Shasa Heritage Consultants

PHASE 1 HERITAGE RESOURCES SCOPING REPORT

PROJECT TITLE: PROPOSED NEW FILLING STATION ON ERF 4413 OF EXT 75, TZANEEN, LIMPOPO PROVINCE

FIELDWORK CONDUCTED BY: L STEGMANN, FE ROODT

REPORT COMPILED BY: L STEGMANN

PRINCIPAL INVESTIGATOR: F ROODT

DATE: 20/01/2022

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EXECUTIVE SUMMARY

Shasa Heritage Consultants were contracted by AGES Limpopo (Pty) Ltd to undertake a Phase 1 Heritage Scoping Assessment, for the proposed new filling station on erf 4413 of Ext 75, at the Deerpark intersection, approximately 3km north- east of Tzaneen, along the R71. This report serves to update and focus the report written by Mr F Roodt in 2005 because the 2005 focus was on a large parcel of land, of which the 1ha proposed filling station forms part. This report deals exclusively with the 1ha intersection parcel of land.

The proposed activities are as follows:

- The development of 1ha land to a filling station.
- Installation of underground tanks
- Establishment of forecourt and associated buildings.

Survey was conducted on foot.

No archaeological or socially significant remains were recorded on the site surveyed, or during the 2005 survey. No formal or known graves are on the erf.
Two (2) buildings were recorded, which have a high probability of being older than 60 years. Should these not realistically be able to be reused, then the owner will need to apply to the Limpopo Heritage Authority (Lihra) for the necessary destruction permits and permissions.

From a heritage resources point of view, we have no objection to the development taking place, should the needed permissions and/or mitigation measures be adhered to.

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1. INTRODUCTION AND TERMS OF REFERENCE

Application purpose: Proposed establishment of new filling station and associated buildings

Area: Tzaneen Area

Size: 1ha

GPS:
S23º 48' 48.2" E30º 10' 19.1"
S23º 48' 47.9" E30º 10' 21.5"
S23º 48' 51.2" E30º 10' 22.5"
S23º 48' 53.5" E30º 10' 19.0"

Map reference number: 2330 CC

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 paleontological 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 11 December 2021, during the early morning. The area was carefully traversed, and special attention given to any areas displaying soil and or vegetative changes. As most archaeological material occurs 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 were marked using Google map drop pin technology, correct to 3 meters.

Map 1. Survey path in white

2.2 Limitations

The scoping survey was thorough, but limitations were experienced because archaeological sites are subterranean and only visible when disturbed. Vegetation was moderate.

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 reinternment [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 by SAHRA
Provincial (Grade 2)	Site is of Provincial Significance	Nominated to be declared by Provincial Heritage Authority
Local Grade 3A	Site is of HIGH significance locally	Site should be retained as a heritage site
Local Grade 3B	Site is 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: Tzaneen Sour Bushveld (Mucina et al. 2006).

Geology: Goudplaats gneiss and Archean granites underlie the main region. Soils are generally hutton soils in the area.

Terrain: The terrain is generally flat undulating plains. The wider region is used extensively for agricultural purposes.

Proposed development: Filling Station

Fig 1: General view of area

Fig 2: General view of area

Fig 3. General view of area

Fig 4: General view of 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- no further action required

4.2 HISTORICAL PERIOD AND BUILT ENVIRONMENT

2 buildings that potentially date to being older than 60 years were recorded on the proposed development area. They are further discussed below.

A. General site description:

Potential Historical Building 1

The first building recorded was potentially constructed during the 1950's/1960's. Farm buildings seldom have building plans. This building is characterised by a gabled roof and open veranda. Generally historical houses built in the wider area conformed to the Transvaal vernacular with an I, L or U shape. Earlier buildings in the Tzaneen area used Oregon Pine (Douglas Fir), for window and door frames, as well as roof trusses and flooring. None of these were evident, thus a date post 1940's is estimated. The building also makes use of steel window frames in a style used widely in the area in the 1950's and 1960's.

GPS: *S23º 48' 51.9" E30º 10' 21.1"*

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 particular community or cultural group.		X
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 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.	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	
Destruction	X
Uncertain	

G. Recommended mitigation The building appears to be older than 60 years and is thus protected in terms of NHRA Act 25 of 1999. It is recommended that either the building can be reused as part of the filling station or a destruction is required from the Limpopo Heritage Authority, if destruction is sought.

H. Applicable legislation and legal requirements- National Heritage Resources Act (Act No. 25 of 1999, Section 34 (1)

I. Image

Fig 5. View Building 1

A. General site description:

Potential Historical Building 2

This building appears to be slightly older than building one. Although it also has a gabled roof, the use of wooden window frames is evident in those that haven't been altered in more recent times. From enlarging photos (windows are high up and couldn't easily be reached), it appears that Oregon pine (Douglas Fir) was used for wooden frames but will need to be firmly established. It is estimated that this building was built in the late 1940's to 1950's.

GPS: *S23° 43' 48.9" E30° 10' 20.0"*

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 particular community or cultural group.		X
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		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.	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 to low
Generally Protected C [Low significance, no further action]			
E. General statement of site significance			
Low			
Medium			X to low
High			
F. Rating of potential impact of development			
None			
Peripheral			
Destruction			X
Uncertain			

G. Recommended mitigation – The building appears to be older than 60 years and is thus protected in terms of NHRA Act 25 of 1999. It is recommended that either the building can be reused as part of the filling station or a destruction is required from the Limpopo Heritage Authority, if destruction is sought.

H. Applicable legislation and legal requirements- National Heritage Resources Act (Act No. 25 of 1999, Section 34(1))

I. Image

Fig 6. Building 2

Significance: Medium-low. Developer is required to apply for destruction permits for each of the buildings if they cannot be utilised as part of the filling station.

4.3 GRAVES

No formal or informal graves could be identified.

Significance: None- no further action required

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 *facies* AD 280-450 (Early Iron Age)
Mzonjani facies AD 450 – 750 (Early Iron Age)
Moloko branch- *Icon facies* AD 1300 - 1500 (Late Iron Age)

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

The 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 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 Tsaneng, Tzaneen's original inhabitants were of Sotho and Shangaan origin.

No remains from the Iron Age were recorded, this may be due to agricultural activities in the past, however, grass and vegetation cover was homogenous throughout the area.

Significance: None- no further action required

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 hand axes, 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, hand axes 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 that 25mm long are called microliths (sometimes found in the final MSA), bows and arrows. Rock art is an important feature of the LSA and is abundant in the Waterberg and the Makgabeng area.

Significance: None- no further action required

4.6 PALAEONOTOLOGICAL SENSITIVITY

The area lies within the grey zone on SAHRIS map and thus no PIA is required. Geology in the area is not conducive to fossils.

Significance: None- no further action required

5. BACKGROUND ON THE AREA

The authors have worked extensively in the wider area, including Tzaneen, Letsitele, 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.

Mr F Roodt conducted a Heritage Assessment in 2005, when the current area formed part of a much larger potential development area. No resources were recorded.

The following table highlights events in the area around Tzaneen, the area used to be a malaria area in the past, as late as 1941 (last map that could be traced).

Date	Occurrence
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	**Significance**	**Rating**
1	The importance of the cultural heritage in the community or pattern of South Africa's history (Historic and political significance)	None
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	None
4	Importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects (Scientific significance)	None
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.

The development can impact the 2 buildings which are potentially 60 years old or older. Mitigation is required.

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***.

Identified building are the only resources and are not of a unique or outstanding type. It can be presumed that the economics benefits outweigh the preservation benefits. Further studies are needed.

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.

Nan alternative to re-utilise the buildings.

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 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 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

Impact	Rating
Nature	Establishment of filling station
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	See below regarding buildings

7. RECOMMENDATIONS

The following is recommended:

1. Both buildings are potentially older than 60 years, or on the cusp of 60 years. It is recommended that if the buildings cannot be re-utilised, a destruction permit needs to be sought from the Limpopo Heritage Authority. Further studies will be required to adhere to these requirements.

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

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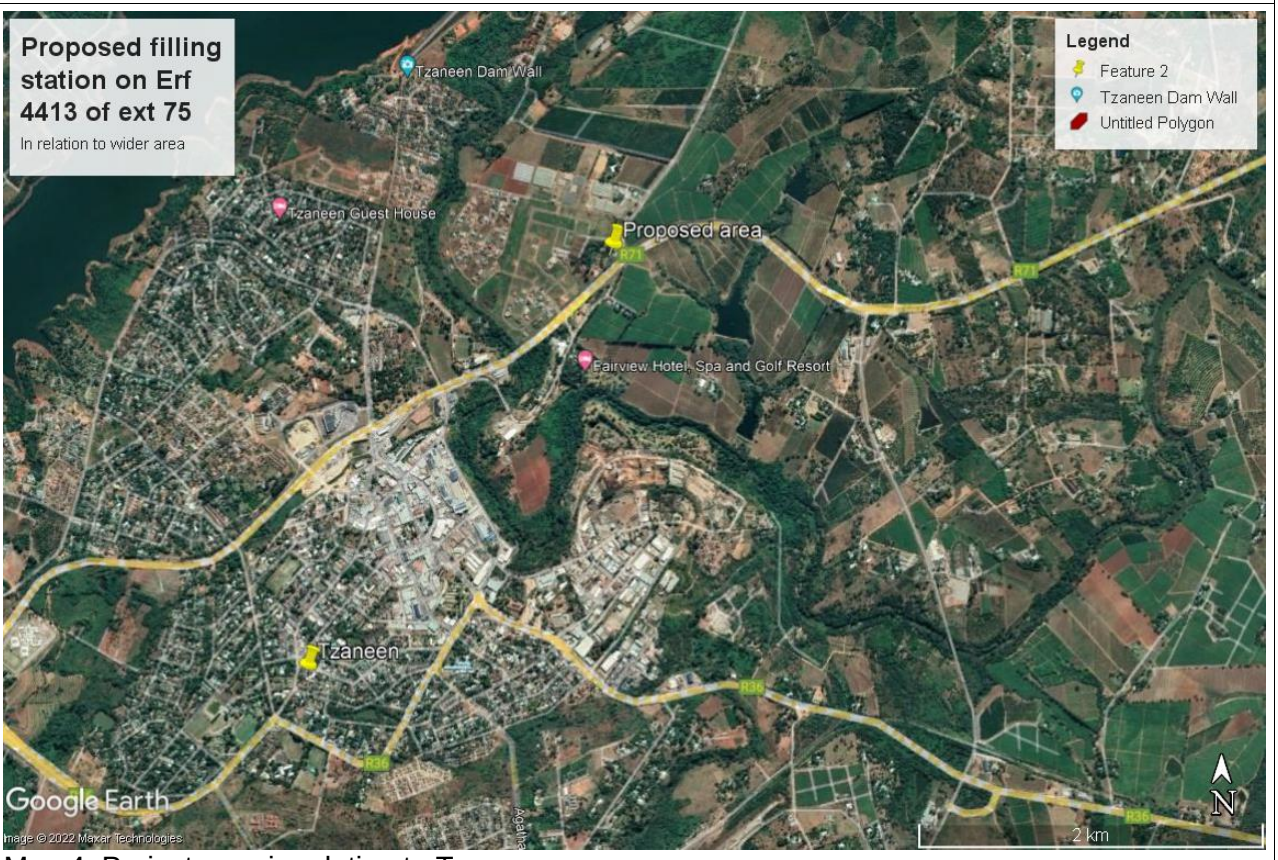
Map 2:Google map close-up view of proposed area

Map 3. Google view 2003 historical image



Map 4. Project area in relation to Tzaneen