



Shasa Heritage Consultants

PHASE 1 HERITAGE RESOURCES SCOPING REPORT

**PROJECT TITLE: PROPOSED NEW ORCHARDS
ON PORTION 13 OF THE FARM PRETORIA 25
KT, OFCOLACO, LIMPOPO PROVINCE**

FIELDWORK CONDUCTED BY: FE ROODT

REPORT COMPILED BY: L STEGMANN

PRINCIPAL INVESTIGATOR: F ROODT

DATE: 26 March 2021

CONTENTS

3	1 Introduction and terms of Reference
4	2 Method
	2.1 Sources of information and methodology
	2.2 Limitations
	2.3 Categories of significance
5	2.4 Terminology
6	3 Description of the proposed development and terrain
8	4 Results of the scoping survey and discussion
	4.1. Intangible Heritage and Social consultation
	4.2 Recent Historical Period
	4.3. Graves
	4.4. Iron Age remains
	4.5. Stone Age remains
	4.6 Palaeontological sensitivity
13	5 Background information
13	6 Statement and evaluation of significance
17	7 Recommendations
18	8 Bibliography
	<u>List of figures</u>
8	Fig 1. View of area
8	Fig 2. View of area
10	Fig 3. View ceramic scatter
10	Fig 4. View of area around ceramic scatter
12	Fig 5. View of ceramics near possible hut floor
12	Fig 6. View of possible hut floor area
5	Map 1. Survey path map
19	Map 2. Close view Google map
19	Map 3. Google map with pins showing features/artefacts recorded
20	Map 4. Google view wide view of wider geography

EXECUTIVE SUMMARY

Shasa Heritage Consultants were contracted to undertake a Phase 1 scoping Heritage Impact Assessment, for a proposed new orchard on Wild Hawk Farm, Portion 13 of the farm Pretoria 25 KT, near Ofcolaco, Limpopo Province.

The farm is located approximately 40km south east of Tzaneen.

Survey was conducted on foot although excessively dense vegetation hindered accessing all areas. A low density scatter of ceramic sherds (within the proposed area) and a possible hut floor (just north east of the proposed area) were recorded. It is recommended that these 2 areas be monitored after bush clearance to determine the extent of each.

From a heritage resources point of view, should mitigation be followed, we have no objection to the development taking place.

Environmental consultant:

Polygon Environmental Planning

Premier Plaza Block C
21 Peace Street
PO Box 1935
Tzaneen
0850

Att: Louise Agenbag
Tel: 015 307 3606
E-mail: louise@polygonenvironmental.co.za

1. INTRODUCTION AND TERMS OF REFERENCE

Application purpose: Proposed new orchards

Area: Ofcolaco area- 40km SE of Tzaneen

Size: 24ha

GPS: 4 points

S24° 06' 09.3" E30° 21' 43.2"

S24° 06' 07.7" E30° 21' 54.7"

S24° 06' 30.0" E30° 22' 05.2"

S24° 06' 31.7" E30° 21' 53.0"

Map reference number: 2330 CD

This report will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on heritage resources.

In terms of the National Heritage Resources Act (1999) the following is of relevance:

Historical remains

Section 34(1) No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Archaeological remains

Section 35(4) No person may, without a permit issued by the responsible heritage resources authority-

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

Burial grounds and graves

Section 36 (3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

(c) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(b) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in detection or recovery of metals.

Culture resource management

Section **38(1)** Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development* ...

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

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

- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carry out any works on or over or under a place*;
- (e) any change to the natural or existing condition or topography of land, and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil;

****‘place’** means a site, area or region, a building or other structure* ...”

****‘structure’** means any building, works, device or other facility made by people and which is fixed to the ground, ...”

2. METHOD

2.1 Sources of information and methodology

The source of information was primarily the field reconnaissance and referenced literary sources.

A pedestrian survey of the area was undertaken by Mr FE Roodt on 21 March 2021 during the morning, during which standard methods of observation were applied. The areas (where possible) were carefully covered and traversed and special attention given to any areas displaying soil and or vegetative changes. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of heritage remains were recorded by means of a Goggle maps pins- correct to 1m and photographs taken with a Samsung S9.



Map 1. Survey path in white

2.2 Limitations

The scoping survey was thorough, but limitations were experienced due to the fact that archaeological sites are subterranean and only visible when disturbed. Vegetation was extremely dense after very high rainfall during the weeks preceding survey, thus the scoping survey was limited to accessible areas.

2.2 Categories of significance

The significance of heritage resources is ranked into the following categories.

Significance rating	Action required
Not protected	1a. No action required
Low	2a. Recording and documentation (Phase 1) of site adequate; no further action required 2b. Controlled sampling (shovel test pits, auger sampling), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction
Medium	3. Excavation of representative sample, 14C dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b]
High	4a. Nomination for listing on Heritage Register

	(National, Provincial or Local) (Phase 2 & 3 investigation); site management plan; permit required if utilised for education or tourism 4b. Graves: Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinterment [including 2a, 2b & 3]
--	--

Nomination and protection levels of significance:

Level	Details	Action
National (Grade 1)	Site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade 2)	Site is considered to be of Provincial Significance	Nominated to be declared by Provincial Heritage Authority
Local Grade 3A	Site is considered to be of HIGH significance locally	Site should be retained as a heritage site
Local Grade 3B	Site is considered to be of HIGH significance locally	The site should be mitigated and part retained as a heritage site
Generally Protected A	High to Medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	Site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording before destruction

The significance of heritage resources is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

A crucial aspect in determining the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. Many aspects must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed. These are generally sites graded as of low or medium significance.

2.4 Terminology

Early Stone Age: Predominantly the Acheulean hand axe industry complex dating to + 1Myr yrs – 250 000 yrs. before present.

Middle Stone Age: Various lithic industries in SA dating from ± 250 000 yr. - 30 000 yrs. before present.

- Late Stone Age:** The period from ± 30 000-yr. to contact period with either Iron Age farmers or European colonists.
- Early Iron Age:** Most of the first millennium AD
- Middle Iron Age:** 10th to 13th centuries AD
- Late Iron Age:** 14th century to colonial period. *The entire Iron Age represents the spread of Bantu speaking peoples.*
- Historical:** Mainly cultural remains of western influence and settlement from AD1652 onwards – mostly structures older than 60 years in terms of Section 34 of the NHRA, though more recent remains can be termed historically significant should the remains hold social significance for the local community.
- Phase 1 assessment:** Scoping surveys to establish the presence of and to evaluate heritage resources in a given area
- Phase 2 assessments:** In depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.
- Sensitive:** Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

3. DESCRIPTION OF THE PROPOSED DEVELOPMENT AND TERRAIN

Vegetation: Lowveld Granite SVI 3 (Mucina et al. 2006)

Geology: Gneisses of the Goudplaats gneiss (Swazian Erathem) and an Archaean granite underlie most of this area.

Terrain: The terrain consists of flatlands.

Proposed development: New orchards



Fig 1: View area



Fig 2: View area

4. RESULTS OF THE SCOPING SURVEY AND DISCUSSION

4.1 SOCIAL and/or RELIGIOUS INTANGIBLE HERITAGE

No areas designated for socio-religious activities were recorded on the site

Significance: None

4.2 HISTORICAL PERIOD

No remains from the historical period were recorded. The farm has been owned by the current family since the 1920's. No buildings or areas of spiritual significance are located within the proposed boundary lines.

Significance: None

4.3 GRAVES

No formal or informal graves could be identified.

Significance: None

4.4 IRON AGE REMAINS

According to the most recent archaeological cultural distribution sequences by Huffman (2007), this area falls within the distribution area of various cultural groupings originating out of both the Urewe Tradition (eastern stream of migration) and the Kalundu Tradition (western stream of migration). The facies that may be present are:

Urewe Tradition: Kwale branch-	Silver Leaves <i>facies</i>	AD 280-450	(Early Iron Age)
	Mzonjani <i>facies</i>	AD 450 – 750	(Early Iron Age)
Moloko branch-	Icon <i>facies</i>	AD 1300 - 1500	(Late Iron Age)

Kalundu Tradition: Happy Rest sub-branch -	Doornkop <i>facies</i>	AD 750 - 1000	(Early Iron Age)
	Letaba <i>facies</i>	AD 1600 - 1840	(Late Iron Age)

The wider area is typically dominated by people of the Lobedu group (Krige: 1934). The traditional village is smaller than that of their Highveld Sotho and Tswana counterparts, as the Lobedu are Sotho in culture. However, they have been influenced by cultural aspects of their surrounding neighbours. Krige (1934:269) states that the traditional village would use the nature brush as a fenceline, and stone walling would be absent to mark sections of the occupation unit. Settlement would also be more towards the mountains, as the valleys were fever-ridden.

Historically the wider area falls with the Modjadji area of the Limpopo Province, traditionally the area under the control of the Rain Queen, who has the ability it is believed to make it rain. The throne is succession based with the last inauguration of the queen Rain Queen Modjadji VI in 2003 succeeding her grandmother Rain Queen Mokope Modjadji V.

Originally known as Tzaneng, Tzaneen's original inhabitants were of Sotho and Shangaan origin.

Ofolaco lies 40km south east of Tzaneen and was named after the **Officers Colonial Land Company** and formed by demobilised British army officers after the First World War.

Archaeological Remains recorded on site:

A. General site description: WH/01		
GPS: S24° 06' 27.4" E30° 21' 59.5"		
A low density concentration of ceramic sherds scattered within the confines of the graded access road. Attempts were made to locate more, however the vegetation density severely limited sight off of the road. Only 1 decorated ceramic sherd was recorded, which displays elements of belonging to the Mzonjani facies, but due to the fact that the hatched motif is evident in other facies a clear diagnostic can not be made. Vegetation density severely limited further exploration of the area.		
B. Site evaluation		
B1. Heritage value	Yes	No
<u>Historic value</u>		
It has importance to the community or pattern of South Africa's history or precolonial history.	X	
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.		X
It has significance relating to the history of slavery in South Africa.		X
<u>Aesthetic value</u>		
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.		X
<u>Scientific value</u>		
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.		X not in context
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.		X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.	X	
<u>Social value</u>		
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).		X
<u>Tourism value</u>		
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.		X
<u>Rarity value</u>		
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.		X

Representative value			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			X
B2. Regional context			
Other similar sites in the regional landscape.		X	
B3. Condition of site			
Integrity of deposits/structures.	Integrity and context are in good condition		
C. Sphere of significance	High	Medium	Low
International			X
Provincial			X
Local			X
Specific community			X
D. Field Register rating			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			X
E. General statement of site significance			
Low			X
Medium			
High			
F. Rating of potential impact of development			
None			
Peripheral			X* with mitigation
Destruction			
Uncertain			
A. Recommended mitigation			
Impact has unfortunately already occurred through the actions of grading the road. Due to the density of vegetation outside of the road confines, it is recommended that monitoring take place during bush clearance to assist in identifying any further heritage remains.			

B. Applicable legislation and legal requirements- National Heritage Resources Act 25 of 1999, section 36

C. Images

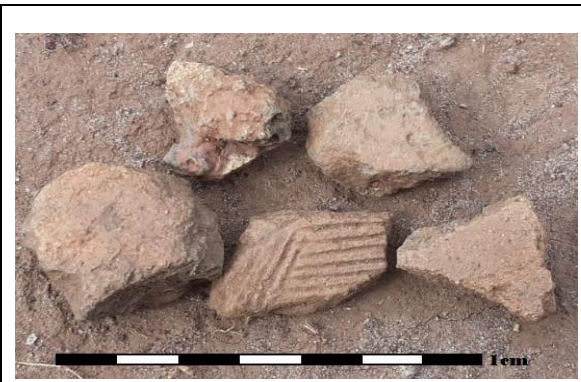


Fig 3. View of ceramic scatter



Fig 4. View of area where ceramics were recorded

A. General site description: WH/02**GPS:** S24° 06' 08.0" E30° 21' 55.0"

A possible hut floor, with associated upper grinder and ceramic sherds were recorded just outside of the upper north eastern boundary of the proposed area. Due to dense vegetation, no further remains within the boundary could be recorded.

B. Site evaluation**B1. Heritage value**

	Yes	No	
<u>Historic value</u>			
It has importance to the community or pattern of South Africa's history or precolonial history.	X		
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.		X	
It has significance relating to the history of slavery in South Africa.		X	
<u>Aesthetic value</u>			
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.		X	
<u>Scientific value</u>			
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.	X		
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.		X	
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.	X		
<u>Social value</u>			
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).		X	
<u>Tourism value</u>			
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.		X	
<u>Rarity value</u>			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.		X	
<u>Representative value</u>			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.	X		
B2. Regional context			
Other similar sites in the regional landscape.	X		
B3. Condition of site			
Integrity of deposits/structures.	Integrity and context are in good condition		
C. Sphere of significance	High	Medium	Low
International			X
Provincial			X
Local		X	
Specific community			X
D. Field Register rating			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			X
Generally Protected C [Low significance, no further action]			
E. General statement of site significance			
Low			
Medium			X
High			
F. Rating of potential impact of development			
None			
Peripheral			X* with mitigation
Destruction			

Uncertain

G. Recommended mitigation

It is recommended that the site remain *in situ* and that during bush clearance that the wider area be monitored. It is further recommended that a buffer of 20m around this area be marked until bush clearance is conducted and the area can be monitored to locate the full extent of heritage resources.

H. Applicable legislation and legal requirements- National Heritage Resources Act 25 of 1999, section 36

I. Images



Fig 5. View of ceramics



Fig 6. View possible floor

4.5 STONE AGE REMAINS

No Stone Age remains were recorded.

The below mentioned is generic background to the area adapted from Deacon and Deacon: 1999:

The Stone Age covers most of southern Africa and the earliest consist of the Oldowan and Acheulian artefacts assemblages. Oldowan tools are regularly referred to as “choppers”. Oldowan artefacts are associated with *Homo habilis*, the first true humans. In South Africa definite occurrences have been found at the sites of Sterkfontein and Swartkrans. Here they are dated to between 1.7 and 2 million years old. This was followed by the Acheulian technology from about 1.4 million years ago which introduced a new level of complexity. The large tools that dominate the Acheulian artefact assemblages range in length from 100 to 200 mm or more. Collectively they are called bifaces because they are normally shaped by flaking on both faces. In plain view they tend to be pear-shape and are broad relative to their thickness. Most bifaces are pointed and are classified as handaxes, but others have a wide cutting end and are termed cleavers. The Acheulian design persisted for more than a million years and only disappeared about 250 000 years ago.

The change from Acheulian with their characteristic bifaces, handaxes and cleavers to Middle Stone Age (MSA), which are characterized by flake industries, occurred about 250 000 years ago and ended about 30 000 – 22 000 years ago. For the most part the MSA is associated with modern humans; *Homo sapiens*. MSA remains are found in open spaces where they are regularly exposed by erosion as well as in caves. Characteristics of the MSA are flake blanks in the 40 – 100 mm size range struck from prepared cores, the striking platforms of the flakes reveal one or more facets, indicating the preparation of the platform before flake removal (the prepared core technique), flakes show dorsal preparation – one or more ridges or arise down the length of the flake – as a result of previous removals from the core, flakes with convergent sides (laterals) and a pointed shape, and flakes with parallel laterals and a rectangular or quadrilateral shape: these can

be termed pointed and flake blades respectively. Other flakes in MSA assemblages are irregular in form.

The change from Middle Stone Age to Later Stone Age (LSA) took place in most parts of southern Africa little more than about 20 000 years ago. It is marked by a series of technological innovations or new tools that, initially at least, were used to do much the same jobs as had been done before, but in a different way. Their introduction was associated with changes in the nature of hunter-gatherer material culture. The innovations associated with the Later Stone Age “package” of tools include rock art – both paintings and engravings, smaller stone tools, so small that the formal tools less than 25mm long are called microliths (sometimes found in the final MSA) and Bows and arrows. Rock art is an important feature of the LSA and is abundant in the Waterberg and the Makgabeng.

Significance: None

4.6 PALAEONOTOLOGICAL SENSITIVITY

The area lies within the grey zone on SAHRIS map and thus no PIA is required.

5. BACKGROUND ON THE AREA

According to SAHRA website, no surveys have been listed for the area- within which the study area falls. The authors have worked extensively in the wider area, including Tzaneen, Modjadjiskloof and Magoebaskloof. Sites noted are generally in a severe state of degradation due to the intensive farming activities that characterize the area, and which has been in effect for the past +100 years.

The following table highlights events in the area:

Date	Occurance
1892	The forerunner of the Coach House Hotel was built- where the Zeederberg Coach Company, rested draught animals before the climb to Leydsdorp
1912	Railway opened
1924	Tzaneen proclaimed a town.

6. EVALUATION AND STATEMENT OF SIGNIFICANCE

6.1	<u>Significance</u>	<u>Rating</u>
1	The importance of the cultural heritage in the community or pattern of South Africa’s history (Historic and political significance)	low
2	Possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage (Scientific significance).	None
3	Potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage (Research/scientific significance)	low
4	Importance in demonstrating the principal characteristics	low

of a particular class of South Africa's natural or cultural places or objects (Scientific significance)

- 5 Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group (Aesthetic significance) None
- 6 Importance in demonstrating a high degree of creative or technical achievement at a particular period (Scientific significance) None
- 7 Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (Social significance) None
- 8 Strong or special association with the life and work of a person, group or organization of importance in the history of South Africa (Historic significance) None
- 9 The significance of the site relating to the history of slavery in South Africa. None

6.2 Section 38(3) (c) An assessment of the impact of the development on such heritage resources.

Only the ceramic scatter falls within the area proposed, impact has already occurred due to road grading.

6.3 Section 38(3) (d) An evaluation of the impact of the development on heritage resources relative to the sustainable economic benefits to be derived from the development.

Impact has occurred on ceramic scatter; thus context is lost. With mitigation impacts can be minimized.

6.4 Section 38(3) (e) The results of consultation with the communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources.

Social consultative process is ongoing as part of EIA.

6.5 Section 38(3)(f) If heritage resources will be adversely affected by the proposed development the consideration of alternatives.

It is recommended that once bush clearance has occurred, monitoring should take place.

6.6 Section 38(3)(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.

Refer to recommendations for mitigation measures.

Impact significance and potential impacts are determined using the following:

Nature
A brief description of the impact of the heritage parameter being assessed in the context of the

specific border delineated project. Criteria, includes a brief written statement of the heritage aspect being impacted upon by a particular action or activity.

Topographical Extent

This is defined as the area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment of a project in terms of further defining the determined.

1	Site	Impact limited to site
2	Local/District	Impact limited to district
3	Province/Region	Impact will affect region
4	International/National	Impact is on a national or international scale

Probability

The probability of the impact occurring

2	Unlikely	The chance of the impact occurring is extremely low (Less than 25% chance of occurrence).
4	Possible	The impact may occur (Between a 25% to 50% chance of occurrence).
6	Probable	The impact will likely occur (Between 50% to 75% chance of occurrence).
8	Definite	Impact will certainly occur (Greater than 75% chance of occurrence).

Reversibility

The degree to which the impact on heritage resources can be reversed after the activity has been completed

1	Completely reversible	The impact is reversible with minor mitigation measures.
2	Partly reversible	The impact is partly reversible but more intense mitigation measures will be required.
3	Barely reversible	The impact is unlikely to be reversed even with intense mitigation measures.
4	Irreversible	The impact is irreversible regardless of mitigation measures.

Permanent loss of heritage resources

The degree to which heritage resources will be lost as a result of proposed activity. This applies to destruction of the context of the resource, as excavation could preserve objects but not context.

1	No loss of resource	The impact will not result in the loss of any resources.
2	Marginal loss of resource	The impact will result in marginal loss of any resources.
3	Severe loss of resource	The impact will result insignificant loss of resources.
4	Complete loss of resource	The impact is result in a complete loss of all resources.

Duration

The duration of the impact on the heritage parameter. Duration indicates the lifetime of a result of the proposed activity.

1	Short	The impact and its effects will either disappear with mitigation or will be mitigated through
---	-------	---

		natural process in span shorter than the construction phase (0-1 years), or the impact and its effects will last for the period of a relatively short construction period and a limited recovery time after construction, thereafter it will be entirely negated (0-2 years).
2	Medium	The impact and its effects will continue or last for some time after the construction phase but will be mitigated by direct human action or by natural processes thereafter (2-10 years).
3	Long	The impact and its effects will continue or last for entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter (10-50 years).
4	Permanent	The only class of the impact that will non-transitory. Mitigation either by man or natural process will not occur in such a way or such a time span that the impact can be considered transient (Indefinite).

Cumulative effect

The cumulative effect of the impacts on the heritage resource. A cumulative effect/impact is an effect, which in itself may not be significant but may become significant if added to other existing or potential impacts emanating from similar or diverse activities as a result of the project activity in question.

1	Negligible Cumulative Impact	The impact would result in negligible to no cumulative effects.
2	Low Cumulative Impact	The impact would result in insignificant cumulative effects
3	Medium Cumulative Impact	The impact would result in minor cumulative effects
4	High Cumulative Impact	The impact would result in significant cumulative effects.

Magnitude

The severity of the impact- it must be considered that once a heritage resource is removed from its original context much of its significance is lost.

1	Low	Impact affects the quality, use and integrity of the Heritage resource in a way that is barely perceptible.
2	Medium	Impact alters the quality, use and integrity of the heritage resource but heritage resource still continues and maintains general integrity (some impact on integrity).
3	High	Impact affects the continued viability of the heritage resource and the quality, use, integrity and context of heritage resource is severely impaired and may temporarily cease. High costs of rehabilitation and remediation.
4	Very High	Impact affects the continued viability of the heritage resource and the quality, use, integrity

		and context of the heritage resource permanently ceases and is irreversibly impaired. Rehabilitation and remediation often impossible. If possible rehabilitation and remediation often unfeasible due to extremely high costs of rehabilitation and remediation. This would involve a destruction permit or reconstruction- essentially losing the essence of what made the resource significant in the first place.
Significance		
It provides an indication of the importance of the impact in terms of both tangible and intangible characteristics. (S) is formulated by adding the sum of numbers assigned to Topographical effect (E), Duration (D), and Magnitude (M) and multiplying the sum by the Probability. S= (E+D+M) P		
<30	Low	Mitigation of impacts is easily achieved where this impact would not have a direct influence on the decision to develop in the area.
30-60	Medium	Mitigation of impact is both feasible and fairly easy. The impact could influence the decision to develop in the area unless it is effectively mitigated.
>60	High	Significant impacts where there is difficult. The impact must have an influence on the decision process to develop in the area.

Impact and rating

<u>Impact</u>	<u>Rating</u>
Nature	Orchard development
Topographical effect	1- limited to site
Reversibility	2
Permanent loss of heritage resources	1
Cumulative effect	1
Duration	3
Magnitude	1
Probability	2
Significance S= (E+D+M) P	1+3+1 x2 =10 The area is considered of low significance
Mitigation	Monitoring after bush clearance

7. RECOMMENDATIONS

The following is recommended:

1. It is recommended that a 20m buffer to begin with be placed around the possible hut floor on the north eastern section.

2. Once bush clearance has occurred, that monitoring take place to identify the scope of the floor area. Possible additional mitigation measures may be required.

The discovery of previously undetected subterranean heritage remains on the terrain must be reported to the Limpopo Heritage Authority or the archaeologist, and may require further mitigation measures.

8. BIBLIOGRAPHY

Deacon, HJ and Deacon, J. 1999. *Human Beginnings in South Africa. Uncovering the Secrets of the Stone Age.* David Philip Publishers. Cape Town & Johannesburg.

Huffman, T.N. 2007. *Handbook to the Iron Age. The Archaeology of Pre-colonial Farming Societies in Southern Africa.* University of KwaZulu-Natal Press.

Krige, E. 1938. *The Place of the North-Eastern Transvaal Sotho in the South Bantu Complex.* Africa: Journal of the International African Institute, 11(3), 265-293.

Mucina, L and Rutherford, M.C. 2006. *The Vegetation of South Africa, Lesotho and Swaziland.* South African National Biodiversity Institute, Pretoria.

SAHRIA website for reports in immediate area



Liesl Stegmann
BA Hons Archaeology Unisa,

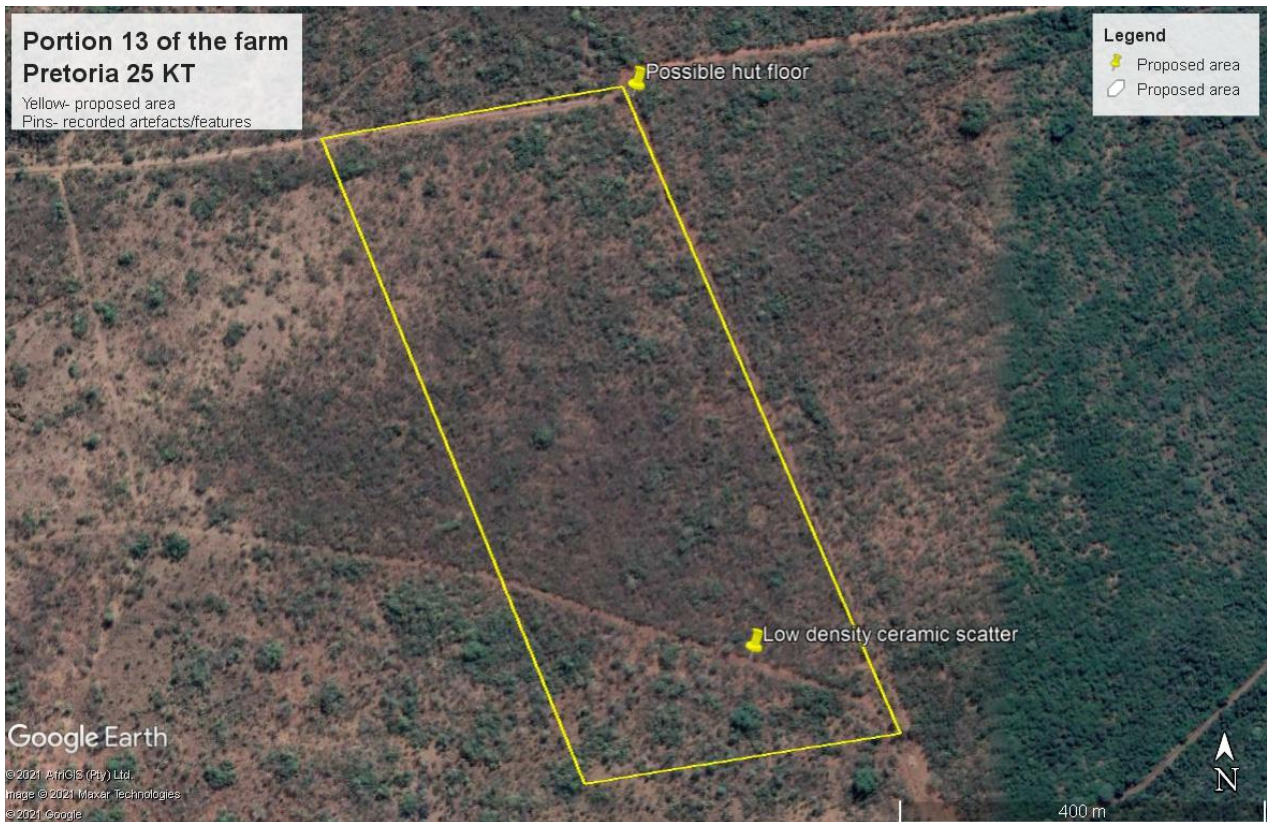
Frans E Roodt
BA Hons Archaeology Unisa



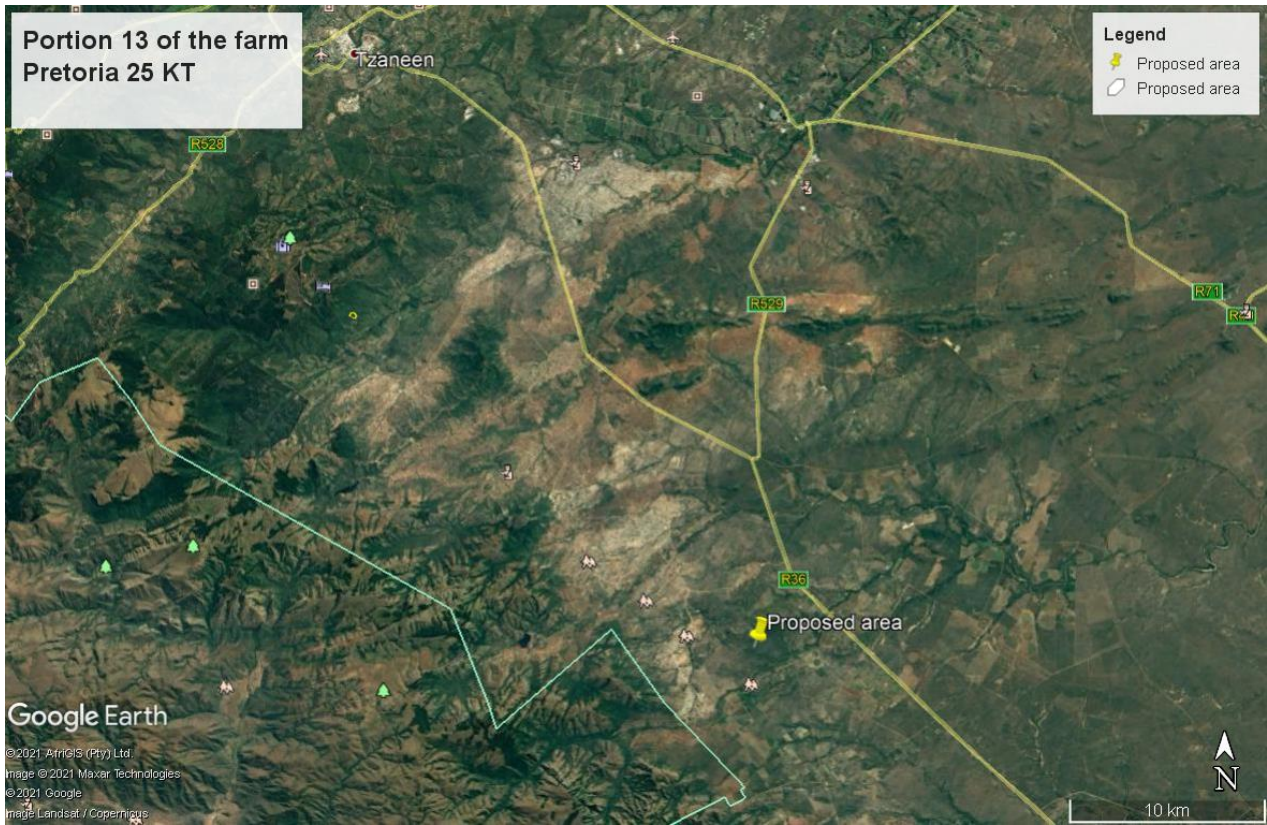
FRANS ROODT (BA Hons, MA Archaeology, Post Grad. Dip. Museology; UP)
Principal Investigator for SHASA Heritage Consultants



Map 2: Google map close view



Map 3. Google view of features/artefacts



Map 4. Google view wide in relation to wider geography