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EXECUTIVE SUMMARY

AGES Geo and Environmental Services contracted the author to survey the proposed area for development of new croplands and to scope the S24G rectification area where croplands have been developed prior to acquiring the land and produce a scoping report for a Phase 1 heritage study to advise on potential impacts and mitigation measures. The area to be developed is approximately 7 km east-north-east of Waterpoort directly north of the R523 road, Limpopo Province.

The expansion is necessary to provide adequate space for a crop rotation cycle of 3 years.

The proposed project parameters are as follows:

The proposed clearance of approximately 450 ha of indigenous vegetation for tomato croplands and an S24G rectification process for 59 ha of existing tomato croplands on the Remainder of Portion 3 of the farm Coniston 699 MS in the Waterpoort area, Makhado Local Municipality, Vhembe District

Survey was conducted on foot (2019 and 2020) and sections were surveyed with Mr Tshivaula (in 2019), a member of the local community, who personally has ancestor graves on the farm. Mr Tshivaula, showed us where graves are located as well as where families lived up until roughly 1958.

Archaeological Iron Age heritage resources were also recorded along a drainage line running roughly N-S across the farm. This area has already been excluded due to ecological reasons by Dr B Henning. Due to the calcareous soils in this area, the area is not arable, and due to archaeological remains, the excluded area has been widened to prevent any impacts in these heritage resources.

The area has also been extended to the N-NW to exclude the area where human settlement existed until the 1950's, to prevent any impact on potential burials, that are not remembered. The area is also significant at the community level.

The remaining area consists of homogenous soil color and grass types in the northern section and homogenous sandy mopane type veld in the south and no heritage remains or areas of social consequence were recorded. The area where the S24G rectification is taking place, has been impacted on by agricultural activities in stages since 2007. No heritage remains could be identified, partially due to the severely disturbed nature of the existing croplands in the S24G rectifications area.

From a heritage resources point of view, we have no objection to the development taking place, on consideration and approval of the mitigation measures as set out in section 7.

Environmental consultant:
AGES Geo- and Environmental Services

Johan Botha

AGES (Pty) Ltd Limpopo
PO Box 2526
Polokwane
0700

Tel: 015 291 1577
E-mail: jbotha@ages-group.com

1. INTRODUCTION AND TERMS OF REFERENCE

Application purpose: Establishment of new croplands and S24G rectification of previously disturbed and cultivated areas.

Area: Waterpoort, Limpopo Province

Size: 450 ha- new croplands; and 59 ha existing croplands (S24G)

GPS: 5 point S22° 52' 08.6" E29° 40' 06.5"
S22° 51' 42.0" E29° 41' 51.0"
S22° 53' 03.6" E29° 41' 59.3"
S22° 53' 13.9" E29° 41' 20.5"
S22° 52' 59.7" E29° 40' 42.5"

Centre GPS points for 3 S24G rectification areas:

S22° 53' 01.4" E29° 41' 04.5"
S22° 53' 02.4" E29° 41' 31.2"
S22° 52' 54.0" E29° 41' 47.5"

Map reference number: 2229 DC

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 entire area was undertaken by Mr FE Roodt, Ms L Stegmann and Ms K Roodt, on 11 May 2019, in the early morning to late afternoon, during which standard methods of observation were applied. Ms L Stegmann revisited the site on 10 June 2020, in the morning to survey the S24G areas, when it was decided to include the areas as part of the wider survey. Mr S Tshivuala and his son accompanied the field team. The area was 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 GPS (Garmin Etrex 10). Heritage material and the general conditions on the terrain were photographed with a Samsung S9.



Map 1. Survey path in white 2019



Map 2. Survey path in white 2020

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 moderate. As many of the family areas were indicated to us by Mr Tshivuala, it must be noted that he was a

young man when the family left the area. He may well not remember infants who may have been buried traditionally near the house or be aware of any new grave sites established after he has left the farm.

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: Musina Mopane Bushveld (Mucina et al. 2006)

Geology: The entire study area is underlain by Carboniferous-Jurassic rocks of the Tshidzi, Madzaringwe, Mikambeni, Fripp, Solitude, Klopperfontein, Bosbokpoort and Clarens formations of the Karoo Supergroup.

Terrain: Slightly undulating plain north of the foothills of the Soutpansberg Mountains

Proposed development: To clear vegetation and establish new croplands; S24G rectification on croplands already established.



Fig 1: View of area



Fig 2: View of area



Fig 3: View of area



Fig 4: View of area



Fig 5: View of area



Fig 6: View of area



Fig 7: View of area



Fig 8: View of area



Fig 9: View of existing croplands (S24G)



Fig 10: View of existing croplands (S24G)

4. RESULTS OF THE SCOPING SURVEY AND DISCUSSION

4.1 SOCIAL and/or RELIGIOUS INTANGIBLE HERITAGE

A. General site description:			
<u>Number allocated</u>	<u>Type site</u>	<u>GPS</u>	<u>Notes</u>
1	Seshokane family area	S22° 52' 01.6" E29° 41' 06.9"	All family, kraal areas were shown to the field team by Mr Samuel Tshivaula, and GPS designates roughly the center of each family settlement area
2	Ratshekane kraal area	S22° 52' 04.0" E29° 41' 06.0"	
3	Frans Tshivaula (Samuel) father's cattle kraal area	S22° 52' 15.3" E29° 41' 09.9"	
4	Mmboyi family area	S22° 52' 15.9" E29° 41' 07.8"	
5	Frans Tshivaula (Samuel) father built with bricks from local soil- family area	S22° 52' 16.0" E29° 41' 09.3"	
6	Machete family area	S22° 52' 17.6" E29° 41' 06.7"	
7	Ramavhila family area	S22° 52' 18.8" E29° 41' 05.4"	

Mr Samuel Tshivaula, was asked by the field team if he had objection to the development and ploughing of the area where families stayed. He replied that he did not have an issue with the area being ploughed. However, it was decided by the field team to rather exclude the area, as child graves etc, may be in the area that are perhaps not well remembered.

The wider area has been occupied by the Tshivaula family since around 1910. During conversations with Mr Samuel Tshivaula on site on the day, he explained that his grandfather had a family home approximately 2 farms over on the southern side of the road. He was unsure of exact dates but estimated it to be around 1910. As sons grew of age and settled nearby land, his father- Frans eventually settled on Coniston, where the development is proposed to take place. Family graves are also located on adjoining and adjacent farms.

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		X

identity and can be developed as tourist destination.			
Rarity value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			X
Representative value			
It is important 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.		Intangible history	
C. Sphere of significance		High	Medium
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			
Destruction		X	
Uncertain			
G. Recommended mitigation			
It is recommended that the area be excluded from development. Although the Tshivaula family did not have objection to development occurring there is still a chance of infant burials where homesteads existed.			
H. Applicable legislation and legal requirements: National heritage Resources Act 25 of 1999.			

I. Images



Fig 11. View of family area being pointed out



Fig 12. View of general family area



Fig 13. View of old cattle area- modern



Fig 14. View of family area



Fig 15. Mr Tshivaula showing family areas



Fig 16. General family area



Fig 17. General family area



Fig 18. Mr Tshivaula's son pointing out family areas

Significance: Generally protected B

4.2 HISTORICAL PERIOD AND BUILT ENVIRONMENT

No remains from the historical period or the built environment were recorded. Where family areas are concerned- these have been recorded under social history point 4.1 above.

Significance: None- no further action required
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4.3 GRAVES

All graves were shown to the heritage surveyor by Mr Samuel Tshivaula and family

In the main cemetery, site 11, it is mainly the family members of Mr Samuel Tshivaula, who are buried there. Prior to entrance, Mr Tshivaula asked for privacy to pray before entering, and to ask permission for the field team to enter. He then pointed out exactly who was buried in each grave, and their personal relationship to him and to each other.

The original delineation of the cemetery was approximately 20m further south than currently, Mr Tshivaula pointed out the original fence pole. Currently the graves are within a fence and Z22 has protocols in place for visits to graves and for new burials. It is a legal document that they have instituted at all their farms across the country. Families can make an appointment with the HR liaison, (Margareth Makhadi) at each farm to discuss issues and permission (Mr A van Staden: personal communication).

A. General site description: Graves Site 8		
GPS: S22° 52' 53.7" E29° 41' 11.3"		
Child grave near building		
This grave is situated to the western side of a building.		
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 important 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.	Has possibly been impacted on by the building	
C. Sphere of significance	High	Medium
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]		X
Generally protected B [Medium significance, to be recorded]		
Generally Protected C [Low significance, no further action]		
E. General statement of site significance		
Low		
Medium		
High		X
F. Rating of potential impact of development		
None		
Peripheral		X
Destruction		
Uncertain		
G. Recommended mitigation		
Grave to remain in situ.		
H. Applicable legislation and legal requirements		
NHRA 25 of 1999. Family pointed out the unmarked grave		
I. Images		
		
Fig 19. View of child grave by building (no 8)		

A. General site description: Graves Site 9		
GPS: S22° 52' 46.2" E29° 41' 07.1"		
2 graves, 1 John Molozwi and 1 unnamed Zimbabwean		
B. Site evaluation		
B1. Heritage value	Yes	No
Historic value		
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
Aesthetic value		
It has importance in exhibiting particular aesthetic characteristics valued by a		X

particular community or cultural group.			
Scientific value			
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
Social value			
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).		X	
Tourism value			
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.			X
Rarity value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			X
Representative value			
It is important 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.		Has possibly been impacted on by the building	
C. Sphere of significance		High	Medium
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]			X
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
E. General statement of site significance			
Low			
Medium			
High			X
F. Rating of potential impact of development			
None			
Peripheral			X
Destruction			
Uncertain			
G. Recommended mitigation			
Grave to remain in situ.			
H. Applicable legislation and legal requirements			
NHRA 25 of 1999. Family pointed out the unmarked grave			
I. Images			



Fig 20. View of John Molozi grave and Zimbabwean (no 9)

A. General site description: Graves Site 10			
GPS: S22° 52' 15.4" E29° 41' 09.7"			
Grave of unnamed child			
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 important 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.	Has possibly been impacted on by the building		
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]	X
Generally protected B [Medium significance, to be recorded]	
Generally Protected C [Low significance, no further action]	
E. General statement of site significance	
Low	
Medium	
High	X
F. Rating of potential impact of development	
None	
Peripheral	X
Destruction	
Uncertain	
G. Recommended mitigation Grave to remain in situ.	
H. Applicable legislation and legal requirements NHRA 25 of 1999. Family pointed out the unmarked grave	

A. General site description: Graves Site 11 GPS: S22° 52' 06.6" E29° 41' 07.5" Family cemetery				
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 important 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.		Has possibly been impacted on by the building		
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]			X
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
E. General statement of site significance			
Low			
Medium			
High			X
F. Rating of potential impact of development			
None			
Peripheral			X
Destruction			
Uncertain			
J. Recommended mitigation			
Grave to remain in situ.			
K. Applicable legislation and legal requirements			
NHRA 25 of 1999. Family pointed out the unmarked grave			

L. Images



Fig 21. Mr Tshivaula showing us the family cemetery

Significance: High

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- *Mzonjani facies* AD 450 – 750
 Moloko branch- *Icon facies* AD 1300 - 1500

Kalundu Tradition: Happy Rest sub-branch -

Happy Rest facies AD 500 – 750
Tavhatshena facies AD 1450- 1600.
Letaba facies AD 1600-1840
Mutamba facies AD 1250- 1450

Decorated ceramics recorded totaled 6 sherds. Due to their fragmented nature, it is not possible to diagnostically attribute them to exact facies. They do display strong elements of the Icon facies, however as Tavhatshena facies is also dominant in the wider area and originates out of a combination of Icon and Khami, the small sample cannot be used to positively determine facies.

A. General site description: Sites marked 12; 13; 14 and 15
GPS:

- 12- S22° 52' 29.9" E29° 41' 40.6" Iron Age ceramic sherd scatter
- 13- S22° 52' 34.0" E29° 41' 43.0" Ash deposit
- 14- S22° 52' 33.7" E29° 41' 44.8" Iron Age ceramics, medium density
- 15- S22° 52' 35.1" E29° 41' 43.6" Grain bin stand foundations- 3. Each approximately 1.2m in diameter

The above sites have been recorded together due to their close proximity.

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		X

cultural heritage.			
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.		The integrity of the deposit can be considered fair.	
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]			
E. General statement of site significance			
Low			
Medium			X
High			
F. Rating of potential impact of development			
None			
Peripheral			X
Destruction			
Uncertain			
G. Recommended mitigation			
It is recommended that the heritage resources remain <i>in situ</i> . The area has been excluded from development on ecological grounds and is supported in archaeological terms to be included in the excluded area.			
H. Applicable legislation and legal requirements			
NHRA act 25 of 1999.			

I. Images



Fig 22. View of area where archaeological Iron Age materials were recorded (no 12)



Fig 23. Mr Roodt checking ceramic shards (no 14)



Fig 24. One of 3 grain bin stands (no 15)

**A. General site description: Sites marked 16; 17 and 18
GPS:**

- 16- S22° 52' 41.0" E29° 41' 49.0" Iron Age ceramic sherd medium density
- 17- S22° 52' 42.2" E29° 41' 50.3" Grain bin stand 1 only
- 18- S22° 52' 43.7" E29° 41' 52.1" Ceramic scatter- medium density and upper grinding stone

The above sites have been recorded together due to their close proximity.

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.	The integrity of the deposit can be considered fair.		
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
Destruction			
Uncertain			

G. Recommended mitigation

It is recommended that the heritage resources remain *in situ*. The area has been excluded from development on ecological grounds and is supported in archaeological terms to be included in the excluded area.

H. Applicable legislation and legal requirements

NHRA act 25 of 1999.

I. Images



Fig 25. Mr Roodt checking ceramics (no 16)



Fig 26. Grain bin stand (no 17)



Fig 27. Upper grinder (no 18)

Significance: Medium

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 Acheul 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. Researched Middle Stone Age sites nearest the proposed area are found west of Mapungubwe, 80km north (Kuman *et al* 2005).

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, south of the proposed area.

The current development is located on flatlands with no overhangs. The drainage calcareous area was carefully surveyed, but no Stone Age remains were recorded.

Significance: None- no further action required

4.6 PALAEONOTOLOGICAL SENSITIVITY

The area falls within a red sector of the SAHRIS Paleo Map. The below statement has been taken from the palaeontological report by Bruce Rubidge, June 2019:

“The entire study area is underlain by Carboniferous-Jurassic rocks of the Tshidzi, Madzaringwe, Mikambeni, Fripp, Solitude, Klopperfontein, Bosbokpoort and Clarens formations of the Karoo Supergroup. Although fossils have not yet been reported from this specific locality the Karoo Supergroup is known to host fossil plants and tetrapods.

However, as these rocks do not outcrop in the study area because of alluvium and vegetation cover, it is unlikely that rocks are exposed in the affected area and thus, in my opinion, this development will not negatively affect palaeontological heritage. However, if rock outcrops are exposed in the course of stabling the tomato croplands, a qualified palaeontologist must be contacted to assess the exposure for fossils so that the necessary rescue operations are implemented.”

Significance: Low- no further action required

5. BACKGROUND ON THE AREA

4578. 2013 The Chapudi Project forms part of the Greater Soutpansberg Projects (GSP) situated to the north of the Soutpansberg in the Limpopo Province. Pikirayi.

A few of the same heritage resources were recorded by Pikirayi in 2013. The grave of John Molozwi, and a reference to the area where Iron Age materials were recorded, but very little detail was mentioned.

Declared sites within the wider area of the proposed development area:

Machema Ruins are situated approximately 20km NW of the project area. Declared a National monument in 1965, it is affiliated with the Shi-Venda who had a cultural affinity with the Great Zimbabwe culture.

Mapungubwe is situated nearly 80km north of the proposed area, as the crow flies.

Dzata is located 40km east of the proposed area, situated between Makhado and Thohoyandou. This site was declared a National Monument on 29 June 1938. The site consists of the remains of the old capital of the chiefs of the Venda people dating back to 1400 AD.

Buysdorp is located south of the Soutpansberg and was declared as National Monument. It is situated on the R522 road to Vivo, a settlement where the descendants of Coenraad du Buys lived. President Paul Kruger allocated this area to the Buys community in 1888.

By Jeppe 1899 map, the area encompassing the Soutpansberg mountains was at that time unsurveyed. General trade routes either went west of the mountain, near the Vivo area, or went east near what is now known as Giyani.

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).	Low
3	Potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage (Research/scientific significance)	Medium
4	Importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects (Scientific significance)	Low
5	Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group (Aesthetic significance)	Low
6	Importance in demonstrating a high degree of creative or technical achievement at a particular period (Scientific significance)	Low
7	Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (Social significance)	High- can be mitigated
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)	Low
9	The significance of the site relating to the history of slavery in South Africa.	Low

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

Areas where heritage resources were recorded have been recommended to be excluded from the development area.

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.

Negligible, as areas where resources were located and recorded have been excluded. Tomato croplands use huge swaths of land, due to crop rotation. It has been recommended to exclude areas where heritage resources were recorded, to prevent impact.

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. The farming company also have protocols in place to negotiate any community concerns through their farm HR liaison. The land is under land claim, 2 lodges have been made, neither have been resolved as of yet and land department states that they are still under investigation.

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

An alternative was sought to prevent any impact on the recorded heritage resources. The areas will be cordoned off, to prevent impact.

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- This rating is based on pre-mitigation measures. WITH mitigation, the impact is low

Impact	Rating
Nature	450 ha vegetation clearance for croplands
Topographical effect	1- limited to site
Reversibility	2
Permanent loss of heritage resources	2
Cumulative effect	3
Duration	4
Magnitude	3
Probability	3
Significance S= (E+D+M) P	3+4+3 x3 =30 The area is considered of medium significance
Mitigation	<i>Mitigation was sought and discussed with the consultants and landowner to prevent any adverse impact on the recorded heritage resources. The areas will be excluded and cordoned off to prevent impact.</i>

7. RECOMMENDATIONS

The following is recommended:

1. The areas where archaeological materials were recorded be excluded from development and cordoned off to prevent farm machinery accidentally impacting archaeological resources.
2. The areas where social/family areas were recorded be excluded from development and cordoned off to prevent farm machinery accidentally impacting social resources.
3. The family cemetery: Access to the graves needs to be provided to the descendants as the ancestors still play a role in the lives of the living family.
4. Grave areas indicated that fall outside of the excluded area- such as graves 8 and 9 should be fenced off, with access for families allowed.
5. The center strip along the calcareous drainage lines has already been excluded due to ecological and environmental reasons.
6. Monitoring should take place when ground works begin.
7. *Should palaeontological materials be uncovered during construction, a qualified palaeontologist is to be contacted to conduct rescue operations.*

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.

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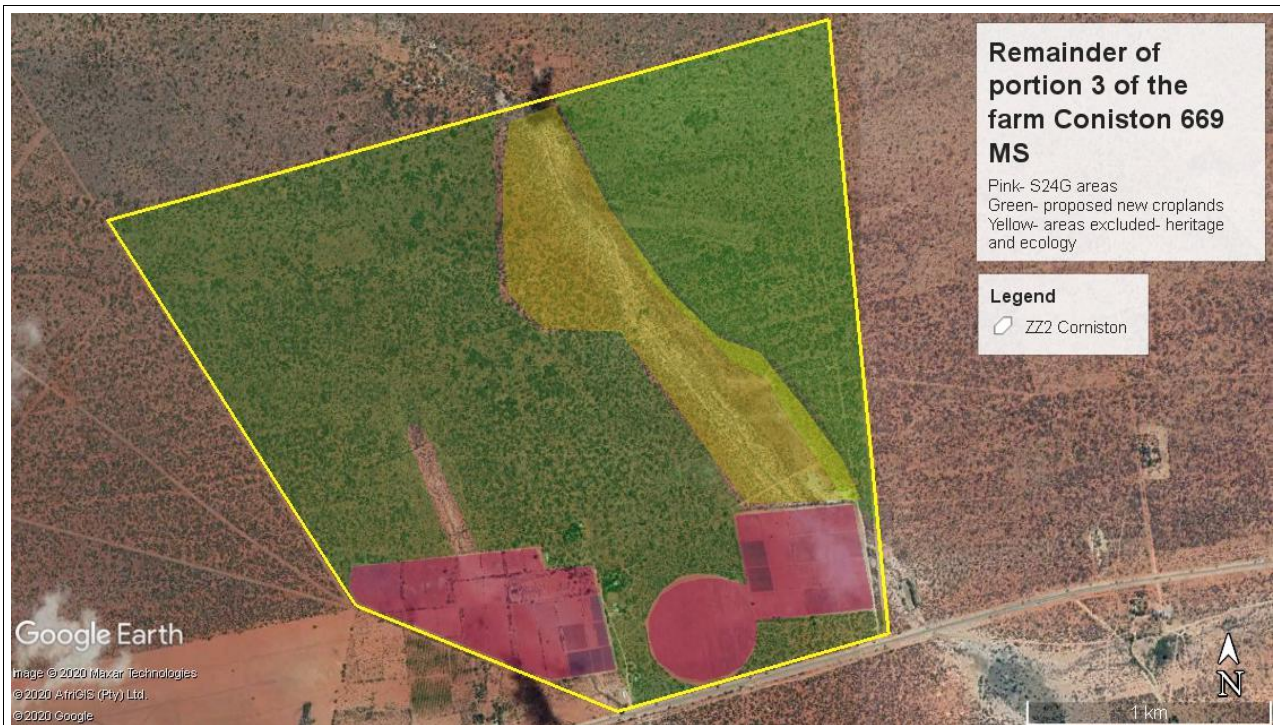
SAHRIS website for reports in immediate area

LIESL STEGMANN
BA Hons Archaeology Unisa

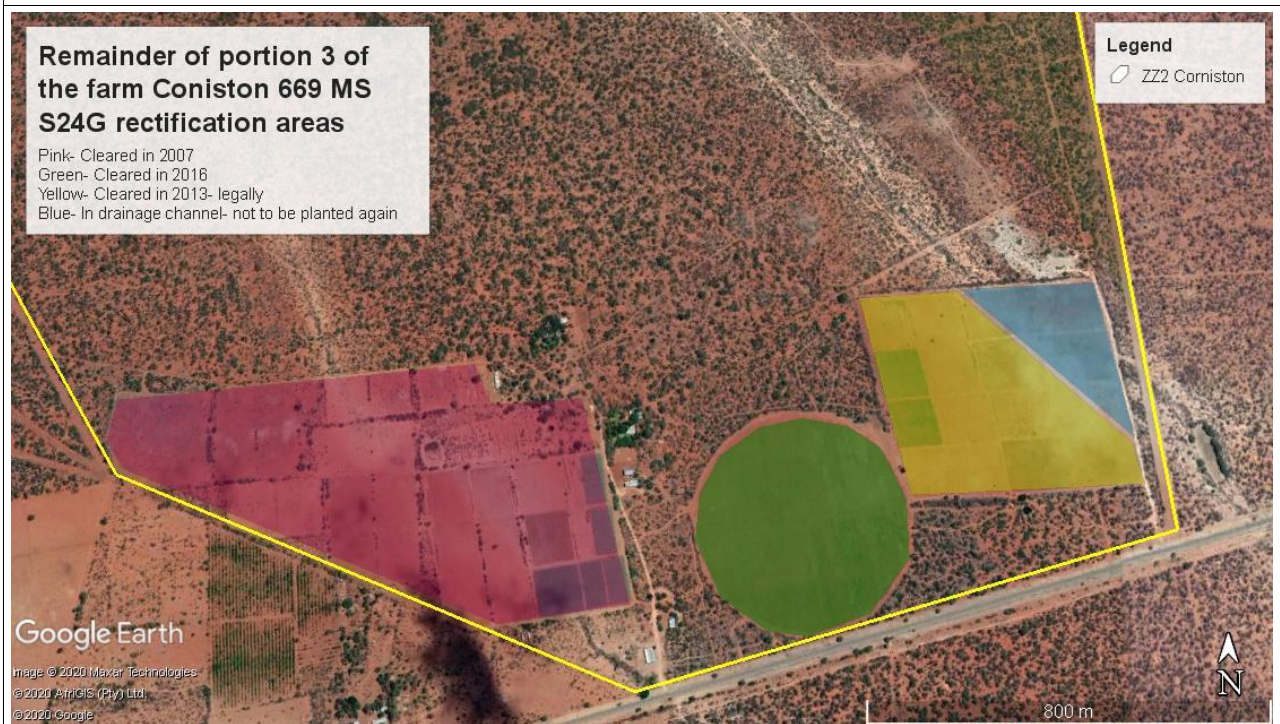
FRANS ELLINGTON ROODT
BA Hons Archaeology Unisa



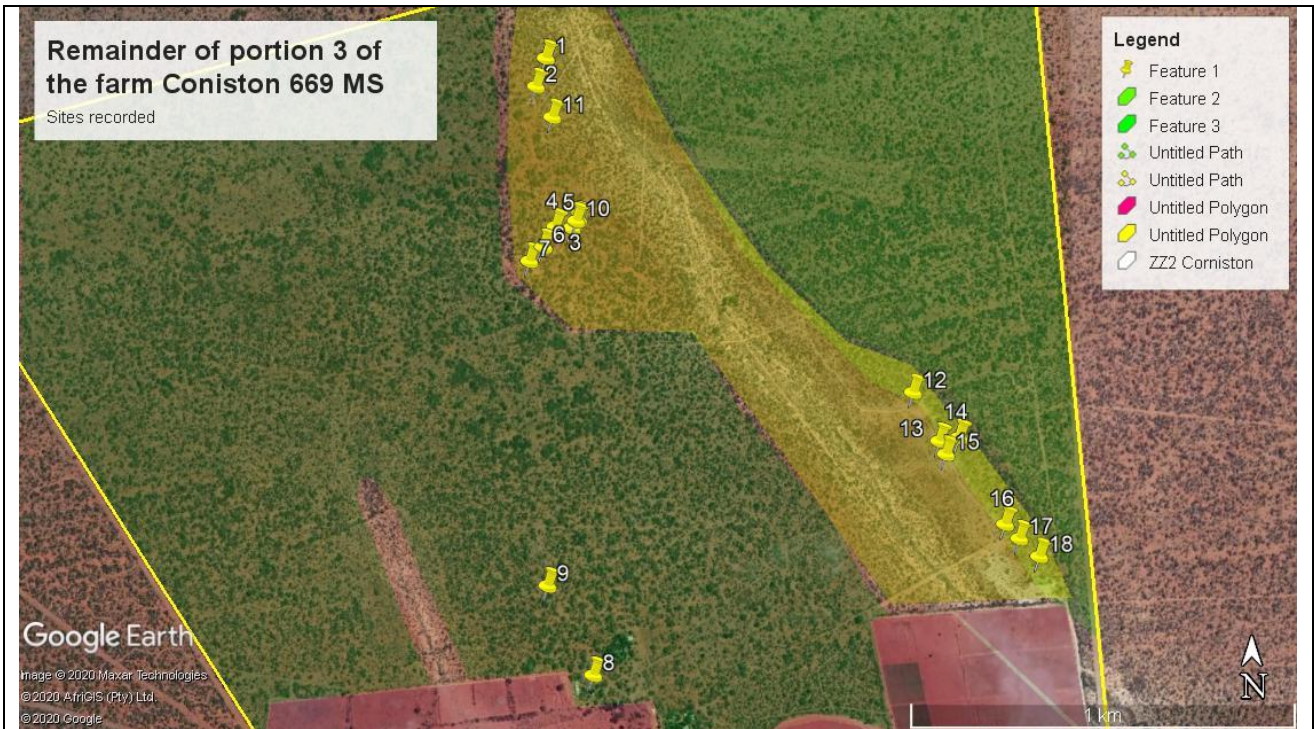
FRANS ROODT (*BA Hons, MA Archaeology, Post Grad. Dip. Museology; UP*)
Principal Investigator for SHASA Heritage Consultants



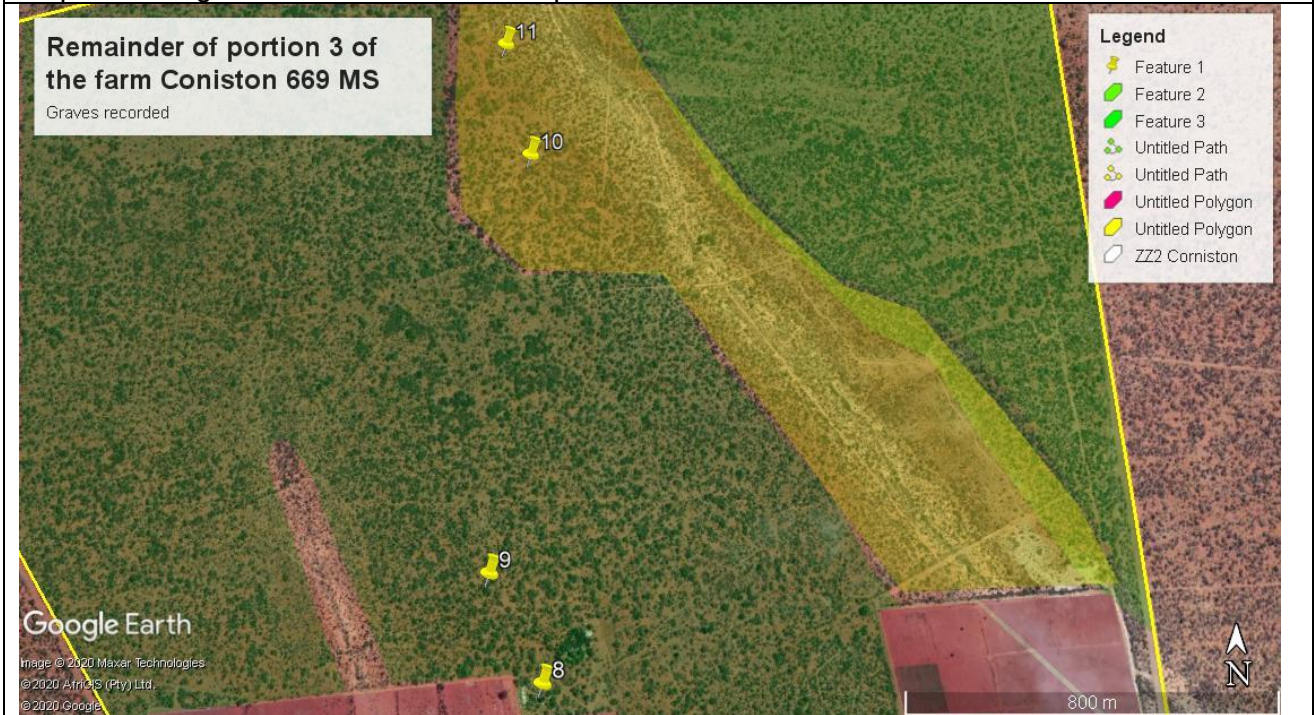
Map 3: Google map close view of demarcated areas



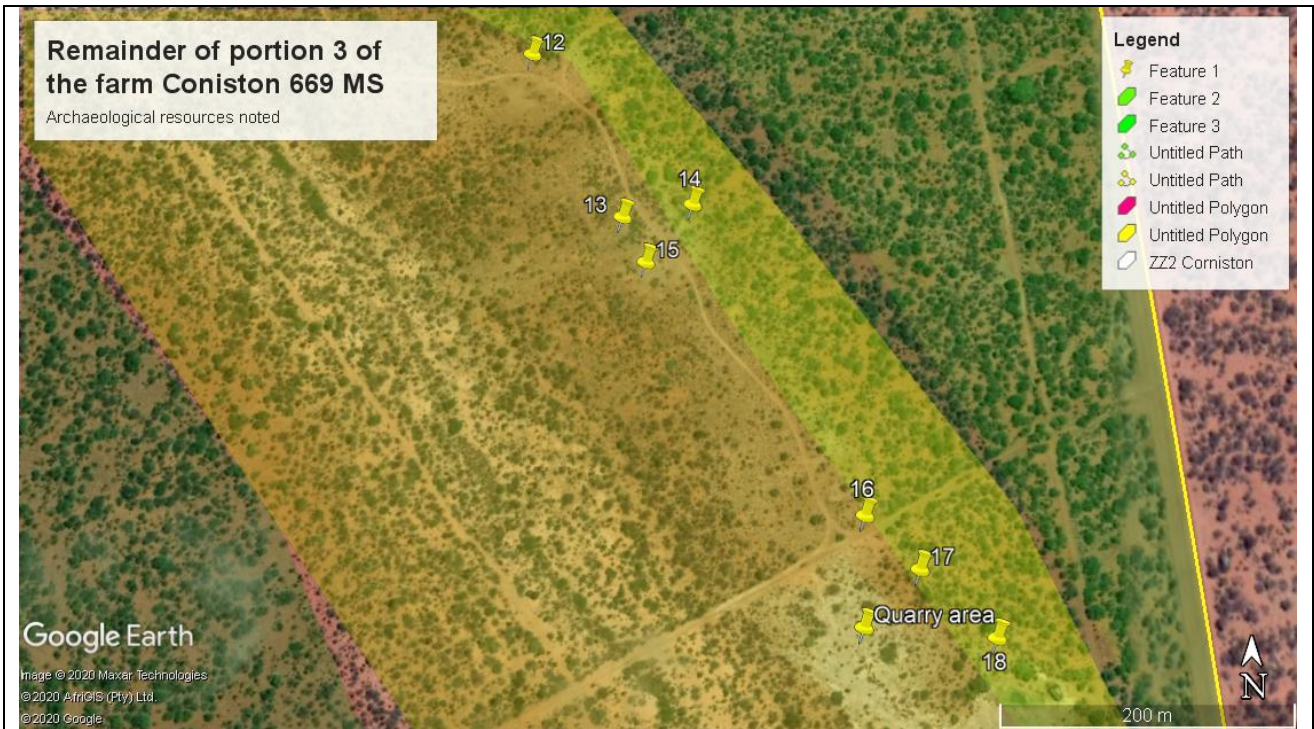
Map 4. S24G areas



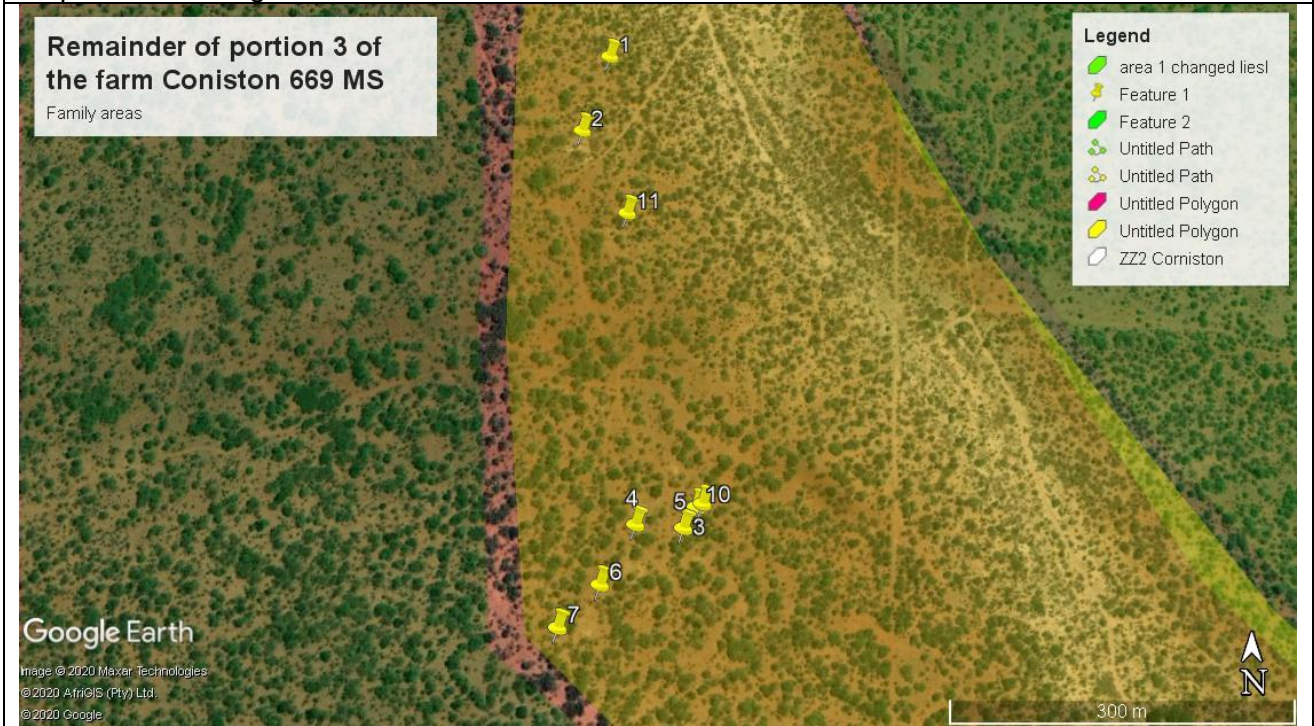
Map 5. Heritage resources recorded and pinned



Map 6. Graves recorded



Map 7. Archaeological resources recorded- recommended to be excluded



Map 8. Social/family area- recommended to be excluded