PHASE ONE HERITAGE IMPACT ASSESSMENT OF THE PROPOSED THE PROPOSED ESTABLISHMENT OF A FILLING STATION, LOCATED ON ZAMAZAMA NO. 16924, WITHIN THE UMHLABUYALINGANA LOCAL AND UMKHANYAKUDE DISTRICT MUNICIPALITY, EPHONDWENI RESERVE, KWAZULU-NATAL



ACTIVE HERITAGE cc.

For: Geen Door Environmental

Frans Prins
MA (Archaeology)
P.O. Box 947
Howick
3290

feprins@gmail.com activeheritage@gmail.com www.activeheritage.webs.com

Fax: 086 7636380

June 2021

i

Details and experience of independent Heritage Impact Assessment Consultant

Consultant: Frans Prins (Active Heritage cc)

Contact person: Frans Prins

Physical address: 37 Buchanan Street, Howick, 3290

Postal address: P O Box 947, Howick, 3290

Telephone: +27 033 3307729 Mobile: +27 0834739657 Fax: 0867636380

Email: Activeheritage@gmail.com

PhD candidate (Anthropology) University of KwaZulu-Natal MA (Archaeology) University of Stellenbosch 1991 Hons (Archaeology) University of Stellenbosch 1989

University of KwaZulu-Natal, Honorary Lecturer (School of Anthropology, Gender and Historical Studies).

Association of Southern African Professional Archaeologists member

Frans received his MA (Archaeology) from the University of Stellenbosch and is presently a PhD candidate on social anthropology at Rhodes University. His PhD research topic deals with indigenous San perceptions and interactions with the rock art heritage of the Drakensberg.

Frans was employed as a junior research associate at the then University of Transkei, Botany Department in 1988-1990. Although attached to a Botany Department he conducted a palaeoecological study on the Iron Age of northern Transkei - this study formed the basis for his MA thesis in Archaeology. Frans left the University of Transkei to accept a junior lecturing position at the University of Stellenbosch in 1990. He taught mostly undergraduate courses on World Archaeology and research methodology during this period.

From 1991 – 2001 Frans was appointed as the head of the department of Historical Anthropology at the Natal Museum, Pietermaritzburg. His tasks included academic research and publication, display conceptualization, and curating the African ethnology collections of the Museum. He developed various displays at the Natal Museum on topics ranging from Zulu material culture, traditional healing, and indigenous classificatory systems. During this period Frans also developed a close association with the Departments of Fine Art, Psychology, and Cultural and Media Studies at the then University of Natal. He assisted many post-graduate students with projects

relating to the cultural heritage of South Africa. He also taught post-graduate courses on qualitative research methodology to honours students at the Psychology Department, University of Natal. During this period he served on the editorial boards of the *South African Journal of Field Archaeology* and *Natalia*.

Frans left the Natal Museum in 2001 when approached by a Swiss funding agency to assist an international NGO (Working Group for Indigenous Minorities) with the conceptualization of a San or Bushman museum near Cape Town. During this period he consulted extensively with various San groupings in South Africa, Namibia and Botswana. During this period he also made major research and conceptual contributions to the Kamberg and Didima Rock Art Centres in the Ukhahlamba Drakensberg World Heritage Site.

Between 2003 and 2007 Frans was employed as the Cultural Resource Specialist for the Maloti Drakensberg Transfrontier Project – a bilateral conservation project funded through the World Bank. This project involved the facilitation with various stakeholders in order to produce a cultural heritage conservation and development strategy for the adjacent parts of Lesotho and South Africa. Frans was the facilitator for numerous heritage surveys and assessments during this project. This vast area included more than 2000 heritage sites. Many of these sites had to be assessed and heritage management plans designed for them. He had a major input in the drafting of the new Cultural Resource Management Plan for the Ukahlamba Drakensberg World Heritage site in 2007/2008. A highpoint of his career was the inclusion of Drakensberg San indigenous knowledge systems, with San collaboration, into the management plans of various rock art sites in this world heritage site. He also liaised with the tourism specialist with the drafting of a tourism business plan for the area.

During April 2008 Frans accepted employment at the environmental agency called Strategic Environmental Focus (SEF). His main task was to set-up and run the cultural heritage unit of this national company. During this period he also became an accredited heritage impact assessor and he is rated by both Amafa and the South African Heritage Resources Agency (SAHRA). He completed almost 50 heritage impact assessment reports nation-wide during an 18th month period.

Frans left SEF and started his own heritage consultancy called "Active Heritage cc" in July 2009. Although mostly active along the eastern seaboard his clients also include international companies such as Royal Dutch Shell through Golder Associates, and UNESCO. He has now completed almost 1000 heritage conservation and management reports for various clients since the inception of "Active Heritage cc". Amongst these was a heritage study of the controversial fracking gas exploration of the Karoo Basin and various proposed mining developments in South Africa and proposed developments adjacent to various World Heritage sites. Apart from heritage impact assessments (HIA's) Frans also assist the National Heritage Council (NHC) through Haley Sharpe Southern Africa', with heritage site data capturing and analysis for the proposed National Liberation Route World Heritage Site and the national intangible

heritage audit. In addition, he is has done background research and conceptualization of the proposed Dinosaur Interpretative Centre at Golden Gate National Park and the proposed Khoi and San Interpretive Centre at Camdeboo, Eastern Cape Province. During 2009 he also produced the first draft dossier for the nomination of the Sehlabathebe National Park, Lesotho as a UNESCO inscribed World Heritage Site.

Frans was appointed as temporary lecturer in the department of Heritage and Tourism, UKZN in 2011. He is also a research affiliate at the School of Cultural and Media Studies in the same institution. In 2020 he assisted Boston Colledge (Stellenbosch) with the development of distance education lectures in Anthropology 1 and 2.

Frans's research interests include African Iron Age, paleoecology, rock art research, San ethnography, traditional healers in South Africa, and heritage conservation. Frans has produced more than fourty publications on these topics in both popular and academic publications. He is frequently approached by local and international video and film productions in order to assist with research and conceptualization for programmes on African heritage and culture. He has also acted as presenter and specialist for local and international film productions on the rock art of southern Africa. Frans has a wide experience in the fields of museum and interpretive centre display and made a significant contribution to the conceptual planning of displays at the Natal Museum, Golden Horse Casino, Didima Rock Art Centre and !Khwa tu San Heritage Centre. Frans is also the co-founder and active member of "African Antiqua" a small tour company who conducts archaeological and cultural tours world-wide. He is a Thetha accredited cultural tour guide and he has conducted more than 50 tours to heritage sites since 1992.

Declaration of Consultants independence

Frans Prins is an independent consultant to Green Door Environmental and has no business, financial, personal or other interest in the activity, application or appeal in respect of which he was appointed other than fair renumeration for work performed in connection with the activity, application or appeal. There are no circumstances whatsoever that compromise the objectivity of this specialist performing such work.

Frans Prins

TABLE OF CONTENTS

1 BACKGROUND INFORMATION ON THE PROJECT	
2 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA	
2.1 The Ndwandwe	
3 BACKGROUND INFORMATION OF THE SURVEY	s
3.1 Methodology	
3.1.1 Guidance from Desktop Study	
3.2 Restrictions encountered during the survey	
3.2.1 Visibility	
3.2.2 Disturbance	
3.3 Details of equipment used in the survey	(
4 DESCRIPTION OF SITES AND MATERIAL OBSERVED	Ç
4.1 Locational data	
4.2 Description of the general area surveyed	
4.2.1 Backgound	
4.2.2 Stakeholder Consultation	
4.2.3 Desktop Paleontology Assessment	
5 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)	11
5.1 Field Rating	
6 RECOMMENDATIONS AND CONCLUSION	12
7 MAPS AND FIGURES	13
8 REFERENCES	18
LIST OF TABLES	
Table 1. Background information	
Table 2. Field rating and recommended grading of sites (SAHRA 2005)	
Table 3. Evaluation and statement of significance	11

LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2006)).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000))
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

EXECUTIVE SUMMARY

A heritage survey of the proposed establishment of a filling station, located on Zamazama No. 16924, within the Umhlabuyalingana Local and Umkhanyakude District Municipality, Ephondweni Reserve, Kwazulu-Natal, identified no heritage sites on the footprint and within 50m from the proposed development site. There is no need for any mitigation. The first phase desktop paleontological investigation indicates that no additional paleontological studies will be required. However, a protocol of finds must be followed. Attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) and the Amafa Research Institute and Heritage Act (Act No. 5 of 2018), which requires that operations that expose archaeological or historical remains as well as old graves and fossil material should cease immediately, pending evaluation by the provincial heritage agency.

1 BACKGROUND INFORMATION ON THE PROJECT

Table 1. Background information

Consultant:	Frans Prins (Active Heritage cc) for Green Door Environmental
Type of development:	Filling Station
Rezoning or subdivision:	Rezoning
Terms of reference	To carry out a Heritage Impact Assessment
Legislative requirements:	The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008)

1.1. Details of the area surveyed:

The Applicant, Sukamani Multiserve, is proposing the establishment of a filling station, located on Zamazama No. 16924, within the Umhlabuyalingana Local and Umkhanyakude District Municipality, Ephondweni Reserve, KwaZulu-Natal. The filling station is proposed to be located on a 0.4 ha area at GPS coordinates $27^{\circ}02'32.80''$ S and $32^{\circ}16'34.82''$ E (Figs 1 – 4). This area is currently disturbed (Figs 6 – 10) and comprises buildings which are utilised by the local community. The filling station is proposed to comprise the following components:

- Four underground fuel tanks for the storage of a maximum of 500 m³ of fuel;
- Three undercover pump islands;
- One exposed pump;
- Seven line shops;
- A small kiosk; and
- Ablution facilities.

The Applicant wishes to store both petrol and diesel, as well as liquid and compressed natural gas.

2 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

The project area is situated within Maputaland in the north eastern section of KwaZulu-Natal between Phongola in the north and Matubatuba in the south. The greater Maputaland is endowed with heritage sites of various traditions and periods spanning the Stone Ages, Iron Ages and the historical period. However, the majority of these occur to the east of the Pongola, in the foothills of the Lebombo Mountains. A second large concentration occurs adjacent to and on the dune gordon along the coastline. The coastal plain as well as the flat lands to the immediate west of the Ubombu and Lebombo Mountains, by contrast, appears to have a smaller percentage of archaeological sites. The N2 (i.e. the study area) tranverses these flat lands to the immediate west of the Ubombu and Lebombo mountains. Oliver Davies, an archaeologist who conducted pioneered research and surveys in northern KwaZulu Natal in the 1960's and 1970's, commented that the coastal plain was unpromising for archaeological research due to its being covered by superficial sands and bush coverage which affect preservation and visibility (Avery 1980). By contrast, the foothills of the Lebombo to the immediate east of the project area, is well endowed with archaeological sites. The provincial heritage data base of the KwaZulu-Natal Museum lists twenty nine sites in the greater Ubombo and Mkhuze areas. These include Early Stone Age, Middle Stone Age, Later Stone Age and Later Iron Age sites. Nevertheless, more recent surveys on the coastal plain by members of the then Natal Museum as well as by independent heritage contractors, such as Umlando and eThembeni, located numerous new sites. Only two archaeological sites, consisting of Early Stone Age surface tool scatters, has been recorded near the footprint.. However more Middle and Early Stone Age occurrences has been recorded along the Mkhuze and Pongola Rivers but situated more than 4km away form the actual footprint. Ghost Mountain, a prominent landmark feature situated near Mkhuze, is associated with the burials of Nzdwandwe nobility. It has also been the scene of a major battle between two sections of the amaZulu during civil strife in 1889. Although visible from the N2 this living heritage site is situated more than a km to ther east of the footprint and it is not threatened by the proposed development.

Based on typological criteria it can be speculated that the known Early Stone Age sites in the greater Maputaland area most probably dates back to between 300 000 and 1.7 million years ago. Some of the stone tools have been identified as belonging to the

Acheulian tradition and it is therefore possible that these sites were occupied by an early hominin such as *Homo erectus* or *Homo ergaster*. Middle Stone Age Sites dates back to ca. 40 000 - 200 000 BP. These sites relate to the first anatomically modern people in the world namely *Homo sapiens sapiens*. Most of the Middle Stone Age sites in the greater Maputaland are open air stone tool scatters with little archaeological context. However, some notable cave deposits do occur. The world renowned Border Cave Site, situated approximately 150km to the north-west of the project area, is a good example. Humans lived at Border Cave over a period of 200 000 years. The human skeletal remains found in the cave are believed to be some of the oldest evidence of anatomically modern human beings. Various radiometric-dating techniques suggest that Middle Stone Age people were living at Border Cave more than 110 000 years ago. More than a million stone artefacts have been excavated in the cave and an enormous amount if animal material has been recovered from the site as well (Derwent 2006).

Only a handful of Later Stone Age sites have been recorded in the greater Maputaland. These relate to San hunter-gatherers or their immediate ancestors. The stone tool technology are smaller and more diverse and specialised than those made during the Middle Stone Age. Archaeological excavations at Border Cave recently produced the oldest known assemblage of typical San (Bushmen) bone arrow points and associated later Stone Age material in southern Africa. These were dated to approximately 40 000 years ago. Later Stone Age occurrences closer to the coastal zone, and by implication the study area, consists mostly of stone tool surface scatters. It is often difficult to date such occurrences and to obtain contextual information.

The Early Iron Age of the coastal zone in Maputaland contains ceramic fragments identified as belonging to the Matola phase. The Matola phase sites can be identified with the very first Bantu-speaking agriculturists that entered KwaZulu-Natal approximately 1 600 years ago from Eastern Africa (Maggs 1989). Although oral history indicate that the greatest portion of Maputaland was occupied in more recent centuries times by the Thembe-Thonga or their immediate ancestors only a few archaeological sites belonging to this period have so far been identified. Nevertheless the present African inhabitants of the area, the Thembe-Thonga and some Nguni peoples, have a rich oral history and culture relating to their intimate relationship with the environment spanning many centuries. Aspects of their cultural heritage identified by community representatives as being important include the following:

- Relationship of the local community with the physical environment
- Traditional fishing practises (fonya basket fishing)
- The indawo spirit possession cult
- Wild fruit utilisation
- The significance of the mothers brother in Thembe-Thonga social organisation
- Settlement rules and history
- Thonga language
- Issues relating to cross border identities
- Trade across the border
- · History of various traditional authorities in the area
- Occupation of some areas by refugees of the Zulu wars
- The grave site of King Dingane
- Influence on local customs by refugees of the Mozambican War of 1975-1990

The conventional view is that that the historical occupants of Maputaland, the Tembe-Thonga, migrated from Karanga in the present day Zimbabwe in the middle of the seventeenth century Junod (1962:23). However, the theory that the African societies of south-east Africa migrated there in fixed ethnic units, as in the case of the Tembe-Thonga, has been questioned by archaeological research and recent research on oral traditions of Zululand and Natal (Maggs 1989). Instead of migrating there in fixed ethnic groups, it is now argued that the African societies of south-east Africa emerged locally from long established communities of diverse origins and diverse cultures and languages. Nevertheless, whether the Tembe came from Karanga to establish their authority over the people of south-east Africa, or whether they emerged locally, reports from Portuguese sailors indicate that a chief Tembe was in control of the ruling chiefdom in the Delagoa Bay hinterland in the mid-1600s (Wright & C. Hamilton 1989:46-64 and Kuper 1997:74). Tembe and his followers gradually established their authority over the people who lived in this hinterland including the project area. Due to the abilities of their strong and charismatic leaders, the Tembe-Thonga remained a unified chiefdom and gradually extended their influence. This unity was upset in the middle of the eighteenth century when a split in the ruling lineage led to the fragmentation of the chiefdom. The division came after the death of Silamboya in 1746. The descendants of Silamboya's oldest son, Muhali, settled west of the Maputo River and north of the Usuthu River. This group, the senior branch of the Tembe-Thonga, became known as the Mututwen-Tembe. The other part of the Tembe-Thonga followed a junior son of Silamboya, Mangobe, and settled east of the Maputo River. This branch

would later become known as the Mabudu or Maputo (Bryant 1965:290). Maputaland is named after this influential chief Mabudu. The imposed international border of 1875 bisected the area where the Mabudu branch settled. Being unable to control the vast area under his control, the chief of the junior branch, Mangobe, placed his sons in strategic positions so as to ensure his control. When Mangobe died, his first son, Nkupo, was named chief. However, his younger son, Mabudu, soon established himself as the stronger leader and took the chieftainship from his older brother (Hedges 1978:137). With the army now at his disposal Mabudu was able to dominate all trade between Europeans who landed at Delagoa Bay and local people living in the hinterland. Through this domination the Mabudu became, by the middle of the eighteenth century, the strongest political and economic unit in south-east Africa (Smith 1972:178-184). The people under his authority, which gradually increased, became known as the abakwaMabudu or the people of Mabudu's land (Webb and Wright 1979:157). By the early 1800s the Mabudu chiefdom stretched from the Maputo River in the west to the Indian Ocean in the east, and from Delagoa (Maputo) Bay in the north to as far south as Lake St. Lucia (Felgate 1982:1) directly adjacent to the project area.

During the early 1800s similar processes of political centralisation were taking place within the project area and further south amongst the Ndwandwe, Mthetwa, and later the Zulu chiefdoms. This period period of great instability and upheaval among indigenous groups is commonly referred to as the Mfecane or Difaqane. The Zulu eventually defeated the other groups and established themselves as the dominant power in south-east Africa (Wright & Hamilton 1989, Laband 1995). In fact, the project area is centrally located within the area dominated by the Ndwandwe, a powerful policy that for many years posed as the main political threat to Shaka Zulu.

2.1 The Ndwandwe

The long-held belief that the increased militarization of the Zulu under Shaka was solely responsible for this state of conflict has now been revised, with research pointing to multiple factors contributing to the instability. These include pressure on natural resources, population expansion, drought, increased social stratification, attempts to control trade routes and, to some extent, European-sponsored slave-raiding among local groups (Eldredge 1992; Gump 1989 and Wylie 2006). Indian Ocean trade contributed to changes in the socio-political structures of many groups, including that

of the Ndwandwe: imported beads became part of bride-wealth/lobola currency, increased demand for meat and grain from east coast ships necessitated more control of agricultural labour, cattle-raids etc, and even influenced the evolution of the amabutho (age-set regiments) system. Ivory, hides, slaves, grain and metal hoes were exchanged for incoming commodities such as beads and cloth (Mitchell & Whitelaw 2005: 228; Huffman 2007: 77-80). It was amid the ensuing power struggles between politically complex chiefdoms that the Mthethwa, Ndwandwe in the north and the Qwabe in the south emerged as prominent role-players. The Ndwandwe kingdom was the dominant force in the east from 1750 to 1820. However, this kingdom's role has been neglected because its history has been overshadowed by the successor Zulu state.

Zwide kaLanga (1758–1825) was the King of the Ndwandwe (Nxumalo) nation from about 1805 to around 1820. He was the son of Langa KaXaba, a Nxumalo king. Legend has it that Zwide's mother, Queen Ntombazi, was a sangoma. Around the time Zwide became King, the Nxumalo were growing in military power. Ambitious in expanding Nxumalo supremacy, Zwide was a prominent rival to King Dingiswayo of the Mthethwa and his famous general and protégé, Shaka kaSenzangakhona, usurper to the Mthethwa throne. Warfare erupted, and two kingdoms battled for control of resources. Both kingdoms became more centralized and militarized, their young men banded together in age regiments that became the basis for standing armies, and their kings became more autocratic as they fought for survival. The Ndwandwe appeared victorious in 1818 when Dingiswayo was killed and his forces scattered. He also destroyed and overran the neighbouring Khumalo Kingdom and executed their King Mashobana KaMangethe. Mashobana's son and heir Mzilikazi escaped from the Nxumalo and sought refuge with Shaka of the Zulu-clan. Knowing this, Zwide planned to destroy the Zulu Empire to secure Ndwandwe domination of Zululand.

When Dingiswayo was killed, Shaka with his military machine avenged his mentor's death, destroying the Ndwandwe in battle. The Battle of Gqokli Hill was fought between the forces of King Shaka and King Zwide of the Ndwandwe in 1818. Although he faced a numerically superior enemy, King Shaka's military tactics won the day and he scored a huge victory. However, the Ndwandwe remained a political force and a continuous threat to the expanding Zulu Kingdom. In 1820, Zwide led his army into battle against the Zulu at the Battle of Mhlatuze River. His forces were caught crossing halfway across the Mhlatuze River when the Zulu forces attacked, and the Nxumalo

army was scattered. Zwide escaped with a remnant of his clan across the Pongola River. After Zwide and his clansmen escaped, the Zulu attacked the rest of his people, killing many at Mome Gorge, a desolate place. The Zulu also attacked the Ndwandwe capital, KwaNongoma. The Zulu victory was the beginning of the Mfecane or the scattering. Zwide's generals fled north, where they established their own kingdoms, such as the Shangane Kingdom in Gaza, formed by General Soshangane (Bruton et al 1980).

3 BACKGROUND INFORMATION OF THE SURVEY

3.1 Methodology

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum. The SAHRIS website was consulted for previous heritage surveys and heritage site data covering the project area. Various heritage impact assessments have been conducted in thw greater Jozini area.. The most relevant surveys in terms of the project area were those conducted by Wouter Fourie (PGS Heritage and Grave Relocation) in 2012, Gavn Anderson (Umlando) in 2008, Len van Schalkwyk (eThembeni) in 2015, and Prins (Active Heritage cc) in 2017. In addition, the available archaeological and heritage literature covering the greater project area was consulted. Aerial photographs covering the area were scrutinised for potential Iron Age and historical period structures and grave sites. A ground survey, following standard and accepted archaeological procedures, was conducted on the 26th May 2021. Particular attention was focused on the occurrence of potential grave sites and other heritage resources on the footprint.

3.1.1 Guidance from Desktop Study

- The desktop study indicates that Stone Age Sites of all periods and traditons may occur in the greater project area. However, it is especially Early Stone Age sites that are known to occur adjacent the Mkhuze and Phongola rivers.
- Early Iron Age Sites typically occur along major river valleys below the 700 m contour in KwaZulu-Natal. It is very unusual to find sites above the 1000m contour. The project area is situated below the 700m contour for most parts and Early Iron Age sites can be expected to occur along the major rivers in the project area.

Later Iron Age sites may occur in the project area. These sites were occupied
by the ancestors of the Thembe-Thonga as well as the first Nguni-speaking
agriculturists as well as their descendants who settled in KwaZulu-Natal. Often
sites are only located with referece to historical or oral data.

 Historical buildings, structures and farmsteads do occur scattered throughout the greater project area.. Historical era buildings and structures could occur at or near the project area.

3.2 Restrictions encountered during the survey

3.2.1 Visibility

Visibility was good.

3.2.2 Disturbance

No disturbance of any potential heritage features was noted.

3.3 Details of equipment used in the survey

GPS: Garmin Etrek

Digital cameras: Canon Powershot A460

All readings were taken using the GPS. Accuracy was to a level of 5 m.

4 DESCRIPTION OF SITES AND MATERIAL OBSERVED

4.1 Locational data

Province: KwaZulu-Natal Closest Towns: Jozini

Municipalities: Umhlabuyalingana Local and Umkhanyakude District Municipality

4.2 Description of the general area surveyed

4.2.1 Backgound

The project area is situated in a very densely populated peri-urban area (Figs 6-10). It is unlikely that any archaeological or other heritage sites would remain intact in this setting. In fact, the ground survey of the project area did not yield any heritage sites. This conclusion is supported by the desktop survey of the project area. No archaeological sites occur within 2km from the footprint.

4.2.2 Stakeholder Consultation

The consultant interviewed some local residents he encountered along the P 522-2. None had knowledge of any old graves or other heritage features witin 50m from the footprint.

4.2.3 Desktop Paleontology Assessment

The updated fossil sensitivity map, as provided by the SAHRIS website, shows that the project area has a low paleontological sensitivity (Fig 5). This is indicated by the blue background colour underlying the project area. There is no need for additional palenological surveys but a protocol of finds mus be followed.

5 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

5.1 Field Rating

Field rating (Tables 2 & 3) does not apply as no heritage sites occur on or near the footprint.

Table 2. Field rating and recommended grading of sites (SAHRA 2005)

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This 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	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

Table 3. Evaluation and statement of significance (excluding paleontology).

	Significance criteria in terms of Section 3(3) of the NHRA	
	Significance	Rating
1.	Historic and political significance - The importance of the cultural heritage in the community or pattern of South Africa's history.	None
2.	Scientific significance – Possession of uncommon, rare or endangered aspects of South Africa's cultural heritage.	None.
3.	Research/scientific significance – Potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage.	None
4.	Scientific significance – Importance in demonstrating the principal characteristics of a particular class of South Africa's cultural places/objects.	None.
5.	Aesthetic significance – Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.	None.
6.	Scientific significance – Importance in demonstrating a high degree of creative or technical achievement at a particular period.	None.
7.	Social significance – Strong or special association with a particular community or cultural group for social, cultu-ral or spiritual reasons.	None
8.	Historic significance – Strong or special association with the life and work of a person, group or organization of importance in the history of South Africa.	None.
9.	The significance of the site relating to the history of slavery in South Africa.	None.

6 RECOMMENDATIONS AND CONCLUSION

The construction of the proposed Zamazama Filling Station may proceed from a general heritage perspective (including paleontology) as no heritage sites or features occur on the footprint. There is no need for any mitigation.

However, It is important to take note that the Amafa Research Institute and Heritage Act (Act no 5 of 2018) requires that any exposing of old graves and archaeological and historical residues as well as fossil material should cease immediately pending an evaluation by the heritage authorities.

7 MAPS AND FIGURES



Figure 1. 1: 50 000 Topographical Map showing the location of the Project Area



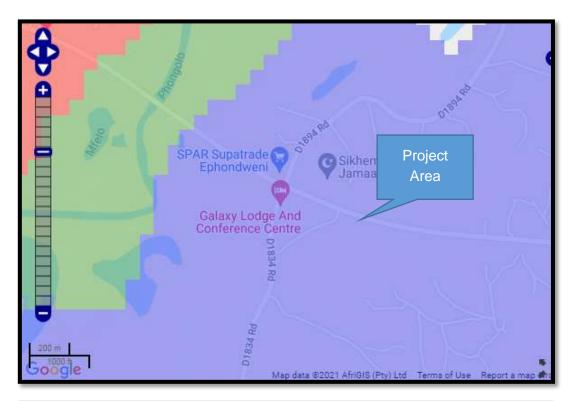
Figure 2. Google Earth Imagery showing the location of thr proposed Zamazama Filling Station near Jozini (Source: Green Door).



Figure 3. Google Earth Imagery showing the proposed filling station, Ephondweni Reserve (Source: Green Door).



Figure 4. Google Earth Imagery showing the location of the proposed filling station: Ephondweni Reserve (Source: Green Door).



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

Figure 5. Fossil Sensitivity Map of the project area: The blue background colour indicates that the area has a low fossil sensitivity. No paleontological studies are required however a protocol of finds must be implemented (Source: SAHRIS website).



Figure 6. The P522-2 Road leading to the site of the proposed filling station.



Figure 7. The area is densely built-up with many formal and informal developments. There are no sites with any heritage features or value.



Figure 8. All the residential houses in the greater project area are younger than 60 years old. They have no heritage value.



Figure 9. The consultant did not find any archaeological sites in the greater project area.



Figure 10. Dirt road running parallel to the P 522-2 in the project area. No archaeological or heritage sites occur in this area.

8 REFERENCES

Anderson, G 2008. Archaeological Survey Of The Proposed Matubatuba Developments

For: Metallon Properties (Pty) Ltd. Umlando. Unpublished report submitted to Amafa.

Avery, G. 1980. Palaeontology and archaeology of Maputaland. In Bruton, M. N. and Cooper, K. H. (eds). *Studies on the Ecology of Maputaland*. Rhodes University. Pg: 346-357.

Bruton, M.N., Smith M., Taylor R. 1980. A brief history of human involvement in Maputaland. In Bruton, M. N. & Cooper, K. H. (eds). *Studies on the Ecology of Maputaland*.Pg 332 – 360. Rhodes University: Grahamstown.

Ballard, C. 1978. 'Migrant labour in Natal 1860-1879: with special reference to Zululand and the Delagoa Bay hinterland.' *Journal of Natal and Zulu History*, I, 25-42.

Bryant, A. T. 1965. Olden times in Zululand and Natal. Cape Town: C. Struik.

Bulpin, T.V. 1966. Natal and the Zulu Country. Cape Town: Books of Africa.

Derwent, S. 2006. *KwaZulu-Natal Heritage Sites: A Guide to Some Great Places*. David Phillips: Cape Town

Eldredge, E. 1992. Sources of conflict in Southern Africa c.1800-30. The "Mfecane" reconsidered. The Journal of African History, vol 33 no 1: 1-35.

Feely, J. 1980. Archaeological survey Mfolozi Park. Unpublished Report.

Felgate, W. S. 1982. *The Tembe Thonga of Natal and Mozambique: An Ecological Approach.* Occasional Publications Number 1. Department of African Studies. University of Natal, Durban.

Fourie, W. 2014. Pongola–Candover 132kV power line, upgrades to the Pongola Substation and Candover switching station, development of the Golela 132/22 kV substation. PGS Heritage and Grave Relocation. Unpublished report submitted to Amafa.

GUMP, J. 1989. Ecological change and pre-Shakan state formation. African Economic History, no 18: 57-71.

Hall, M. 1980. Field Survey: The Ecology of the Iron Age. Unpublished report

Hedges, D.W. 1978. *Trade and Politics in Southern Mozambique and Zululand in the Eighteenth and Early Nineteenth Centuries*. Unpublished PhD thesis, School of Oriental and African Studies, University of London: Department of History.

Junod, H.A. 1962. *The Life of a South Africa Tribe*. New York:Two Volumes, University Books Inc.

Kuper, A. 1997. 'The academic frontier: History and Social Anthropology in South Africa.' In P. McAllister (ed) *Culture and the Commonplace. Anthropological Essays in Honour of David Hammond-Tooke.* Johannesburg: Witwatersrand University Press, 69-84.

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

Klopper, R. 2004. *Border Crossings: life in the Mozambique/South African Borderland.* Unpublished PhD thesis. University of Pretoria: Pretoria.

Maggs, T. The Iron Age farming communities. In Duminy, A. and Guest, B. 1989. *Natal and Zululand: from Earliest Times to 1910. A New History*. Pg. 28-46. University of Natal Press. Pietermaritzburg.

Mitchell, P. 2002. *The Archaeology of Southern Africa*. Cambridge University Press: Cambridge

Mitchell, P & Whitelaw, G. The archaeology of southernmost Africa from c.2000 BP to the early 1800s: A review of recent research. Journal of African History, 46: 209-41.

Omer-Cooper, J.D. 1975. The Zulu Aftermath. A Nineteenth-Century Revolution in Bantu Africa. Norfolk: Lowe & Brydone Ltd.

Penner, D. 1970. Archaeological Survey in Zululand Game Reserves. Natal Parks Board. Unpublished Report.

Prins, F E. 2016. Cultural Heritage Impact Assessment Of The Proposed Kwamsane Interchange Improvements On National Route 2, Section 30 From Km 0.50 To Km 5.00, Mtubatuba Local Municipality, Umkhanyakude District Municipality. Active Heritage cc. Unpublished Report submitted to Amafa.

Prins, F. E. 2017. First Phase Cultural Heritage Impact Assessment Of The Proposed Phinda Water Pipeline Near Mkhuze, Northern Kwazulu-Natal. Active Heritage Cc. Unpublished Report Submitted To Amafa.

SAHRA, 2005. Minimum Standards for the Archaeological and the Palaeontological Components of Impact Assessment Reports, Draft version 1.4.

Smith, A. 1972. 'The trade of Delagoa Bay as a factor of Nguni politics 1750-1835.' In

Thompson (ed) *African Societies in Southern Africa.* London: Heinemann Educational Books, 171-189.

Van Schalkwyk, L. 2015. Application for Exemption from a Phase 1 Heritage Impact Assessment Proposed agricultural development by Senekal Boerdery near Mkuze, uMkhanyakude District Municipality, KwaZulu-Natal, South Africa. eThembeni Cultural Heritage. Unpublished document submitted to Amafa.

Webb, C. and J.B. Wright (eds.) 1979. *The James Stuart Archive of Recorded Oral Evidence Relating to the History of the Zulu and Neighbouring Peoples.* Volume 2. University of Natal (Pietermaritzburg) and Killie Cambell Africana Library (Durban).

Webster, D.J. 1991. 'Abafazi baThonga bafihlakala. Ethnicity and Gender in a KwaZulu border community.' In A.D. Spiegel and P.A. Mcallister (eds.), *Tradition and transition in Southern Africa: Festschrift for Phillip and Iona Mayer*. Johannesburg: Witwatersrand University Press, 243-271.

Wylie, D. 2006. *Myth of iron: Shaka in history*. University of KwaZulu-Natal Press: Pietermaritzburg

Wright, J. & C. Hamilton 1989. 'Tradition and transformations. The Phongolo-Mzimkhulu region in the late eighteenth and early nineteenth centuries.' In A. Duminy and BGuest (eds.) *Natal and Zululand from Earliest Times to 1910. A New History.* Pietermaritzburg: University of Natal, 49-82.

APPENDIX 1 RELOCATION OF GRAVES

Burial grounds and graves older than 60 years are dealt with in Article 36 of the NHR Act, No. 25 of 1999. The Human Tissues Act (Act No. 65 of 1983) protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and reburial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities.

Below follows a broad summary of how to deal with graves in the event that they are indentified within the footprint, or within 25m, of the proposed development.

- If the graves are younger than 60 years, an undertaker can be contracted to deal with the exhumation and reburial. This will include public participation, organising cemeteries, coffins, etc. They need permits, such as those relating to health and safety, and have their own requirements that must be adhered to.
- If the graves are older than 60 years old or of undetermined age, an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. This is a requirement by provincial heritage legislation.

Once it has been decided to relocate particular graves, the following steps should be taken:

- Notices of the intention to relocate the graves need to be put up at the burial site for a period of 60 days. This should contain information where communities and family members can contact the developer/archaeologist/public-relations officer/undertaker. All information pertaining to the identification of the graves needs to be documented for the application of a SAHRA permit. The notices need to be in at least 3 languages, English, and two other languages. This is a requirement by law.
- Notices of the intention needs to be placed in at least two local newspapers and have the same information as the above point. This is required by provincial heritage legislation.
- Local radio stations can also be used to try contact family members. This is not required by law, but is helpful in trying to contact family members.
- During this time (60 days) a suitable cemetery need to be identified close to the development area or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days

so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account. This is a required by provincial heritage legislation.

- Once the 60 days has passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a required by provincial heritage legislation.
- Once the permit has been received, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any items found in the grave

APPENDIX 2 'LIVING HERITAGE'

Living (or intangible) heritage encompasses all those ideas, traditions, customs and memories that are passed from generation to generation. It includes things such as language, folklore, traditional medicine and healing, music, songs, dances and recipes. Skills and practices related to the local economy, such as sheepherding, animal husbandry and transhumance between summer and winter grazing areas, are also important because without them early African and colonial settlers and even modern day small-scale subsistence farmers would never have survived. These are all things that contribute to the identity of a group (Orton et al 2016). The Department of Arts and Culture (2009:5) defines living heritage as "cultural expressions and practices that form a body of knowledge and provide for continuity, dynamism, and meaning of social life to generations of people as individuals, social groups, and communities." Part of the importance of living heritage is that it helps to create a new national identity and promotes heritage that was repressed by missionaries, colonists and the apartheid regime (Department of Arts and Culture, 2009).

The living heritage of the project area has not been researched and is not represented in any data base. However, it is was felt that systematic ethnographic surveys of the project area may produce natural and man-made features with living heritage values. In addition, it is important to refer to indigenous perceptions relating to the 'symbolic water complex'. This complex of beliefs occur amongst all indigenous groups (African and Khoisan descendants) along the eastern seaboard and further afield (Bernard 2010). It has also been documented amongst Zulu, Swazi, and Thonga groups (ibid) and is therefore relevant to the project area. It is also almost certain that some of the prominent mountains as well as forests, waterfalls and pools and other natural features in the greater project area may have 'living heritage' values. Some archaeological sites and places of worship are also classified as 'living heritage' sites as indigenous knowledge systems still find expression at these locales. Local and affected communities may still frequent such sites in order to enact traditional rites and rituals informed by indigenous knowledge.

	Zamazama Filling Station
All fliving heritage sites, are protected by national and	orovincial horitage legislation
All 'living heritage sites' are protected by national anf p	provincial neritage legislation.