 (NHRA), with specific reference to Section 36;
National Heritage Resources Act No. 25 of 1999 (NHRA), with specific reference to Section 35;
Environmental Conservation Act No. 73 of 1989 (ECA);
National Environment Management Act No. 107 of 1998 (NEMA);
List of Activities and Regulation for Environmental Impact Assessments (EIA), Government Notice No. R1183;
Human Tissues Act No. 65 of 1983;
Removal of Graves and Dead Bodies Ordinance 7 of 1925.
National Heritage Resources Act No. 25 of 1999 (NHRA), with specific reference to Section 38;
National Heritage Resources Act No. 25 of 1999 (NHRA), with specific reference to Section 36.

5. AIM OF STUDY

Recording, documentation and rating of known sites according to SAHRA minimum standards.

Survey of affected areas to identify any other heritage resources

Recording of any heritage resources identified

6. LIMITATIONS

All work is undertaken under mandates of the National Heritage Resources Act 25 of 1999, SAHRA minimum standards and the constitution and code of ethics of the Association of Southern African Professional Archaeologists (ASAPA).

Archaic HPM and persons contracted by Archaic HPM cannot be held responsible for exposure of any subsurface heritage resources, including graves and burials, exposed during intrusive construction and development activities.

Notwithstanding Archaic HPM's attempts at a detailed and comprehensive assessment of the affected areas, the heritage resources identified during the study do not necessarily represent the total resources in the area. Several reasons exist which may lead to heritage resources remaining unidentified: subsurface resources, impenetrable, dense vegetation, dangerous ascents/descents. Absence of evidence *is not* evidence of absence.

7. BACKGROUND INFORMATION

Report type	Heritage Impact Assessment report
Development type	Urban and commercial development
Rezoning and/or land subdivision	Rezoning from agriculture to urban
Developers	<p>Schoemanskloof Water Strome Mr Albert Koen Tel: 012-259-1265 Cell: 083-254-1968 albert@abaconstruction.co.za</p> <p>Mr Willie Stols Tel: 013-235-2775 Cell: 082-335-5106 Fax: 013-235-2344 hydraulic.mining@lantic.net</p> <p>PO Box 583 Lydenburg 1250</p>
Consultants	<p>GO EnviroScience cc Dr. Pieter van Eeden / Mr David Otto Tel: 011-972-5298 Cell: 083-379-4419 / 084-200-0766 Fax: 086-500-3452 schoemanskloof@goenviro.biz</p> <p>PO Box 13434 Norkem Park 1631</p>
Landowner	<p>Mr Willie Stols Tel: 013-235-2775 Cell: 082-335-5106 Fax: 013-235-2344 hydraulic.mining@lantic.net</p> <p>PO Box 583 Lydenburg 1250</p>

Table 1: Project Data

Province:	Mpumalanga
Magisterial district:	Belfast
1: 50 000 Map number (or SAN chart):	2530 AD
Latitude and Longitude:	Between S25°29'/E30°25' & S25°29'/E30°24' and S25°28'/E30°24' & S25°27'/E30°24'
Recording method (GPS, Trig., Other):	GPS (Garmin Etrex, Accuracy 4m)
Farm Name and No.:	Portion 9 of Mooiplaats 147 JT
Town/Nearest Town:	Machadodorp & Nelspruit

Table 2: Geographical Data

Cartographic Data
1:50 000 orthographic map 2530 AD

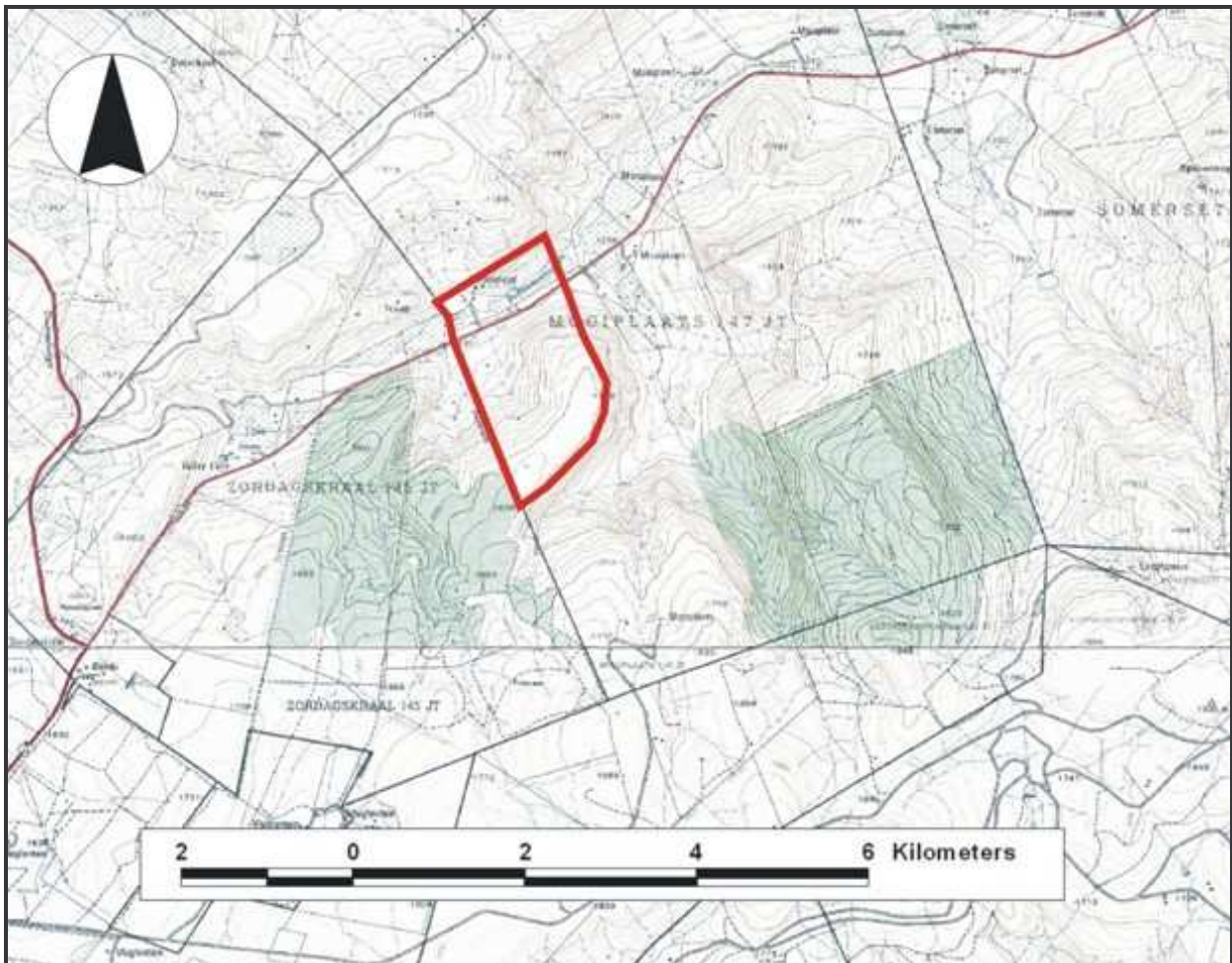


Figure 1: 2530 AD map indicating study area

Area Background

Mpumalanga is, archaeologically speaking, a relatively under-researched province and thus potentially able to offer new research insights for the region. This province has however been witness to many different stages of South African history and prehistory. The Schoemanskloof valley is a fertile valley suited to agricultural activities. It is also a natural thoroughfare from the colder Highveld region into the warmer sub-tropical climate of the Lowveld. A passage such as this enables migration of people, as well as animals. This provides an ideal environment for human settlement from the earliest hunter-gatherer communities to historical European expansion. Evidence of land use in the area is witnessed in terms of various types of settlement and artefacts; ranging from 2.5 million year old hand-axes to 100 year old churchyards.

The Great Escarpment and surrounding areas form part of what is generally known as the Bushveld basin and the Lowveld. This area is comprised out of Highveld, Escarpment, Lowveld and Bushveld areas. The Great Escarpment separates the Highveld and Bushveld areas from the Lowveld. The area is characterized by a mountainous landscape forming the escarpment. The landscape evens out further east towards the Kruger National Park, becoming broken plains. Various large rivers including the Sabie, Crocodile, Olifants and Komati Rivers course through this area.

The area under investigation is located in Schoemanskloof on the banks of the Buffelkloofspruit, a tributary of the Crocodile River. This area is situated in the summer rainfall zone of South Africa and the annual rainfall varies from 400 to 500mm in the low-lying areas, and up to 1500mm in the higher foothills of the Drakensberg on the escarpment. The survey area was divided into four broad sections: 1) mountain/hilltop, 2) mountain slope, 3) valley and 4) agricultural lands. This division was arbitrary based on geographical location and land use. Each section was surveyed separately.

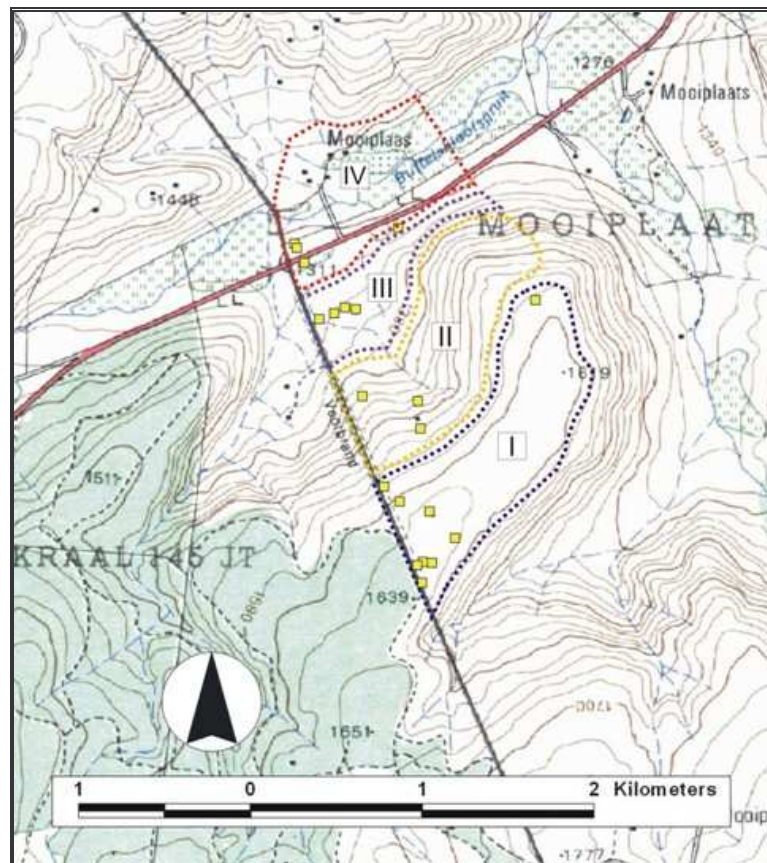


Figure 2: Detail map indicating areas surveyed

The mountain/hilltop (section 1) mainly consists of grassland with denser tree and shrub growth inside the stonewall structures. A small rock outcrop exists at the north-eastern side of this section. The area is bordered on the west by SAPPI pine plantations. The southern and western extents slope steeply into two river valleys. The third of section 1 towards the north-east is characterised by short cliff faces below small, flat false plateaus that end at a non-perennial fountain. From there it slopes steeply towards the north.

The mountain slope (section 2) covers the entire northern slope of the mountain. The slope consists of natural terraces ranging from less than five meters to approximately twenty meters, interspersed with fairly steep gradients. This section is bordered on the west by the SAPPI plantation and on the east by a river valley and mountain slope. Section 2 is characterised mainly by mixed grass and woodland, especially *Acacia*, *Cussonia* and *Aloe* species.

The valley (section 3) is bound by a river valley and the SAPPI plantation in the west, the lower mountain slopes in the south and east, and a game fence in the north. The game fence also indicates the beginning of disturbed, agricultural land. The valley is characterised by erosion gulleys, non-perennial streams, and mainly woodland and riverine type vegetation typified by *Acacia sp.*

The agricultural lands (section 4) lie immediately north of the above mentioned game fence in the valley. It extends to the N4 highway, which intersects this section, and continues to the slopes of the mountains north of the N4. The vegetation is mixed grassland, indigenous and exotic trees, and cultivated soils. All present residential and agricultural structures are located in section 4.

The study area comprises several archaeologically significant periods: Middle and Late Stone Age, Late Farmer, hunter-gatherer, and historical European and African expansion. Previous research in the region have been done by Van Hoepen (****), Maggs (****), Schoeman (****), Delius (****) and others. The first mention of rock art research in the province dates to 1918 and so far 400 rock art sites have been recorded in the province; primarily in the northern and eastern parts of the province (Lydenburg, Nelspruit, Nsikazi, Witbank, White River Districts and the Kruger National Park – see Murray & Schoonraad 1965; Schoonraad & Schoonraad 1975; Smith & Zubieta 2006; Tracey 1956).

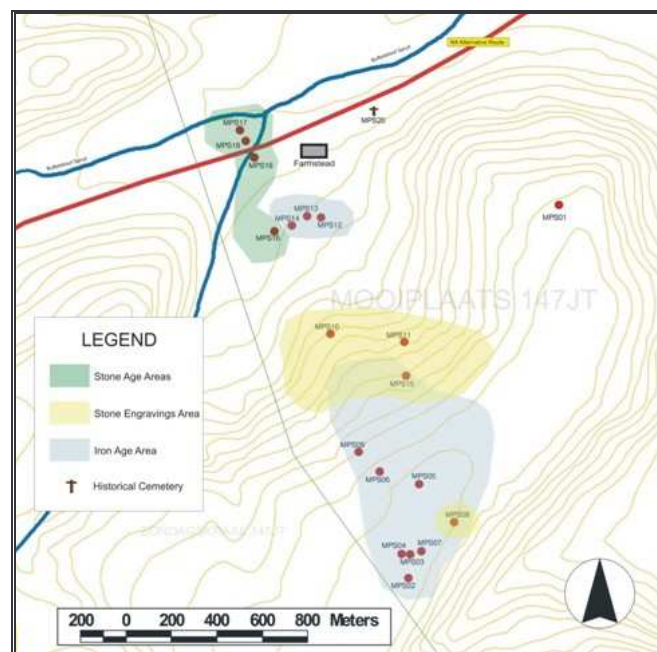


Figure 3: Map indicating major heritage resources areas

Site Name	Site Type	East Co-ordinates	South Co-ordinates
MPS 001	Utilised rock outcrop	30° 24' 53.28"	25°28' 14.05"
MPS 002	Stonewall & terrace	30° 24' 31.94"	25°29' 07.24"
MPS 003	Rock engraving	30° 24' 32.20"	25°29' 03.38"
MPS 004	Stonewall & terrace	30° 24' 31.04"	25°29' 03.95"
MPS 005	Stonewall & terrace	30° 24' 33.45"	25°28' 53.82"
MPS 006	Stonewall & terrace	30° 24' 27.82"	25°28' 52.00"
MPS 007	Stonewall & terrace	30° 24' 33.75"	25°28' 03.45"
MPS 008	Rock engraving	30° 24' 38.15"	25°28' 58.75"
MPS 009	Stonewall & terrace	30° 24' 24.85"	25°28' 49.20"
MPS 010	Rock engraving	30° 24' 20.74"	25°28' 32.20"
MPS 011	Rock engraving	30° 24' 31.20"	25°28' 33.13"
MPS 012	Stonewall	30° 24' 19.47"	25°28' 15.82"
MPS 013	Stonewall	30° 24' 17.47"	25°28' 15.52"
MPS 014	Stonewall	30° 24' 15.38"	25°28' 16.62"
MPS 015	Stonewall & terrace	30° 24' 31.62"	25°28' 38.20"
MPS 016	Middle Stone Age	30° 24' 12.70"	25°28' 17.65"
MPS 017	Middle Stone Age	30° 24' 07.90"	25°28' 03.45"
MPS 018	Middle Stone Age	30° 24' 08.40"	25°28' 04.20"
MPS 019	Middle Stone Age	30° 24' 09.80"	25°28' 06.95"
MPS 020	Historical Cemetery	30° 24' 27.40"	25°28' 00.45"

Table 3: Site Data

8. METHODOLOGY

A team of three professional archaeologists undertook pedestrian surveys in all four sections of the property (refer to Area Background). The survey was conducted over a period of four days. Approximately 70% of the total property area was covered by the survey during this period. The remaining 30% included areas not affected by the proposed development, the residential area and inaccessible areas on steep slopes and densely vegetated valleys.

Section 1: Mountain/hilltop

The main part of the proposed urban development will be on the mountain top. This area was surveyed in transects starting at the south-western corner of the property. The transects were oriented approximately east-west, between the eastern, southern and western boundary fences. Each transect was approximately 20 meters from the previous.

Visibility was limited in places due to long grass. However, the large stonewall structures were obvious, as well as several other similar structures that may have been robbed at some stage.

Section 2: Mountain slope

Several units will also be developed on parts of the northern slope. This slope was surveyed along its natural contours. The slope was inaccessible at stages due to the gradient, and these parts were not surveyed. No development is to take place on these gradients.

Visibility was limited due to long grass and steep gradients hindered survey.

Section 3: Valley

The valley south of the N4 highway was surveyed according to possible localities of heritage resources. This area will become the main access route to the mountain top development. Attention was paid to natural water courses, erosion gulleys and pits, and plant growth.

The valley had a fairly high visibility due to grazing activities.

Section 4: Agricultural lands

The proposed filling station will be situated in the agricultural lands either north or south of the N4 highway. Both fields were surveyed in transects, spaced approximately 10 – 20 meters.

Visibility was limited due to grass and weeds, the fields also seemed to have been tilled fairly recently.

All visible heritage resources were recorded with a Garmin Etrex GPS, using the WGS 84 datum. Three sites were initially indicated to the survey team by the landowners. These were two stonewalled sites and one large boulder with rock engravings.

SITE DESCRIPTIONS

Rock Engravings

MPS 003

Site number	MPS 003	GPS (Garmin Etrex Legend, WGS 84)	S25°29'03.38" E30°24'32.20"
Estimated size	N/A	Site type	Farmer rock engravings
Site Category	Agricultural	Context	Primary

Statement of significance (0-5; 0=none, 5=high) Total: 3.8 (78%)		
	Rating	Reason
A	5	The rock engravings found on Mooiplaats represent unique, under-researched heritage resources relating to the past 500 years of southern African history in general and in Mpumalanga specifically.
B	5	Although these engravings are not uncommon, rare or endangered, sufficiently little is known regarding the use, spread and interpretation of such engravings. Engravings of late farmers may contribute significantly to the understanding of southern Africa cultural heritage, specifically in Mpumalanga concerning more accurate hypotheses regarding the Pedi empire and the role of the Koni in this province.
C	5	These engravings occur in relation to late farmer settlements. The exact relationship between the engravings and the landscape has yet to be identified.
D	4	The engravings seen as a certain artistic representation of the landscape may be important to various communities and/or cultural groups.
E	5	As two-dimensional representations of a landscape, a high degree of technical creativity is present.
F	5	Although little is known about the cultural affinity of these engravings, they do represent strong associations with late farmer communities. The reasons for these associations are still being researched.
G	5	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
H	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.
I	1	

Field rating			
Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	✓
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	None, other than the two engraved stones
Cultural affinities	Late Farmer
Burials/graves	None
Threats/risks	In proposed residential unit footprint

Site detail

Located about 40m SE of the Sappi road entrance gate on top of the hill overlooking the Mooiplaats farm are two engraved rocks immediately next to each other (Figures 4 & 5) on the edge of an archaeological terraced field. These rock engravings are placed among a cluster of large, natural andesite rocks, some of which have been used as grinding / food preparation surfaces as well as parts of a stone wall that has been robbed. There are no surface finds of

artefacts such as pottery, stone tools, metal etc. near these engravings. On a bearing of 340° from these engravings on the opposite valley slope at least three stonewalled settlement complexes are visible.



Figure 4: General view of site MPS 003 rock engravings. MPS 002 can be seen at the top right.



Figure 5: Detail of MPS 003, with the engraved stones in the foreground.

Engraving 1

The smaller of the two engravings (670mm x 400mm, at a 60° angle). The engraved surface faces north. The engraving has been made with a coarse-pecked 'gouging' technique – almost certainly by a metal instrument. The engraving comprises two clear, pecked infill circles (the largest is 60mm in diameter), one outline circle and one partial circle. These are connected by lines that have three distinct trajectories. These lines are 10mm – 25mm thick. The bottom

60mm of the rock is covered by earth and some of the engraved lines are covered by this earth layer, suggesting some time has passed since the manufacture of these engravings (Figure 3). There is a moderate degree of patination (weathering) of the engraved lines, which also suggests an age in the order of several hundred years.



Figure 6: Detail photograph of Engraving 1, MPS 003, Mooiplaats, South Africa



Figure 7: Tracing of Engraving 1, MPS 003, Mooiplaats, South Africa

Engraving 2

A slightly larger rock (790mm x 650mm, that lies flat) roughly south-east facing (Figures 8 & 9). The engraving consists of two pecked infill circles (largest has an 80mm diameter) and three clear line trajectories with some interlinking. There are also three short lines not connected to any other engraved areas. There are nine pecked areas. Light abrasion marks suggest that this rock could either have been used for everyday activity or the abrasions (which have an unusual patina) could have had a symbolic importance.



Figure 8: Photograph of Engraving 2, MPS 003, Mooiplaats, South Africa



Figure 9: Tracing of Engraving 2, MPS 003, Mooiplaats, South Africa

Site number	MPS 008	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 38.15" 25°28' 58.75"
Estimated size	N/A	Site type	Farmer rock engravings
Site Category	Settlement/ agricultural	Context	Primary

Statement of significance (0-5; 0=none, 5=high) Total: 3.8 (78%)		
	Rating	Reason
A	5	The rock engravings found on Mooiplaats represent unique, under-researched heritage resources relating to the past 500 years of southern African history in general and in Mpumalanga specifically.
B	5	Although these engravings are not uncommon, rare or endangered, sufficiently little is known regarding the use, spread and interpretation of such engravings
C	5	Engravings of late farmers may contribute significantly to the understanding of southern Africa cultural heritage, specifically in Mpumalanga concerning more accurate hypotheses regarding the Pedi empire and the role of the Koni in this province.
D	4	These engravings occur in relation to late farmer settlements. The exact relationship between the engravings and the landscape has yet to be identified.
E	5	The engravings seen as a certain artistic representation of the landscape may be important to various communities and/or cultural groups.
F	5	As two-dimensional representations of a landscape, a high degree of technical creativity is present.
G	5	Although little is known about the cultural affinity of these engravings, they do represent strong associations with late farmer communities. The reasons for these associations are still being researched.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	1	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating			
Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	✓
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	✓
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	None, other than the engraved stones
Cultural affinities	Late Farmer
Burials/graves	None
Threats/risks	In footprint of proposed residential unit

Located almost 100m east of MPS 003, is a solitary engraved rock that seems to have been moved from elsewhere and been incorporated into a long, low stone wall made up of single stones placed on their sides. The line of this wall ends close to the gravel pit/dam excavated to the south of the largest stone-walled site on the hilltop. Quite close to the game fence and overlooking the kloof and waterfall to the SE.

Engraving 1:

A 610mm x 410cm triangular sandstone-like dolerite rock, resting flat on the ground. The rock's main facet, as well as a smaller side facet, is engraved with a series of meandering engraved lines (Figures 10 & 11). This rock shows considerable erosion, weathering and cracking.



Figure 10: Photograph of Engraving 1, MPS 008, Mooiplaats, South Africa

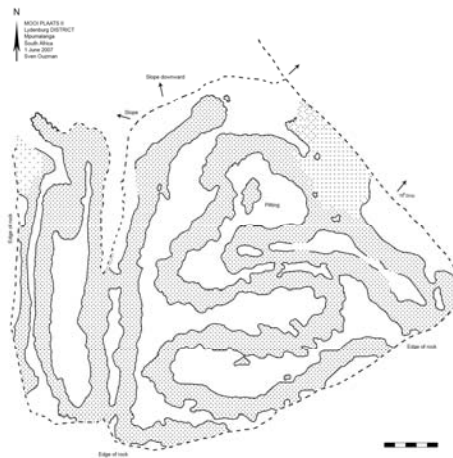


Figure 11: Tracing of Engraving 1, MPS 008, Mooiplaats, South Africa

MPS 010

Site number	MPS 010	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 20.74" 25°28' 32.20"
Estimated size	N/A	Site type	Farmer rock engravings
Site Category	Open	Context	Primary

Statement of significance (0-5; 0=none, 5=high) Total: 3.8 (78%)		
	Rating	Reason
A	5	The rock engravings found on Mooiplaats represent unique, under-researched heritage resources relating to the past 500 years of southern African history in general and in Mpumalanga specifically.
B	5	Although these engravings are not uncommon, rare or endangered, sufficiently little is known regarding the use, spread and interpretation of such engravings
C	5	Engravings of late farmers may contribute significantly to the understanding of southern Africa cultural heritage, specifically in Mpumalanga concerning more accurate hypotheses regarding the Pedi empire and the role of the Koni in this province.
D	4	These engravings occur in relation to late farmer settlements. The exact relationship between the engravings and the landscape has yet to be identified.
E	5	The engravings seen as a certain artistic representation of the landscape may be important to various communities and/or cultural groups.
F	5	As two-dimensional representations of a landscape, a high degree of technical creativity is present.
G	5	Although little is known about the cultural affinity of these engravings, they do represent strong associations with late farmer communities. The reasons for these associations are still being researched.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	1	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	✓
Local	III A	<i>High, heritage register site, mitigation not advised</i>	✓
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	None, other than the two engraved stones
Cultural affinities	Late Farmer
Burials/graves	None
Threats/risks	Main access route to mountain top cuts through site. Some engraved rock already damaged.

This site is located on either side of the zigzag contour road leading from the Mooiplaats farmhouse to the hilltop (figure 6). The *platboom* or 'flat tree' marks the eastern extremity of a site complex that consists of at least 50 engraved rocks (Figure 7) – the grass was very thick during surveying so it is almost certain more engraved rocks will be located. The area of engravings extends to the western boundary fence, at least 80m above the road and 35m below the road. The rock here is a much finer-grained dolerite than the granitic rock on most parts of the farm. The engraved rocks range from small 300mm x 150mm rocks at ground level to large rocks up to 1.8m long and 500mm across. These rocks bear a variety of images that are variations on a theme – solid and outline circles, meandering lines, circles with short, bent lines

coming out of them, and so forth. On one of the two large upright rocks above the road is an engraving on a vertical surface, comprising circles connected by lines. The site complex exhibits considerable variation with a larger, coarser pecking technique evident in the eastern section, grading into a smaller, finer peck with more emphasis on circles to the west.

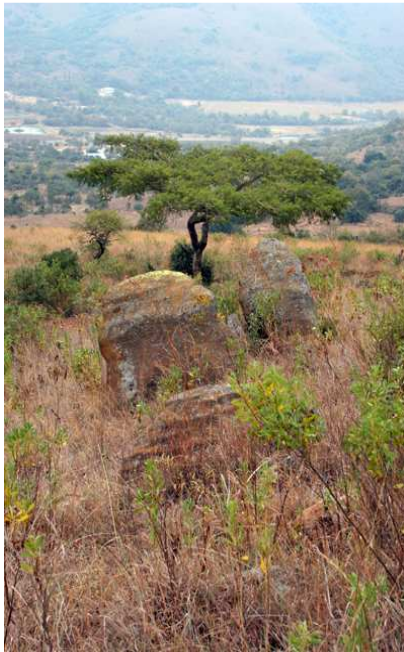


Figure 12: Views to the north of MPS 010, Mooiplaats, Mpumalanga, South Africa



Figure 12: Views to the east of MPS 010, Mooiplaats, Mpumalanga, South Africa



Figures 13-15: Sample pictures of engravings from MPS 010, Mooiplaats, Mpumalanga, South Africa

Interpretation of rock engravings at MPS 003, 008 and 010: Most of the engravings show a considerable awareness for the contours of the rock. Iconographically, circles and lines predominate lending support to the interpretation of van Hoepen (1939) and Maggs (1995) that these engravings were made by Bantu-speaking farmers in the last 500 years or so and that they represent an aerial view of stone-walled settlements and the paths of movement of people and cattle as well as perhaps areas of terraced fields. Though not necessarily a 1:1 'realistic' map, these rock engravings select for certain areas of these settlements presumed to be areas of male influence. It is not impossible that these engravings could have been used in the education and initiation of young boys/men; though more research needs to be conducted on these engravings' meaning. Sometimes lizard-like animals are also depicted at farmer rock engravings sites, but none have been noted at Mooiplaats. Mooiplaats is a major new site in this tradition and promises to shed light on this fascinating yet imperfectly understood form of southern African rock art.

MPS 011

Site number	MPS 011	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 20.74" 25°28' 32.20"
Estimated size	N/A	Site type	Farmer rock engravings
Site Category	Open	Context	Primary

Statement of significance (0-5; 0=none, 5=high) Total: 3.8 (78%)		
	Rating	Reason
A	5	The rock engravings found on Mooiplaats represent unique, under-researched heritage resources relating to the past 500 years of southern African history in general and in Mpumalanga specifically.
B	5	Although these engravings are not uncommon, rare or endangered, sufficiently little is known regarding the use, spread and interpretation of such engravings
C	5	Engravings of late farmers may contribute significantly to the understanding of southern Africa cultural heritage, specifically in Mpumalanga concerning more accurate hypotheses regarding the Pedi empire and the role of the Koni in this province.
D	4	These engravings occur in relation to late farmer settlements. The exact relationship between the engravings and the landscape has yet to be identified.
E	5	The engravings seen as a certain artistic representation of the landscape may be important to various communities and/or cultural groups.
F	5	As two-dimensional representations of a landscape, a high degree of technical creativity is present.
G	5	Although little is known about the cultural affinity of these engravings, they do represent strong associations with late farmer communities. The reasons for these associations are still being researched.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	1	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	✓
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	None, other than the engraved boulder
Cultural affinities	Late Farmer
Burials/graves	None
Threats/risks	None

This site is located on the northern slope of the mountain, facing the homestead (figure 16). This site comprises of a single large, freestanding rock, approximately 300m west of site MPS 010. Survey in and around the immediate area did not reveal any more engravings. However, the site was located in fairly dense vegetation that hampered detailed survey. This area is also not at risk due to the proposed development.

Insert figure 16

Stonewalled sites

MPS 002

Site number	MPS 002	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 31.94" 25°29' 07.24"
Estimated size Site Category	c. 100m Residential & agricultural	Site type Context	Stonewall and terraces Primary, with possible secondary disturbance.

Statement of significance (0-5; 0=none, 5=high) Total: 3.2 (64%)

	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating			
Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	✓
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	Several potsherds, upper and lower grinding stones found on surface
Cultural affinities	Late farmer, possibly of Koni or Pedi origin.
Burials/graves	None identified
Threats/risks	Close to one of the residential units. The associated terraces will be destroyed during construction. The stonewalls will in all probability be damaged.

Site detail

This site is located at the south-western corner of the property, overlooking a deep valley to the south. A Sappi pine plantation exists immediately west of the site, with evidence of more stone walling in the plantation. Fence roads/firebreaks are present alongside the fences, and have possibly disturbed part of the site. The site comprises of both stonewall enclosures and low terraces. Most of the stonewalls are overgrown and large *Cussonia sp.* Grow in and next to the walls. The wall heights range from 120cm to 50cm where these are broken. As a whole the stonewalls are in fairly good preservation.



Figure 17: View of MPS 002, Mooiplaats, South Africa



Figure 18: View to the north from MPS 002. Note the stones in the foreground that may be possible remains of wall foundations. MPS 004 can be seen in centre left.



Figure 19: Detail of walling and vegetation at MPS 002.

The complex consists of several enclosures (Figure 20). The central, circular enclosure (Enclosure 1) measures approximately 12.5m by 11.1m. An entrance of 2.4m is visible in the northern wall, with a short wall abutting this enclosure at the entrance. Two other enclosures scallop out of this central enclosure on the northern side. The smaller (Enclosure 2) measures approximately 5m by 5.5m, with an entrance into the second and larger enclosure (Enclosure 3), close to the entrance to Enclosure 1. Enclosure 2 is almost circular, whilst Enclosure 3 has a semi-circular outside wall. The inner walls are shared with the Enclosure 1. Enclosure 3 measures 6.6m from the abutment east, and 9.7m north-south.

Two large walls extend from Enclosure 2's outer wall, almost in line with Enclosure 1's entrance. One wall forms about three quarters of a circle to the west. The other wall forms about half a circle to the east. Both these walls have been destroyed by the fence roads/firebreaks on the east and south of the site. Two large elongated heaps of smallish stones separate the walls from terraces immediately to the north. These are possibly foundation remnants of a large outer wall around the described enclosures.

The terraces are very low, allowing a drop of approximately 10cm after each retaining wall. The retaining walls are made of rows of stones packed along natural contours, and extend towards the north. There are between ten and fifteen terraces between the stonewalls and the robbed walls of MPS 004.

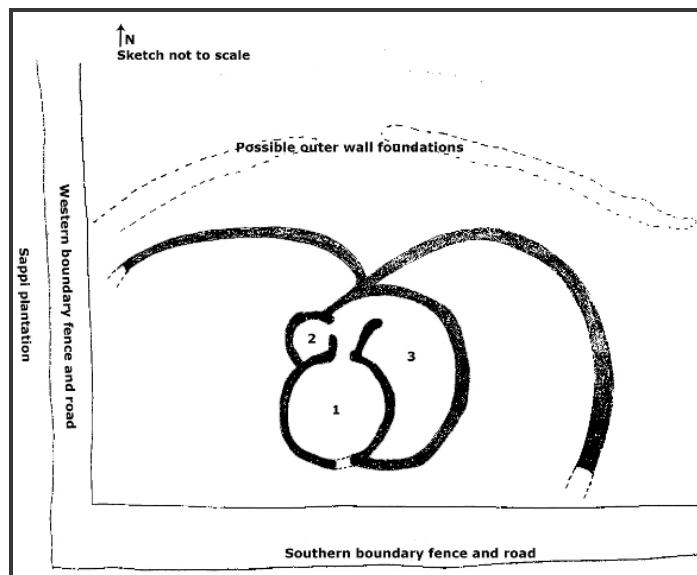


Figure 20: Sketch map indicating major enclosures.

MPS 004

Site number	MPS 004	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 31.04" 25°29' 03.95"
Estimated size Site Category	c. 100 – 150m Residential & agricultural	Site type Context	Robbed stonewalls and terraces Secondary, with some primary remains.

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)		
	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating			
Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	✓
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	Few ceramic potsherds, some MSA and LSA flakes
Cultural affinities	Late farmer, possible of Koni or Pedi origin.
Burials/graves	None identified
Threats/risks	The stonewall foundations and parts of the terraces are situated in the development footprint. These will be destroyed during construction.

Site detail

This site is located approximately 200m south of MPS 002. Parts of the walls have been destroyed by the western boundary fence road. The site comprised mainly of robbed stonewalls and rows of double packed stone. It is unclear whether the terraces found around the site can be associated with this or with MPS 002. The area has been intensively grazed and most walls and foundations could be clearly identified. The two engraved rocks are situated approximately 50m away, due east of the site. The wall heights ranged from about 80cm to less and comprised

almost exclusively of the lower foundation stones and small stone fill. The site further seems to continue west of the boundary fence, into the Sappi plantation.



Figure 21: General view south of MPS 002. The outer perimeter wall can be seen, as well as the robbed central enclosure. MPS 002 is in the background.



Figure 22: View towards the north-west of MPS 004.
The row of stones in the centre is part of the outer perimeter wall.

MPS 004 was characterised by a small central enclosure, approximately 6m in diameter (figure 23). Three walls abutted this enclosure, two of which joined to the outer perimeter wall. Due to the dilapidated nature of this site it was difficult to determine the exact shapes of walls and the existence of any entrances. At least five double rows of packed stone could be discerned around the main circular stone wall. At least one of these abutted the main wall. These are possibly the only visible remains of stonewall foundations of which the fill has either washed away or been robbed. The material may have been used in constructing parts of MPS 002 and/or MPS 005. A low retaining terrace wall existed from the approximate eastern centre of the outer perimeter wall to a row of double packed stones.

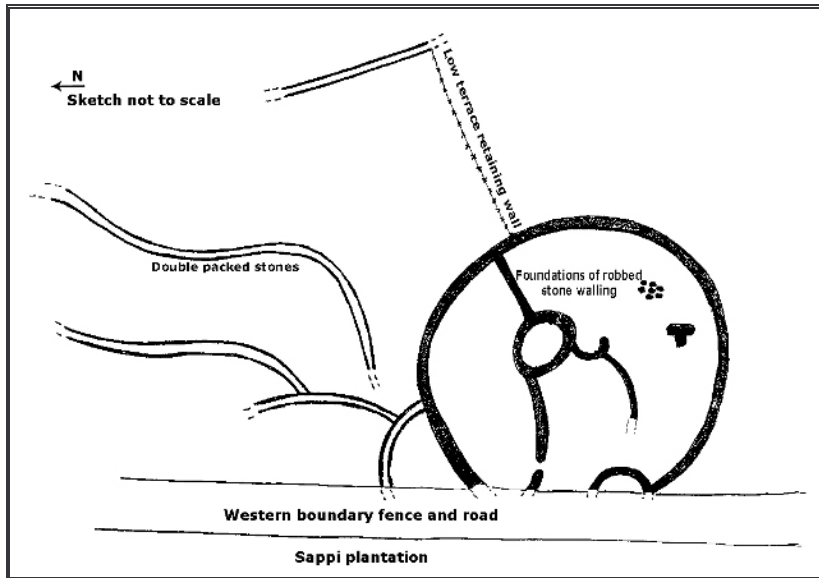


Figure 23: Sketch map of MPS 004, detailing robbed walls and double rows of stone.



Figure 24: Detail of double rows of stone.



Figure 25: Detail of double rows of stone.

MPS 005

Site number	MPS 005	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 33.45" 25°28' 53.82"
Estimated size Site Category	c. 50m x 20m Residential & agricultural	Site type Context	Stonewalls and terraces Primary

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)

	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating

Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	✓
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts

Cultural affinities

Burials/graves

Threats/risks

No material culture found

Late farmer, possibly of Koni or Pedi origin.

None identified

Within residential units. Site will probably be damaged during development.

Site detail

This site is located approximately 300m north-east of MPS 004, above a natural terrace on the northern slope of the mountain. This terrace has been reinforced with stone retaining walls ranging between 80cm to 120cm. These walls followed the natural contours of the slope, forming a possible passage for cattle to the main stonewalled area. The site was heavily overgrown, but the walls were in very good repair. The walls averaged a height of about 100cm to 120cm. The approximate size of the walled enclosure was 20m north-south and 30, east-west. Some terracing was evident, but due to the dense grass no indication of the size or orientation could be made.



Figure 26: General view from MPS 004 towards MPS 005.

The walling followed the typical “wagon-wheel” design prevalent in the Mpumalanga escarpment region (figure 27), with a probable entrance in the southern centre of the outer wall. A total of twelve enclosures were identified within the outer perimeter wall. A central circular enclosure with two possible entrances was identified (1). Six enclosures were placed around (1), enclosures (2) and (3) both were connected to (1) by narrow entrances. No definite entrances could be seen in the remaining four enclosures.

The whole enclosure was bisected approximately north-south by stonewalls in the eastern and western halves that created enclosures (8) and (9). Both (8) and (9) were further divided in the west by stonewalls that connected the outer perimeter wall with the inner complex. A very small enclosure was found in enclosure (10), joining (5). Two short walls that abutted (5) and (7) respectively could also be seen. Remains of a possible wall that would have abutted (3) and the perimeter wall were also found.

No material culture of any sort could be identified due to the overgrowth.

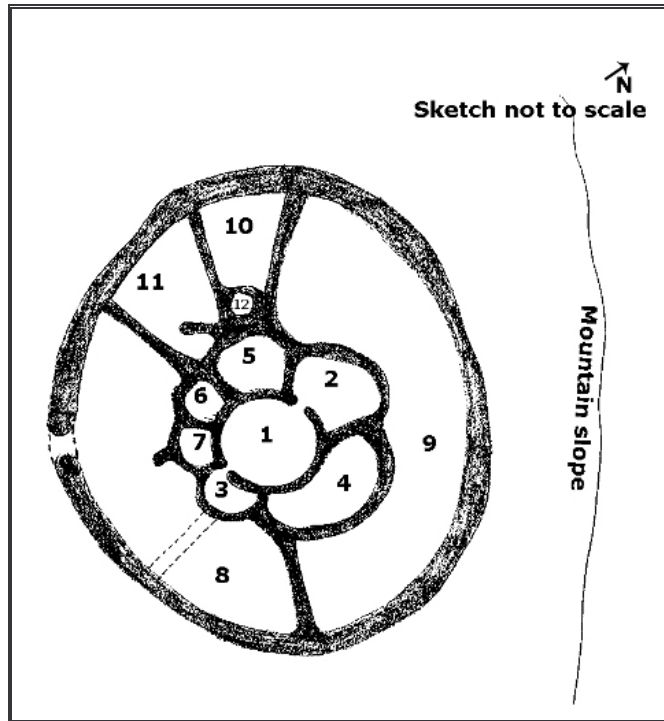


Figure 27: Sketch map of MPS 005, indicating separate enclosures

MPS 006

Site number	MPS 006	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 27.82"	25°28' 52.00"
Estimated size		Site type		
Site Category		Context		

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)

	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating

Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts

Cultural affinities

Burials/graves

Threats/risks

MPS 007

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)		
	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)		
	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

MPS 012

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)		
	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

MPS 013

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)		
	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)

	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

MPS 015

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 3.2 (64%)		
	Rating	Reason
A	3	These sites are significant in an understanding of southern African history over the last 500 years in terms of new research being undertaken on late farmer archaeology.
B	3	Although these stonewalled sites are not unique, they represent an important part in the understanding of southern African late farmer history in the past 500 years, especially as new and more updated research are being done on these sites.
C	5	These types of sites may yield significant information based on new research and new understandings of the archaeology and history of southern Africa.
D	5	The sites represent principal characteristics of classes of southern African cultural heritage, both in terms of the landscape and possible cultural affinity during a particular period.
E	5	These sites are typical of stonewalled settlements found in the Mpumalanga Province. Although no specific community of cultural group has been identified with these structures, they have a high rate of aesthetic characteristics that can be associated with various living groups in southern Africa.
F	5	Based on recent research (Maggs 2007) these sites demonstrate levels of possible intensive agricultural land use, equalling high rates of creative, technical achievement for that particular period.
G	3	These sites cannot definitely be associated with any specific community or cultural group. However, new research and recent findings may identify such associations.
H	0	Due to the age and anonymity of these engravings, they cannot be associated with any specific person or group.
I	0	Even though certain stratified societies almost certainly did have forms of slavery, or at least serfdom, the age of these engravings, as well the abstract context thereof does not contribute to an understanding of slavery in South Africa.

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

Stone Age Sites
MPS 016

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 1.7 (36%)

	Rating	Reason
A	3	Stone Age sites are important in terms of the general archaeology of southern Africa. This site seems to be of a secondary context, within a late farmer context.
B	2	The artefacts found at this site are not rare or uncommon, and seem to be from a secondary context.
C	2	Although any Palaeolithic site could contribute significantly to the understanding of southern Africa's past, they need to be in context.
D	1	The artefacts identified do not significantly illustrate any particular characteristics.
E	2	Other than the scientific community and others of similar interest, the resources identified do not exhibit any particular aesthetic characteristics.
F	5	As with all Palaeolithic assemblages, the artefacts found demonstrate high degrees of creative and technical achievement and innovation in that particular period.
G	1	Due to the age no special associations on social, cultural or spiritual grounds can be made.
H	0	Due to the age no special associations based on the life or work of a person, group or organisation can be made.
I	0	No significance related to the history of slavery can be made

Field rating

Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts

Cultural affinities

Burials/graves

Threats/risks

MPS 017

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 1.7 (36%)

	Rating	Reason
A	3	MSA sites are important in terms of the general archaeology of southern Africa. However, in order to understand the relationship over time and place, such sites need to have primary contexts, which are absent from these.
B	2	The artefacts found at this site are not rare or uncommon, and seem to be from a secondary context.
C	2	Although any Palaeolithic site could contribute significantly to the understanding of southern Africa's past, they need to be in context.
D	1	The artefacts identified do not significantly illustrate any particular characteristics.
E	2	Other than the scientific community and others of similar interest, the resources identified do not exhibit any particular aesthetic characteristics.
F	5	As with all Palaeolithic assemblages, the artefacts found demonstrate high degrees of creative and technical achievement and innovation in that particular period.
G	1	Due to the age no special associations on social, cultural or spiritual grounds can be made.
H	0	Due to the age no special associations based on the life or work of a person, group or organisation can be made.
I	0	No significance related to the history of slavery can be made

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

MPS 018

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: Total: 1.7 (36%)

	Rating	Reason
A	3	MSA sites are important in terms of the general archaeology of southern Africa. However, in order to understand the relationship over time and place, such sites need to have primary contexts, which are absent from these.
B	2	The artefacts found at this site are not rare or uncommon, and seem to be from a secondary context.
C	2	Although any Palaeolithic site could contribute significantly to the understanding of southern Africa's past, they need to be in context.
D	1	The artefacts identified do not significantly illustrate any particular characteristics.
E	2	Other than the scientific community and others of similar interest, the resources identified do not exhibit any particular aesthetic characteristics.
F	5	As with all Palaeolithic assemblages, the artefacts found demonstrate high degrees of creative and technical achievement and innovation in that particular period.
G	1	Due to the age no special associations on social, cultural or spiritual grounds can be made.
H	0	Due to the age no special associations based on the life or work of a person, group or organisation can be made.
I	0	No significance related to the history of slavery can be made

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

MPS 019

Site number		GPS (Garmin Etrex Legend, WGS 84)	
Estimated size		Site type	
Site Category		Context	

Statement of significance (1-5; 1=low, 5=high) Total: 1.7 (36%)

	Rating	Reason
A	3	MSA sites are important in terms of the general archaeology of southern Africa. However, in order to understand the relationship over time and place, such sites need to have primary contexts, which are absent from these.
B	2	The artefacts found at this site are not rare or uncommon, and seem to be from a secondary context.
C	2	Although any Palaeolithic site could contribute significantly to the understanding of southern Africa's past, they need to be in context.
D	1	The artefacts identified do not significantly illustrate any particular characteristics.
E	2	Other than the scientific community and others of similar interest, the resources identified do not exhibit any particular aesthetic characteristics.
F	5	As with all Palaeolithic assemblages, the artefacts found demonstrate high degrees of creative and technical achievement and innovation in that particular period.
G	1	Due to the age no special associations on social, cultural or spiritual grounds can be made.
H	0	Due to the age no special associations based on the life or work of a person, group or organisation can be made.
I	0	No significance related to the history of slavery can be made

Field rating	Grade	Significance	
Type			✓
National	I	<i>Very high, no mitigation</i>	
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts	
Cultural affinities	
Burials/graves	
Threats/risks	

Historical sites: Cemetery
MPS 020

Site number	MPS 020	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 27.40" 25°28' 00.45"
Estimated size	c. 4m x 8m	Site type	Cemetery
Site Category	Historical	Context	Primary

Statement of significance (1-5; 1=low, 5=high) Total: 3.0 (60%)

	Rating	Reason
A	5	The remains of the individuals buried may have high importance to the community.
B	2	No uncommon, endangered or rare aspects of heritage resources are associated with the cemetery. However, the tradition of stone carving associated with the headstones is becoming extinct.
C	3	In terms of possible physical anthropological research, some important information may be obtained as to health, demographics and other factors related to historical settlement in the region.
D	1	Graves rarely demonstrate any principal characteristics related to cultural places or objects.
E	5	The cemetery as a whole may exhibit particular aesthetics valued by a local community or group.
F	2	Other than the engraved headstones, no particular level of creative or technical achievement is demonstrated. However, some degree of this may be present associated with the physical remains in terms of possible surgical procedures, etc.
G	5	The cemetery may have special associations with various communities based on social, cultural and spiritual reasons.
H	3	Although unlikely, the cemetery may have some association with the life or work of a person in the history of South Africa.
I	1	Although unlikely, the cemetery may have some significance to the history of slavery in South Africa, cf. <i>inboekselinge</i> during the ZAR government.

Field rating

Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	✓
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	

Artefacts/Ecofacts

Various grave goods observed on surface, including tin of Nutsi snuff, clear glass bottle with liquid, some broken vase sherds.

Cultural affinities

Two graves have written inscriptions identifying them as European. The other seems to be of African origin.

Burials/graves

Three

Threats/risks

No immediate threats or risks have been identified

Miscellaneous sites: Rock outcrop utility area

MPS 001

Site number	MPS 001	GPS (Garmin Etrex Legend, WGS 84)	30° 24' 53.28" 25°28' 14.05"
Estimated size Site Category	c. 3m x 2.5m Farmer and/or hunter-gatherer	Site type Context	Activity area Primary

Statement of significance (1-5; 1=low, 5=high) Total: 1.6 (33%)

	Rating	Reason
A	2	This site may be important in context of the immediate area. However, it is an isolated activity area with no evidence of relationship to any hunter-gather or farmer settlement. It is also not unique in terms of its usage. As such it is difficult to place the site within the larger pattern of southern African history.
B	2	The site displays no unique characteristics in terms of southern African heritage resources.
C	3	Very little potential exists in yielding any significant information regarding an understanding of southern African heritage resources. However, in terms of distribution and relationships with the sites in the immediate area it may be of value. The recording and documentation of this site is deemed sufficient for such purposes
D	2	The site does not demonstrate any principal characteristics of any class of cultural places or objects.
E	1	No aesthetic characteristics, other than its position in the landscape are evident.
F	3	The use of a natural feature as a utilitarian area may be significant.
G	2	No association can be drawn related to any particular community or group <i>per se</i> . However, some association with the site in terms of symbolic or ritual activity may be possible, especially if the site may be associated with hunter-gather/farmer relationships.
H	0	None
I	0	None

Field rating

Type	Grade	Significance	
National	I	<i>Very high, no mitigation</i>	✓
Provincial	II	<i>Very high, no mitigation</i>	
Local	III A	<i>High, heritage register site, mitigation not advised</i>	
Local	III B	<i>High, mitigation possible with retention of parts</i>	
Generally Protected A	IV A	<i>High/medium, mitigated before destruction</i>	
Generally Protected B	IV B	<i>Medium, recorded before destruction</i>	
Generally Protected C	IV C	<i>Low, sufficiently recorded in Phase 1</i>	✓

Artefacts/Ecofacts

Artefacts/Ecofacts	None
Cultural affinities	Unknown
Burials/graves	None
Threats/risks	Very close to one of the residential units. May be impacted on by leisure activities such as walks, social gatherings on the rock outcrop.

10. STATEMENT OF SIGNIFICANCE AND FIELD RATINGS

Statement of significance and field ratings of all sites identified during Phase 1 heritage impact assessments are required under SAHRA's minimum standards. The NHRA states that heritage resources that are of significant cultural value are considered part of the national estate. Such resources are held "in trust" by the heritage resources authorities for present communities and future generations. Grading of sites is the responsibility of the heritage resources authorities. However, heritage specialists must provide Field Ratings for the sites, as proposals for grading in order to comply with section 38 of the NHRA.

Statements of significance are made against the following guidelines (NHRA section 3.3):

- a. The importance of the heritage resources in the community, or pattern of South Africa's history;
- b. The possession of a heritage resource of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c. A heritage resource's potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- d. The importance of a heritage resource in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- e. The importance of a heritage resource in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f. The importance of a heritage resource in demonstrating a high degree of creative or technical achievement at a particular period;
- g. A heritage resource's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h. A heritage resource's strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- i. Sites of significance relating to the history of slavery in South Africa.

SAHRA's minimum standards for archaeological and palaeontological components of Impact Assessment Reports provide the following field ratings:

National: This site is considered to be of Field Rating/Grade I significance and should be nominated as such (mention should be made of any relevant international ranking);

Provincial: This site is considered to be of Field Rating/Grade II significance and should be nominated as such;

Local: this site is of Field Rating/Grade IIIA significance. The site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised;

Local: this site is of Field Rating/Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance);

Generally Protected A (Field Rating IV A): this site should be mitigated before destruction (generally High/Medium significance);

Generally Protected B (Field Rating IV B): this site should be recorded before destruction (generally Medium significance);

Generally Protected C (Field Rating IV C): this site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (generally Low significance).

11. CONCLUSION

12. RECOMMENDATIONS

The Hilltop Sites: The three rock engravings located on the hilltop (Site 1 S xx° xx' xx" E xx° xx' xx"; Site 2, S xx° xx' xx" E xx° xx' xx") are directly in harm's way from the proposed development. These three engraved rocks should, pending permit approval from SAHRA, be removed to either the Lydenburg Museum or to an on-site display that showcases the farm's rich archaeological heritage.

The Hill slope site: (Site 3 S xx° xx' xx" E xx° xx' xx"): The over 60 engraved rocks on the hill slope site constitute a significant and interesting rock engraving concentration and should be declared a provincial heritage site through SAHRA. In addition, the road that bisects the site should be upgraded only with on-site supervision to ensure no further damage is done to the engravings (Figure 8). Further, this whole site should be mapped, photographed, and select tracings made of the more significant engraved rocks.



Figure **: Engraving from Site 3 damaged by road-making

14. REFERENCES

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