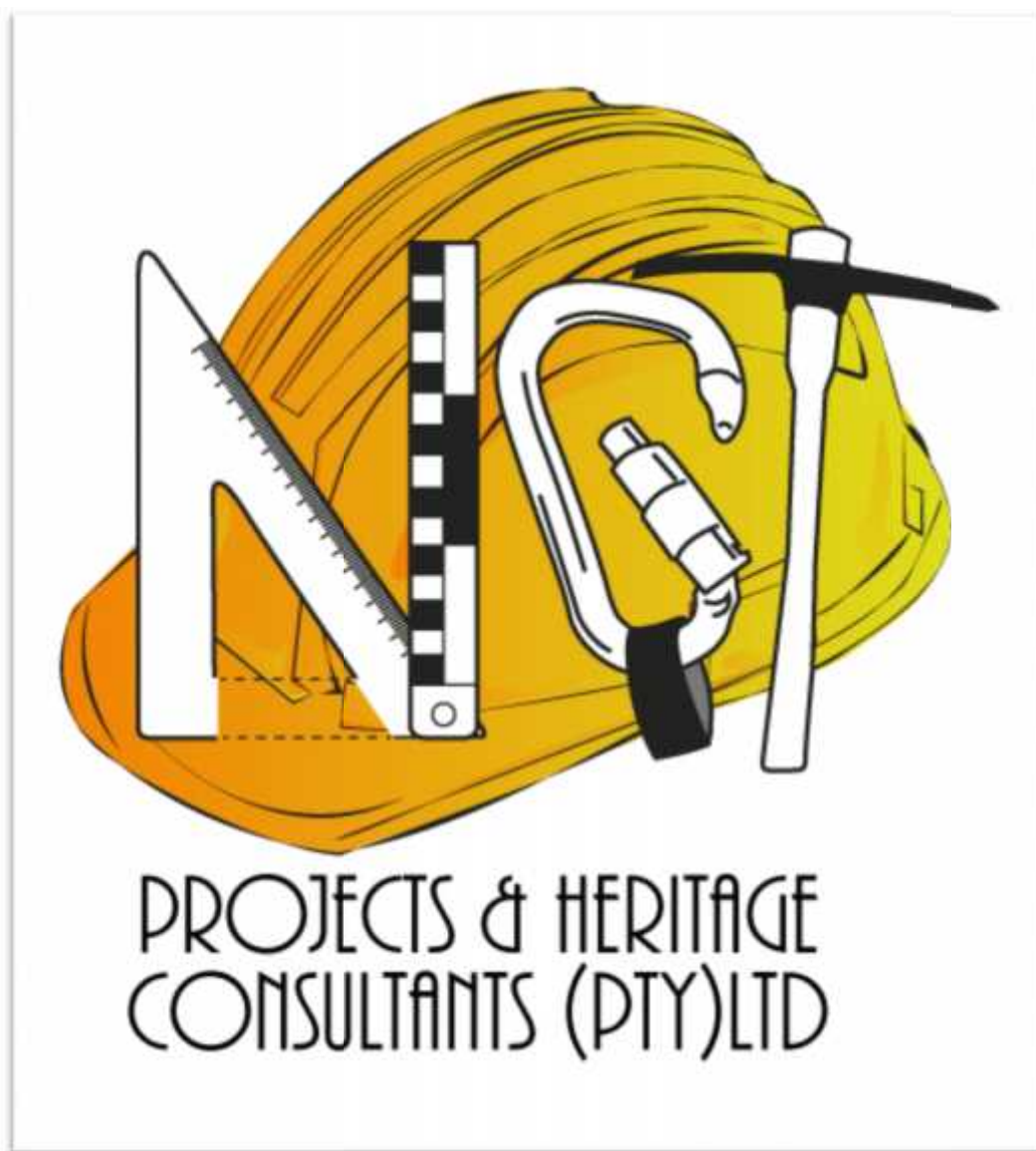




PHASE 1 HERITAGE IMPACT ASSESSMENT STUDY FOR THE PROPOSED MANGOSUTHU HOUSING DEVELOPMENT, PAULPIETERSBURG, KWAZULU-NATAL PROVINCE, REPUBLIC OF SOUTH AFRICA.

PROJECT NO: RDPH/7/22/2013/01



VERSION: 01

10 June 2014



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## DECLARATION OF INDEPENDENCE

This report has been compiled by Nkosinathi Tomose, leading archaeologist and heritage consultant for NGT Project & Heritage Consultants. The views expressed in this report are entirely those of the author and no other interest was displayed during the decision making process for the project.

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## EXECUTIVE SUMMARY

NGT Projects & Heritage Consultants (Pty) Ltd was appointed by ENPROCON cc in terms of NEMA, 107 of 1998 (as amended & applicable EIA Regulations of 2010) as an independent CRM firm to conduct a HIA study (exclusive of Palaeontological desktop study), as required by Section 38 of the NHRA, No. 25 of 1999 (and other applicable legislations) for the proposed 1500 RDP housing development in Mangosuthu Village, Edumbe Local Municipality, Zululand District Municipality, KwaZulu-Natal.

The physical survey of the proposed development area yield a total of 10 historic site with one located just outside the boundary - Mg-07 (Figure 32). Sites Mg-01 to Mg-07 and Mg-10 where assessed in terms of their heritage significance and found to be of high heritage significance. Sites Mg-8 and Mg-09 have low heritage significance. Based on these assessments the following recommendations are made about the proposed 1500 RDP houses within Mangosuthu Village:

- It is concluded that the current proposed development may have positive impact in terms of reconstruction development programme initiatives set by the Edumbe Local Municipality, Zululand District and subsequently the provincial and national department of human settlement.
- It is also concluded that the 1500 RDP houses project will have low potential impact on the identified resources in that they are mostly visible. High impact may result from other project other this proposed project; for example, local community residents who have already started developing around the grave sites.
- This impact (by communities) will develop further if there are no interventions made by the relevant heritage authority in consultation with either the ward councillors or tribal authority depending on the social-cultural and political structures that are found within the Mangosuthu Village Community.
- We would also like to conclude that the survey did not yield any other archaeological resources in form of Stone Age, Iron Age and Industrial Archaeological resources.
- There were also no historical sites associated with either the Anglo-Zulu War or the Anglo-Boer Wars within the village even though such sites are known to occur in the Paulpietersburg Area such as the Battle of Hlobane further south of Paulpietersburg.



## Recommendations

- It is recommended that the proposed 1500 RDP housing scheme should avoid the identified burial grounds and grave sites located within Mangosuthu Village and treat them as No-Go-Areas.
- The EAP of the project should highlight the issue of disturbing ancestral land during the Public Participation Process of the EIA.
- The following sites (i.e. Mg-01 to Mg-05) will require special intervention by either the local government authorities in form of ward councillors or tribal authority representative such as the Induna. Such intervention should include among other things – identification of the people who are trying to construct on the graves and engagement with them about the potential threat of their activities of the above mentioned graves.
- It is further recommended that the developer should appoint an ECO who should pay special attention to these resources during the construction phase of the project. In the case that such resources are disturbed the project construction activities in and around the areas in which these resources are identified should stop and the ECO and the EAP should consult Amafa to come and investigate the finds and make necessary recommendations.

# Refer to the conclusion and recommendation section of this report for other recommendations made about the project



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## ABBREVIATIONS

Acronyms	Description
AIA	Archaeological Impact Assessment
AMAFA	Amafa aKwaZulu-Natali
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
DoE	Department of Energy
EIA practitioner	Environmental Impact Assessment Practitioner
EAP	Environmental Impact Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age
GIS	Geographic Information System
GPS	Global Positioning System
HIA	Heritage Impact Assessment
I&AP	Interested & Affected Party
KZNHA	KwaZulu-Natal Heritage Act
KZNHB	KwaZulu-Natal Heritage Bill
K.y.a	Thousand years ago
LSA	Late Stone Age
LIA	Late Iron Age
MSA	Middle Stone Age
MIA	Middle Iron Age
NERSA	National Energy Regulator of South Africa
NHRA	National Heritage Resources Act
NEMA	National Environmental Management Act
PHRA	Provincial Heritage Resources Agency
PSSA	Palaeontological Society of South Africa
ROD	Record of Decision
RDP	Reconstruction and Development Programme
PDAFP	Proposed Development Area Footprint
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency
SPV	Special Purpose Vehicle



## TERMS & DEFINITION

### Archaeological resources

This includes:

- material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years including artefacts, human and hominid remains and artificial features and structures;
- rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- wrecks, being any vessel or aircraft, or any part thereof which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- Features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

### Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

### Development

This 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 the change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- carrying out any works on or over or under a place;



- subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- constructing or putting up for display signs or boards;
- any change to the natural or existing condition or topography of land; and
- any removal or destruction of trees, or removal of vegetation or topsoil

Heritage resources

This means any place or object of cultural significance

## 1. INTRODUCTION

### 1.1. Project Background

#### 1.1.1. Developer and Summary of the Proposed Project

Umpheme have been appointed by Edumbe Local Municipality to develop approximately 1500 RDP (Reconstruction and Development Programme ) houses in Mangosuthu Village east of the town of Paulpietersburg. Mangosuthu is one of KwaZulu-Natal villages towns situated on the border of KwaZulu-Natal (KZN) and the Mpumalanga Province. It is ensconced between the following towns: Piet Retief (north), Wakkerstroom and Charlestown (west), Vryheid (south) and Pongola (east) (e.g. Figure 2 for N11).

#### 1.1.2. Proposed Project Aims

The objective of the proposed project is to contribute to the development of approximately 1500 RDP houses within Mangosuthu Village, Edumbe Local Municipality, KwaZulu-Natal Province, South Africa – in line with the objectives of Edumbe Municipality of providing housing and other basic human rights to its people. This is also in-line with the Constitution of the Republic of South Africa, Act No.108 of 1996.

The project basic aim is, therefore, to contribute to the development of housing and associated infrastructure as described above.



### 1.1.3. Terms of Reference for the Appointment of Archaeologist and Heritage Specialist

Because of the nature and size of the proposed development -housing development and associated infrastructure exceeding a total area of 5000m<sup>2</sup> a need to conduct an EIA developed. In terms of the EIA Regulations of June 2010 (Government Notice 543-546 published in terms of the NEMA, No 107 of 1998) the construction of the proposed facilities is listed as an activity that requires environmental authorisation. This is because the project comprises development of 1500 houses and bulk infrastructure such as roads, water supply and electrification to support the proposed house. Undertaking an EIA process is therefore a requirement for the authorisation of this project. The current process comprises of an EIA and it involves the identification and assessment of environmental impacts through specialist studies, as well as public participation.

ENPROCON cc was appointed by Umpheme (Pty) Ltd as a lead Environmental Assessment Practitioner to manage the EIA process and associated impact studies for the proposed RDP housing development project. ENPROCON facilitated the appointment of NGT Projects & Heritage Consultants (Pty) Ltd by Umpheme (Pty) Ltd as an independent and lead CRM firm to conduct an HIA (exclusive of Palaeontological desktop study) for the proposed Mangosuthu RDP housing development as part of specialists (inputs) impact assessment studies required to fulfil the EIA process and its requirements.

Nkosinathi Tomose, the Principal archaeologist & heritage consultant for NGT Projects & Heritage Consultants, conducted the HIA study for the proposed Mangosuthu RDP housing development proposed within Mangosuthu Village, Edumbe Local Municipality, Zululand District Municipality, KwaZulu-Natal Province, Republic of South Africa (Figure 1).

The appointment of NGT Projects & Heritage Consultants (as an independent CRM firm) is in terms of the KZNHA, No. 10 of 1997 (at a provincial level), the NHRA, No. 25 of 1999 (as amended), the NEMA, No.107 of 1998 (as amended & the applicable 2010 Regulations), as well as other applicable legislations and bills such as the KZNHB of 21 February 2008.

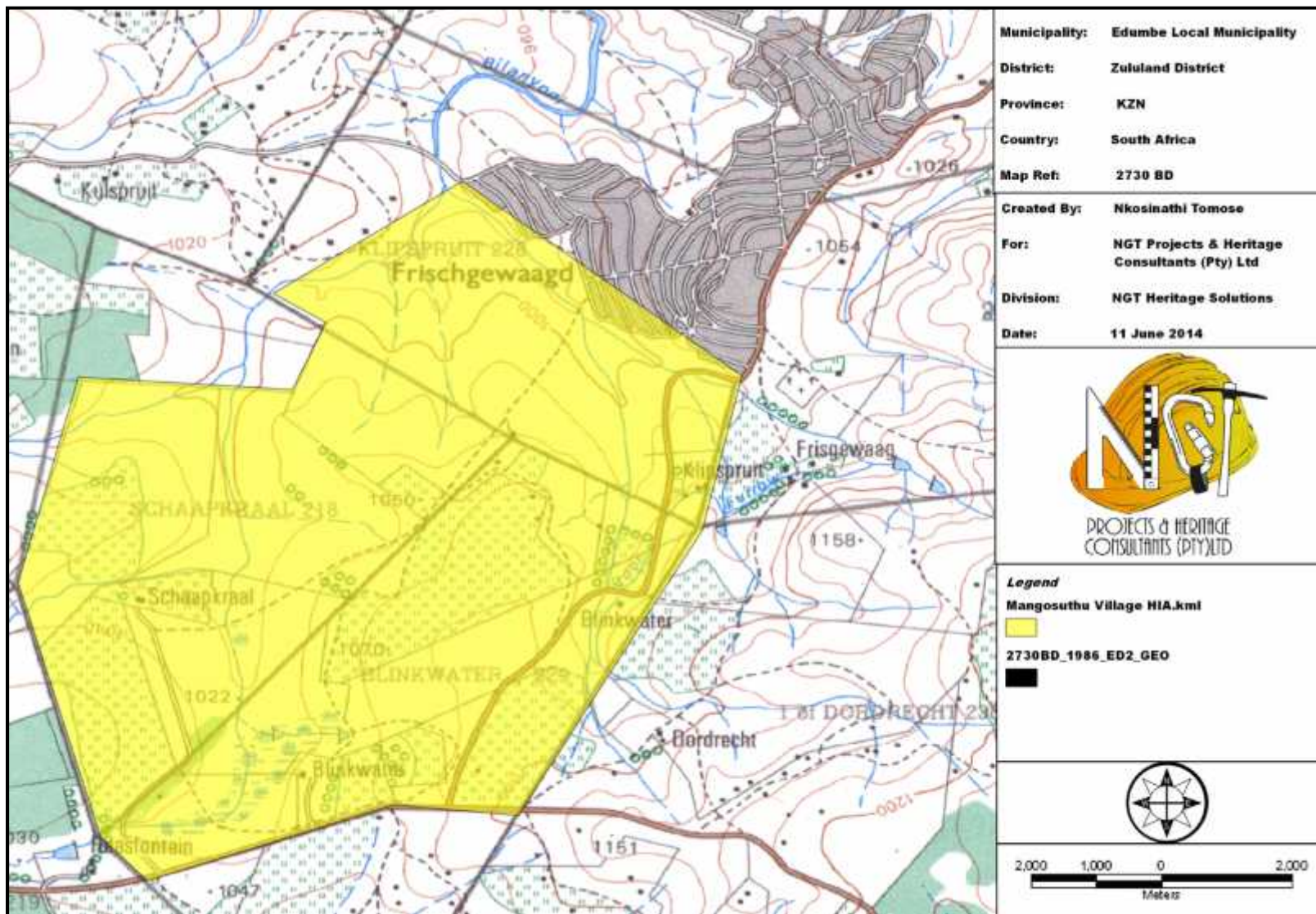


Figure 1 –Location of Mangosuthu Village development site as indicated by a yellow ink, Edumbe Local Municipality, Zululand District, KwaZulu-Natal Province, South Africa.



## 2. BACKGROUND OF THE STUDY AREA

### 2.1. Description of the affected environment

Table 1 – Description of the affected environment of the proposed Vereeniging PRASA Station upgrade

<ul style="list-style-type: none"> <li>• Location</li> </ul>	<ul style="list-style-type: none"> <li>• Mangosuthu Village is located approximately 10km east of the town of Paulpietersburg in Edumbe Local Municipality, within Zululand District Municipality, KwaZulu-Natal Province, Republic of South Africa (Figure 1).</li> <li>• The study area is situated on the border of KwaZulu-Natal and Mpumalanga; it is found on the KwaZulu-Natal side and south of Piet Retief in Mpumalanga.</li> <li>• Within KwaZulu-Natal Edumbe is located on the north-western part of KwaZulu-Natal and covers a total area of approximately 1947km<sup>2</sup>.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Surrounding Townships/Industrial Zones/ Villages</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Residential/Township Zones</u> <ul style="list-style-type: none"> <li>• The town of Paulpietersburg is located 10km west of Mangosuthu Village.</li> <li>• The village is rural in nature</li> </ul> </li> <li>• <u>Farm Zones</u> <ul style="list-style-type: none"> <li>• There are existing plough fields throughout many of the village stands (Figure 1 &amp; 2)</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>▪ Land Uses in and around the study area</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Industrial</u></li> <li>• Housing/residential, burial, agriculture etc (Figure 1 &amp; 2)</li> </ul>
<ul style="list-style-type: none"> <li>▪ Land Owner(s)</li> </ul>	<ul style="list-style-type: none"> <li>• Edumbe Local Municipality and Private</li> </ul>
<ul style="list-style-type: none"> <li>▪ Current Conditions (on site)</li> </ul>	<ul style="list-style-type: none"> <li>• Disturbed landscape with housing, plough fields, water works etc (Refer to Figure )</li> </ul>
<ul style="list-style-type: none"> <li>▪ Applicant</li> </ul>	<ul style="list-style-type: none"> <li>• ENPROCON on behalf of Umpheme (Pty) Ltd (implementing agent)</li> </ul>
<ul style="list-style-type: none"> <li>▪ Proposed Development</li> </ul>	<ul style="list-style-type: none"> <li>• Application for the proposed 1500 RDP houses</li> </ul>
<ul style="list-style-type: none"> <li>▪ Access</li> </ul>	<ul style="list-style-type: none"> <li>• Existing national, provincial and local roads, routes and human</li> </ul>



	<p>foot paths.</p> <p><u>Provincial Roads:</u></p> <ul style="list-style-type: none"><li>• The R33 west of the study area</li><li>• R616 - south</li><li>• R69 -south and east</li><li>• N2 north and east</li><li>• R34 south</li></ul>
<ul style="list-style-type: none"><li>▪ Defining natural features</li></ul>	<ul style="list-style-type: none"><li>• The study area is defined by undulating hills and tree plantations (Figure 2 &amp; 3).</li></ul>
<ul style="list-style-type: none"><li>▪ Zoned for</li></ul>	<ul style="list-style-type: none"><li>• Residential and partly agricultural (Figures 1 &amp; 2)</li></ul>





Figure 2 – Google Earth photo showing the previous proposed development area

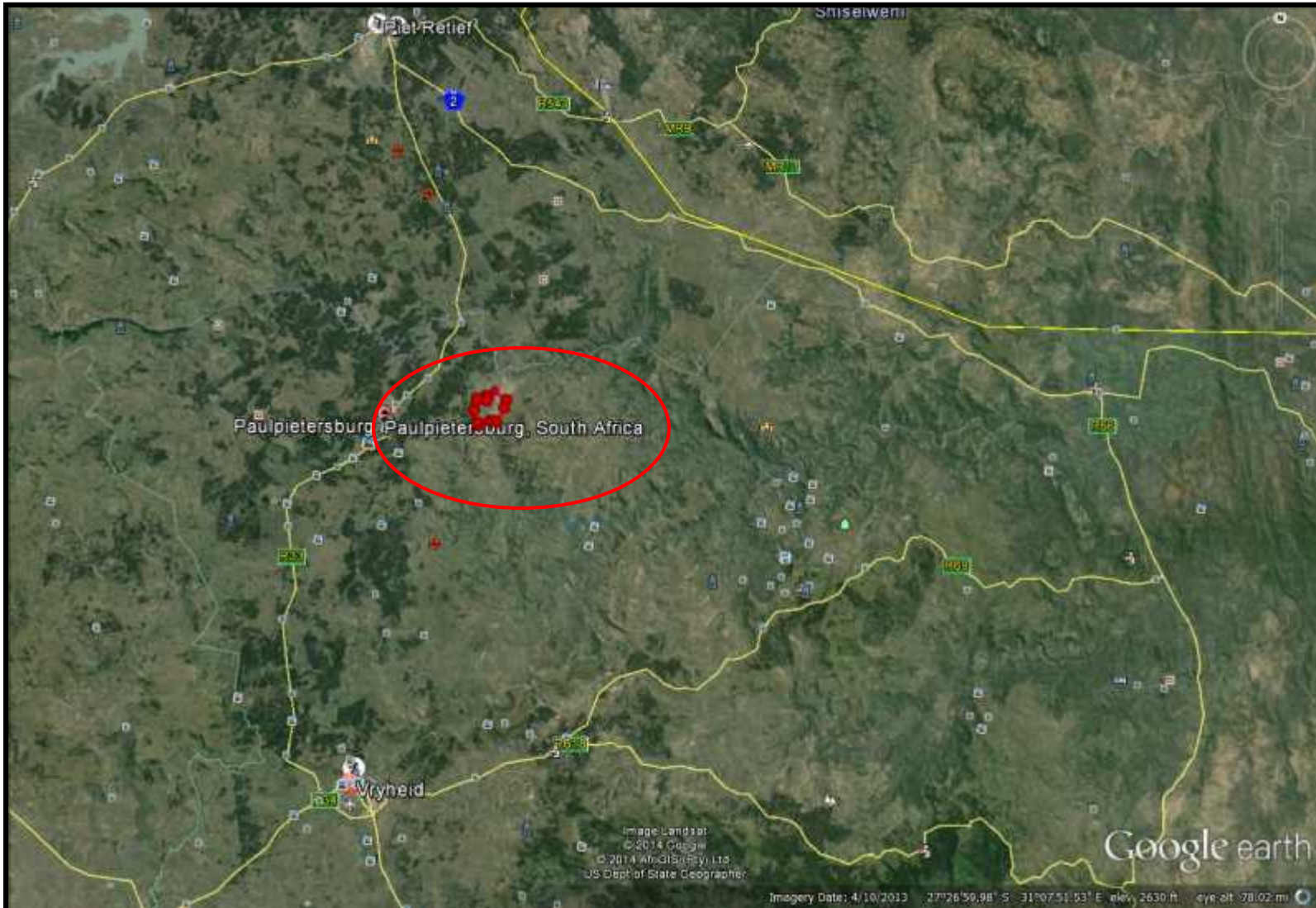


Figure 3- Access to Mangosuthu Village, Edumbe Local Municipality, Zululand District Municipality, KwaZulu-Natal Province, Republic of South Africa



Figure 4 – Existing water treatment and distribution plant



Figure 5 – Municipal infrastructure inclusive of a taxi rank.



Figure 6 - Example of village homestead consisting three flat roofed houses, a modern rondaval and modernised beehive structure





Figure 7 – Rondaval built of cement bricks. Not the black tyre on the apex of the rondaval roof used to repel lightning.



Figure 8 – Mangosuthu Village active plough fields.



Figure 9- Example of modest house under construction



Figure 10 – Grazing fields west and north of the village.



Figure 11- General view of the village looking west ward



Figure 12- Villagers mining sand for construction related activities



## 2.2. Desktop Study: Archaeological & Historical Heritage of KwaZulu-Natal:

The archaeology of KwaZulu-Natal spans three archaeological periods: the Stone Age, Iron Age and Historical/Colonial period. The early periods in Stone Age archaeology of the region are recorded amongst others in Sibudu Cave on the coast of KwaZulu-Natal and which shows evidence for early forms of cognitive human behavioural patterns in the Middle Stone Age of South Africa some 40 000 years BP (e.g. Wadley, 2005; Wadley et al, 2004; Wadley, 2001). The caves, plains, valleys and hills of KwaZulu-Natal are known have once been occupied by the San people. Evidence for this includes stone artefacts and an abundance of rock art, predominantly in the form of rock paintings in areas such as the Giants Castle and Kamberg in the Drakensburg Mountains (e.g. Vinnicombe). Rock art sites have been also been documented in the areas around Estcourt, Mooi River and Dundee.

The second period of occupation in KwaZulu-Natal was during the Early and Middle Iron Age; an occupation of the KwaZulu-Natal region by the Bantu speakers who migrated from as far as the Great Lakes regions of Congo and Cameroon. Existing evidence dates the Iron Age in southern Africa to the first millennium AD (e.g. Huffman, 2010, 2007). The site of Mzonjani, 15 km from Durban is the oldest known Iron Age site in KwaZulu-Natal, dating to the 3<sup>rd</sup> Millennium AD (Huffman, 2010).

Archaeologically, the Natal area of current day KwaZulu-Natal was occupied by the Zulu people by AD 1050 (Huffman, 2010, 2007). Approaches used to arrive at these conclusions include historical accounts, oral traditions, the study of linguistics, as well as anthropological and archaeological data (as presented through material culture and artefacts). The archaeological evidence of the Iron Age people in the region is represented through distinct ceramic traditions, stone walls and other structural features such as grain bins and hut floor remains, kraal remains, vitrified cattle dung (sheep and goat), iron implements, slugs, bellows and furnaces. The area that was occupied by the Nguni speaking group of the Eastern Bantu language stream is characterised by settlement patterns defined as the Central Cattle Pattern (CCP) (Huffman, 2010, 2007). The earliest known type of stonewalling that characterises this settlement pattern (C.C.P) in the region (KZN) is known as Moor Park, which dates from the 14<sup>th</sup> to 16<sup>th</sup> Centuries AD (Huffman, Whitelaw, Davis 1974) (Figure 13). This type of stonewalling can be found in defensive position on hilltops in the Midlands of KZN (Huffman, 2010 & 2007).





Archaeologists have concluded that the function of these structures was to serve mainly defensive purposes - the site of Moor Park is "located on the spurs and ends of hills, stone walls cut the settlement off from remaining terrain perimeter walls enclose about two thirds of the settlement, leaving the back free" (Huffman, 2007). However, it has to be noted that the CCP and other forms of Iron Age stonewalling features are not restricted and/or endemic to the eastern Bantu Speaking language group and/or the Nguni to whom the Zulu people belong. Huffman's (2007) statement validated this, "Iron Age stonewalling occurs over much of Southern Africa". He goes on to say, "as the most visible sign of agro-pastoral settlement, there are several classifications, mostly for specific areas and few for larger regions". It must also be noted that these stonewall structures were not the most dominant and/or preferred form of building for the KwaZulu-Natal Nguni's even though some are dated to have been also been built during the times of war between the Colonial powers and the Zulus (for example, during the Anglo-Zulu War).

In KwaZulu-Natal, the most dominant and preferred form of Iron Age structures are the 'beehive huts'- documented in many of historical records dating as far back as the colonial times (Figure 14).

This presents a challenge to the archaeological study of Iron Age in the province. Huffman (2007) argues that the archaeology of the KwaZulu-Natal is not as prominent as is in other parts of the country because most of the structures were built of thatch material that do not preserve well. The same is true for their ceramic traditions. The type site of Moor Park therefore presents a unique view of the Iron Age in KwaZulu-Natal.

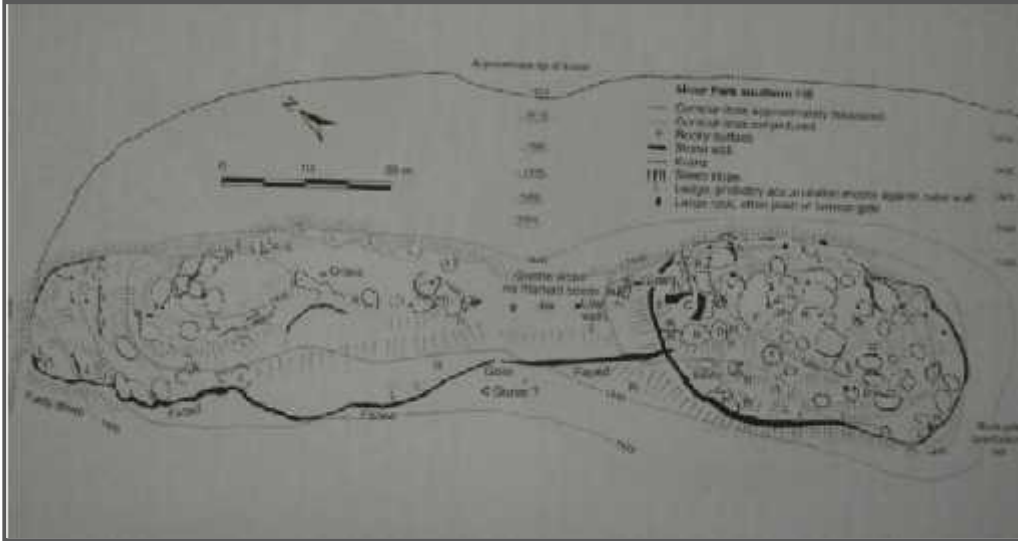


Figure 13-Site of Moor Park; picture ©T. N. Huffman (2007) to illustrate the C.C.P stonewalling (see also Davies 1974 from which the picture was initial taken).

The third phase of occupation in current day KZN was the Late Iron Age – a period just before the contact with the colonial settlers. In KwaZulu-Natal and other parts of southern Africa this period was characterised by a variety of expansionists’ battles fought by different chiefdoms, culminating in the pre-colonial southern African war called Imfecane (Ommer-Cooper, 1993). In the province of KwaZulu-Natal it started in early 1800’s when the ama-Zulu were still under the kingdom of Senzangakhona (Ommer-Cooper, 1993; Knight 1998). In KZN, the Imfecane brought about many battles between and within the different local Zulu chiefdoms and the Swazi’s.

In other parts of the country the Imfecane also affected the Koni (Limpopo Province), the Tswana by the Ndebele ka-Mzilikazi (interior regions of the country) and the amaMpondo, amaHlubi, abaThembu and amaXhosa in the Eastern Cape regions (Wright, 1991). The Imfecane featured very prominent in KwaZulu-Natal during the reign of King Shaka KaSenzangakhona (Ommer-Cooper, 1993). Some of the battles associated with the Mfecane go as far as Zimbabwe with the movement of Mzilikazi also argued to have been displaced by the Trek Boers.



In Zululand our current region of study within the KwaZulu-Natal Province - one of the bigger local chiefdoms that were conquered was the Ndwandwe chiefdom of Zwide kaLanga which were situated north of Shaka's territory around the modern day kwaNongoma (Knight, 1998).

Shaka managed to achieve his ideal kingdom by strategically expanding/extending the traditional amabutho system. The amabutho were the brigade of young men of similar age gathered together for a period of national service (Laband & Thompson, 2000; Torlage & Watt, 1999; Knight, 1998; Ommer-Cooper, 1993; Wright, 1991). The amabutho were quartered at large royal homestead, amakhanda (Figure 15) - which were sited strategically above the surrounding country to guard against both outside attack and internal dissension like the site of Moor Park discussed above. During the times of need, amabutho would be organised into impi to fight and protect the Zulu kingdom. The amabutho, organised into impi, would also be sent out to attack and take over rival chiefdoms that were opposed to King Shaka's rule and in the process incorporating them under his monarchy.

As powerful as it may have been, King Shaka's reign as the Zulu King did not last long as he was assassinated by his younger brothers in September 1828. One of them, Dingane KaSenzangakhona later became King. It is argued that by the time of his assassination he had not yet fully managed to assume and reconcile into his kingdom all the local Zulu chiefdoms: "much chiefdom within the kingdom were still unreconciled to Zulu rule, while Zulu influence south of Thukela [was still] patchy" (Knight, 1998: 14). The area south of the Thukela River (Natal) was to some degree not in King Shaka's hold. He did not manage to assimilate all the chiefdoms south of uThukela under his rule and this had negative ramification to the Zulu kingdom for the years to come. King Shaka moved the royal homestead to KwaDukuza, Stanger, south of upper Thukela River before his assassination by Dingane (and Mpande) who later re-relocated and rebuilt it at eMgungundlovu, 'The Place Surrounding the Elephant' in the emaKhosini valley where King Shaka and King Dingane's forefathers are buried. The moving of the royal homestead by both Shaka and Dingane presents an interesting 'thesis' into the internal dynamics and politics of the Royal House and possibly one of the reasons for the assassination of King Shaka by his brothers. One important reason for the relocation of the royal homestead back to uMgungundlovu- north of the upper Thukela River was the growing influence of the white community at Port Natal (settlers) and the encroaching Trek Boers who crossed uKhahlamba Mountains into Natal in the 1837 (Knight, 1998). The period of encroachment of first Natal, then Zululand represents a fourth phase of settlement or occupation of KwaZulu-Natal. Before it became open to most



people during the Union (1910-1961), Nationalist rule (1947-1994), and democratic South Africa (1994 - current)



Figure 14-Pre-industrial Zulu village: beehive huts, note homestead built using thatch material (Colonial time picture) © Laband & Thompson, 2000.

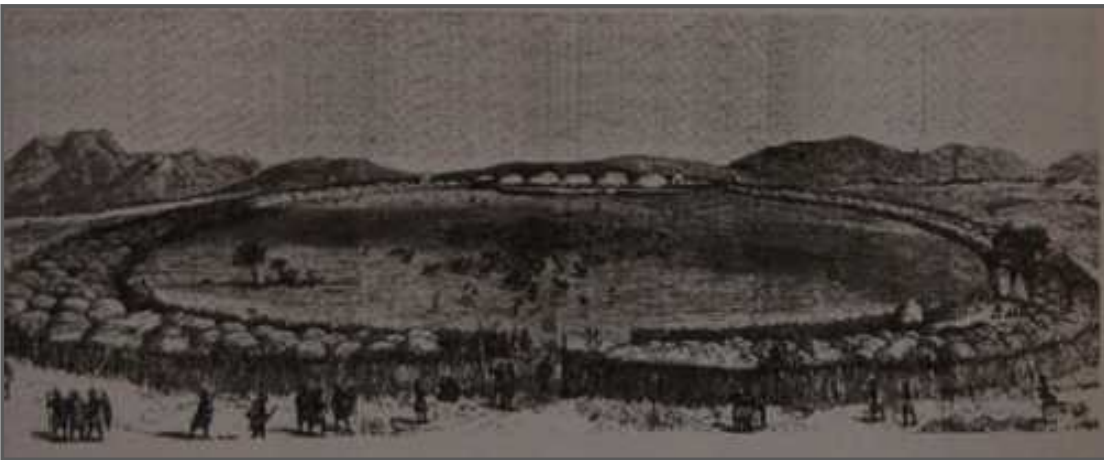


Figure 15 - An illustration of iKhanda or the royal homestead © Laband & Thompson, 2000

### 2.3. The Natal and Zululand: A Colonial Time Account of KwaZulu-Natal

The border between the former Natal colony and Zululand developed as a result of political influences between the settlers, the Afrikaners and the Zulu people.



The area located north of Upper Thukela (uThukela) River was under the former Zululand and the area south was under the Afrikaner and settler

communities. The territorial border between Zululand and Natal develop in the late 1830s. Following the demarcation of the two territorial boundaries - Zululand became the area between the Upper Thukela River, Swaziland and Mozambique. Natal was the area south of the Upper-Thukela River. Natal came into exist when, "the south-eastern seaboard had remained unknown to the European world until Christmas Day 1497, when the Portuguese explorer, Vasco da Gama, had noted its existence in his log as he sailed around the Cape and up the east coast of Africa, searching for a route to the Indies. He christened it Terra Natalis, in honour of the birth of Christ, and for the centuries Natal was used to describe the country south of uThukela" (idem: 15). The map below show the historic boundary between Zululand and Natal south of Thukela River.

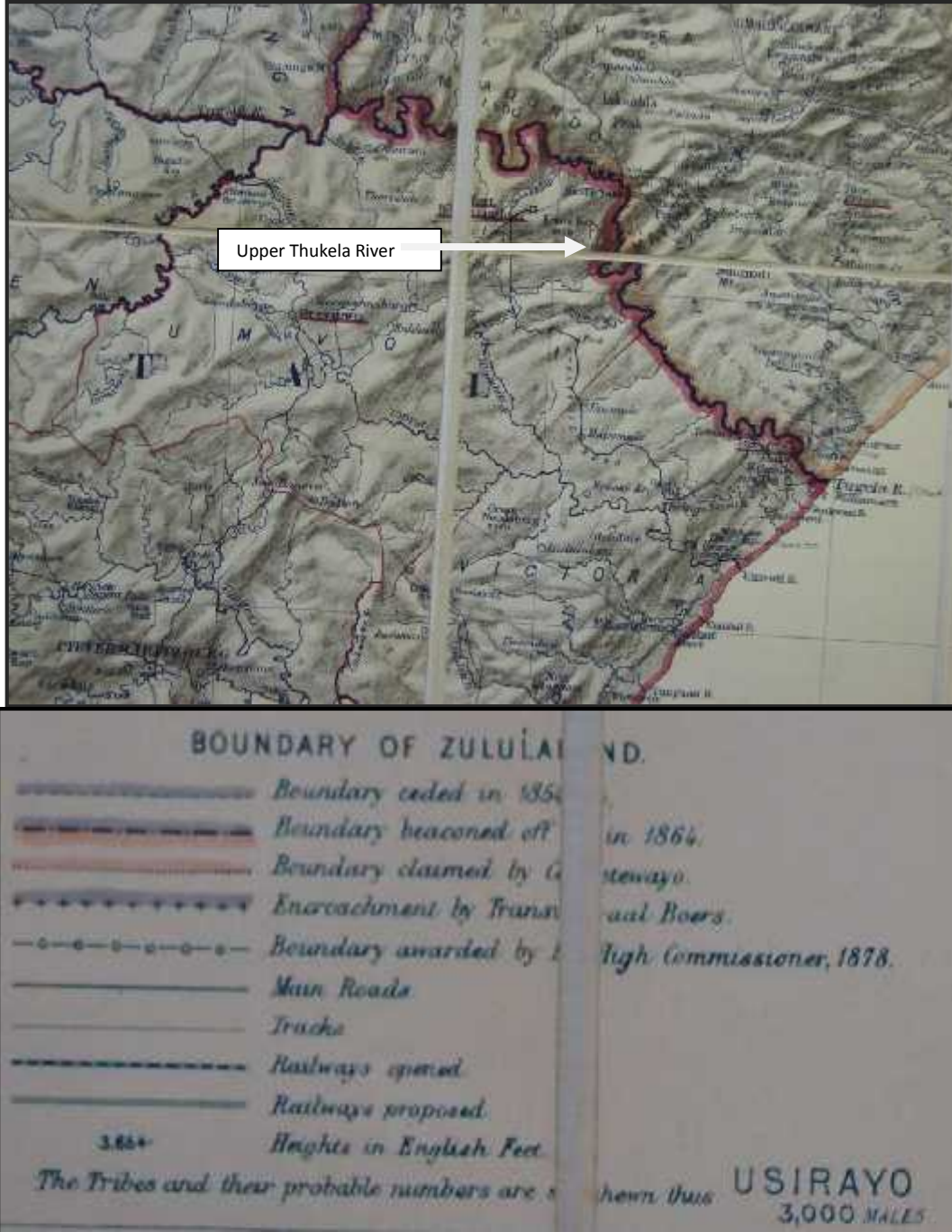


Figure 16- Map showing the Natal (south of Thukela River) and Zululand (north of Thukela River) Boundary as well as the boundary proclaimed by King Cetshwayo in 1870s when he became a King. The first official proclamation of the boundary dividing Natal and Zululand took place in 1854 (Note the map legends). Stanford's Large Scale Map of Zulu Land with adjoining parts of Natal, Transvaal and Portuguese Africa, March 4<sup>th</sup> 1879 © Map Archives, Cullen Library, University of the Witwatersrand, Johannesburg, South Africa.



## 2.4. Historical Battles of KwaZulu-Natal Near Edumbe Local Municipality:

The battle of Thukela River (17 April 1838) and Synopsis of Blood River (16 December 1838)

## 2.5. Formation of Edumbe:

The town of Paulpietersburg is a major reference point for the Edumbe Municipality and it has a long and significant place within the history of South Africa. Developed in 1888 the town initially formed part of the Transvaal Republiek i.e. the Eastern Transvaal. It was named after the Transvaal President – President Paul Kruger and Voortrekker Hero Piet Joubert ([www.edumbe.gov.za/10.06/2014](http://www.edumbe.gov.za/10.06/2014)).

The town was proclaimed a township in 1910 coinciding with the year for the proclamation of the Union of South Africa. It, however, only attained its municipal status in 1958.

## 3. METHODOLOGY

### 3.1. Legislative Requirements

The NEMA, No. 107 of 1998 stipulated that for any development in South Africa to be granted permission to go ahead an assessment of the potential impacts of the proposed development on both the natural and cultural environment need to be conducted. As such, this HIA fulfils the requirements of NEMA and is conducted in-line with Section 38 (1) of the NHRA, No. 25 of 1999 and the KwaZulu-Natal Heritage Act, No. 10 of 1997 (various sections as applicable) as well as applicable 2010 EIA Regulations.

### 3.2. Methodology

This chapter outlines the methodologies used in conducting the study. This HIA report was compiled by Nkosinathi Tomose, principal archaeologist and heritage consultant for NGT Projects & Heritage Consultants. It is conducted for 1500 RDP houses proposed for Mangosuthu Village, Edumbe Local Municipality, within Zululand District Municipality, KwaZulu-Natal Province.



### 3. 2.1. Step I – Literature Review (Desktop Phase):

- The background information of the proposed area of development following the receipt of appointment letter and sites maps from the client. Sources used included, but not limited to published academic papers and HIA studies conducted in and around the region where the current development will take place.
- Map Archives - Historical maps of the proposed area of development and its surround were assessed to aid information about the proposed area of development and its surround.
- This also included a review and assessment of relevant environmental and heritage legislations, and Bills such as the KwaZulu-Natal Heritage Bill, 21 February 2008.

### 3.2.2. Step II – Physical Survey:

- The physical survey of Mangosuthu Village took place on the 17<sup>th</sup> of April 2014 and conducted by Principal of NGT Projects & Heritage Consultants. The survey covered areas that were spotted using Google Earth during the proposal stages of the project in July 2013.
- The objective of the survey was to locate and identify archaeological and heritage resources and/or sites within Mangosuthu Village and record them using necessary and applicable tools and technology.
- The physical survey was deemed necessary since the desktop phase (which included Google Earth Spotting of the affected village) yielded some information of the history of the region in which Mangosuthu Village is located.
- The survey also paid special attention to disturbed and exposed layers of soils as such as eroded surfaces because these areas are more likely to exposed or yield archaeological and other heritage resources that may be buried underneath the soil and brought to the earth surface by natural, animal and human activities.
- This involved the survey of house foundations, eroded surfaces and river banks (e.g. Figure) he dirty roads edges/sides were also inspected for possible Stone Age scatters as well as exposed Iron Age implements and other resources.





Figure 17- Disturbed areas used to search for potential exposed archaeological resources such as stone artefacts and Iron Age implements

- The following technological tools were deemed important for documenting and recording located and/or identified sites:
  - Garmin GPS (i.e. Garmin 62s) – to take Lat/Long coordinates of the identified sites and to track the site.
  - Lenovo ThinkPad aided Garmin Basecamp Software, Google Earth – to plot the propose project footprint. If any site or resources were identified - ArcGIS Software was used to map them in the landscape.
  - Maps provided by the client during the physical survey of the PDAFP proved invaluable
  - Shapefiles provided by the client were used were used to map the project area and sites located in and around the PDFP site
  - Samsung – to take photos of the affected environment and identified sites (if any were to be located within the PDAFP)



### 3.2.3. Step III – Data Consolidation and Report Writing:

- The final step involved the consolidation of the data collected using the various sources as described above.
- This involved the manipulation Shapefiles/KMZ files through ArcGIS
- Assessing the significance and potential impact of the identified sites, discussing the finds, report writing and making recommendation on the management and mitigation measures of the identified sites and resources as well as the impact and influence of these sites and resources on the proposed development project and project area.

### 3.3. Assessment of Site Significance in Terms of Heritage Resources Management Methodologies

The significance of heritage sites was based on four main criteria:

- Site integrity (i.e. primary vs. secondary context)
- Amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures)
  - Density of scatter (dispersed scatter)
  - Low -  $<10/50\text{m}^2$
  - Medium -  $10-50/50\text{m}^2$
  - High -  $>50/50\text{m}^2$
- Uniqueness and
- Potential to answer present research questions.

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

- A - No further action necessary;
- B - Mapping of the site and controlled sampling required;
- C - No-go or relocate pylon position
- D - Preserve site, or extensive data collection and mapping of the site; and
- E - Preserve site
- Impacts on these sites by the development will be evaluated as follows:



## Site Significance

The following site significance classification minimum standards as prescribed by the SAHRA (2006) and approved by the ASAPA for the SADC region were used for the purpose of this report.

Table 2: Site significance classification standards as prescribed by SAHRA

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High Significance	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High Significance	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	-	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium Significance	Recording before destruction
Generally Protected C (GP.A)	-	Low Significance	Destruction

3.4. Methodology for Impact Assessment in terms of Environmental Impact Assessment Methodologies including Measures for Environmental Management Plan Consideration:

The Basic Assessment Methodology assists in evaluating the overall effect of a proposed activity on the environment. The determination of the effects of environmental impact on an environmental parameter is determined through a systematic analysis of the various components of the impact. This is undertaken using information that is available to the environmental practitioner through the process of the Basic Assessment & Environmental



Impact Assessment. The impact evaluation of predicted impacts was undertaken through an assessment of the significance of the impacts:

The Basic Assessment included:

- an indication of the methodology used in determining the significance of potential environmental impacts
- a description of all environmental issues that were identified during the environmental impact assessment process
- an assessment of the significance of direct, indirect and cumulative impacts in terms of the following criteria:
  - the nature of the impact, which shall include a description of what causes the effect, what will be affected and how it will be affected
  - the extent of the impact, indicating whether the impact will be local (limited to the immediate area or site of development), regional, national or international
  - the duration of the impact, indicating whether the lifetime of the impact will be of a short-term duration (0–5 years), medium-term (5–15 years), long-term (> 15 years, where the impact will cease after the operational life of the activity) or permanent
  - the probability of the impact, describing the likelihood of the impact actually occurring, indicated as improbable (low likelihood), probable (distinct possibility), highly probable (most likely), or definite (impact will occur regardless of any preventative measures)
  - the severity/beneficial scale, indicating whether the impact will be very severe/beneficial (a permanent change which cannot be mitigated/permanent and significant benefit, with no real alternative to achieving this benefit), severe/beneficial (long-term impact that could be mitigated/long-term benefit), moderately severe/beneficial (medium- to long-term impact that could be mitigated/ medium- to long-term benefit), slight or have no effect
  - the significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high
  - the status, which will be described as either positive, negative or neutral
  - the degree to which the impact can be reversed
  - the degree to which the impact may cause irreplaceable loss of resources
  - the degree to which the impact can be mitigated



- a description and comparative assessment of all alternatives identified during the environmental impact assessment process
- recommendations regarding practical mitigation measures for potentially significant impacts, for inclusion in the Environmental Management Plan (EMP)
- an indication of the extent to which the issue could be addressed by the adoption of mitigation measures
- a description of any assumptions, uncertainties and gaps in knowledge
- an environmental impact statement which contains:
  - a summary of the key findings of the environmental impact assessment;
  - an assessment of the positive and negative implications of the proposed activity (one alternative only in EIA phase);
  - a comparative assessment of the positive and negative implications of identified alternatives

## Assessment of Impacts

Direct, indirect and cumulative impacts of the issues identified through the scoping study, as well as all other issues identified in the EIA phase must be assessed in terms of the following criteria:

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- The extent, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high):
- The duration, wherein it will be indicated whether:
  - the lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1;
  - the lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2;
  - medium-term (5–15 years) – assigned a score of 3;
  - long term (> 15 years) - assigned a score of 4; or
  - permanent - assigned a score of 5;



- The magnitude, quantified on a scale from 0-10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The probability of occurrence, which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1–5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- the significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and
- The status, which will be described as positive, negative or neutral.
- The degree to which the impact can be reversed.
- The degree to which the impact may cause irreplaceable loss of resources.
- The degree to which the impact can be mitigated.

The significance is calculated by combining the criteria in the following formula:

$$S = (E + D + M) P$$

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The significance weightings for each potential impact are as follows:

- < 30 points: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),



- 30-60 points: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- > 60 points: High (i.e. where the impact must have an influence on the decision process to develop in the area).

Assessment of impacts must be summarised in the following table format. The rating values as per the above criteria must also be included.

Table 3-Example of Impact table summarising the significance of impacts (with and without mitigation).

Nature:		
	Without mitigation	With mitigation
Extent	High (3)	Low (1)
Duration	Medium-term (3)	Medium-term (3)
Magnitude	Moderate (6)	Low (4)
Probability	Probable (3)	Probable (3)
Significance	36 (Medium)	24 (Low)
Status (positive or negative)	Negative	Negative
Reversibility	Low	Low
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	Yes	
Mitigation: Mitigation Measures		
Cumulative impacts: Cumulative Impacts		
Residual Impacts: Residual Impacts		



Table 4 -Measures for inclusion in the draft Environmental Management Plan:

OBJECTIVE:		
Description of the objective, which is necessary in order to meet the overall goals; these take into account the findings of the environmental impact assessment specialist studies		
Project component/s	List of project components affecting the objective	
Potential Impact	Brief description of potential environmental impact if objective is not met	
Activity/risk source	Description of activities which could impact on achieving objective	
Mitigation: Target/Objective	Description of the target; include quantitative measures and/or dates of completion	
Mitigation: Action/control	Responsibility	Timeframe
List specific action(s) required to meet the mitigation target/objective described above	Who is responsible for the measures	Time periods for implementation of measures
Performance Indicator	Description of key indicator(s) that track progress/indicate the effectiveness of the management plan.	
Monitoring	Mechanisms for monitoring compliance; the key monitoring actions required to check whether the objectives are being achieved, taking into consideration responsibility, frequency, methods and reporting	

#### 4. ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations exist in terms of the present study:

- The current study is a Phase 1 Heritage Impact Assessment.
- There was limited use of archival records but used Google Spotting to scope potential heritage areas.
- Field survey were undertaken to identify tangible heritage resources located in and around the proposed development area footprint.
- No formal heritage social consultation took place.
- Informal conversations were undertaken with some of the residents about sites Mg-01 to Mg-05.





## 5. FINDINGS

The findings of this study are presented in three ways as per the search and other methodological methods used in conducting it. Such as desktop study, map and deeds search as well as the physical survey of the proposed development area.

### Anticipated Heritage Resources and Sites within Mangosuthu PDAFP –

Based on the known archaeological and historical events that took place within this region of Zululand, the following archaeological and heritage resources sites are anticipated to occur within Mangosuthu Village development area:

- Iron Age implements or ceramics
- Iron Age graves and burials
- Historic monuments – some associated with the War
- Historical cemeteries and graves dating as far back to the establishment of Mangosuthu
- Historic houses/buildings dating to the early days of Paulpietersburg now Edumbe
- There is also a likely hood of founding Stone Age artefacts, but chance are very slow
- Iron Age implements or ceramics; Iron Age graves and burials; Historic monuments – some associated with the War; Historical cemeteries and graves dating as far back to the establishment of Paulpietersburg; Historic houses/buildings dating to the early days of Paulpietersburg.

#### 5.1. Results of Desktop Search:

The following provincial heritage sites were yielded by the desktop study of Mangosuthu Village and its surrounding. These sites are proclaimed provincial heritage sites in term of The KwaZulu-Natal Heritage Act, No. 10 of 1997, and they include:



Table 5- List of KZN Provincial Heritage Sites Located in and Around Mangosuthu

Heritage Resource	Landmark Status Heritage (Section 44):Provincial (Section 45)	Location	SAHRA File Number	GPS Coordinates
Old Powder Magazine, President Street, Utrecht - rectangular brick structure with hipped, corrugated iron roof The powder magazine was erected in 1893 and is one of 3 similar structures built by the ZAR. The Type of site: Powder Magazine Previous use: powder magazine. Current use: abandoned. From Van Rooyen Street turn into President Street head east towards Paulpietersburg. Turn into the P. One of three similar structures erected by the ZAR in 1893.	Provincial	Utrecht	9/2/447/0015	-
Battle of Hlobane	Provincial	-	-	-

## 5.2. Cadastral Search:

A number of observations are made about the evolution of the landscape in and around Mangosuthu:

1. The 1986 Topographic Map of Paulpietersburg (2730BD) shows minimum developments in the area with Mangosuthu Village. There are also not huts or kraals shown (Figure 18)

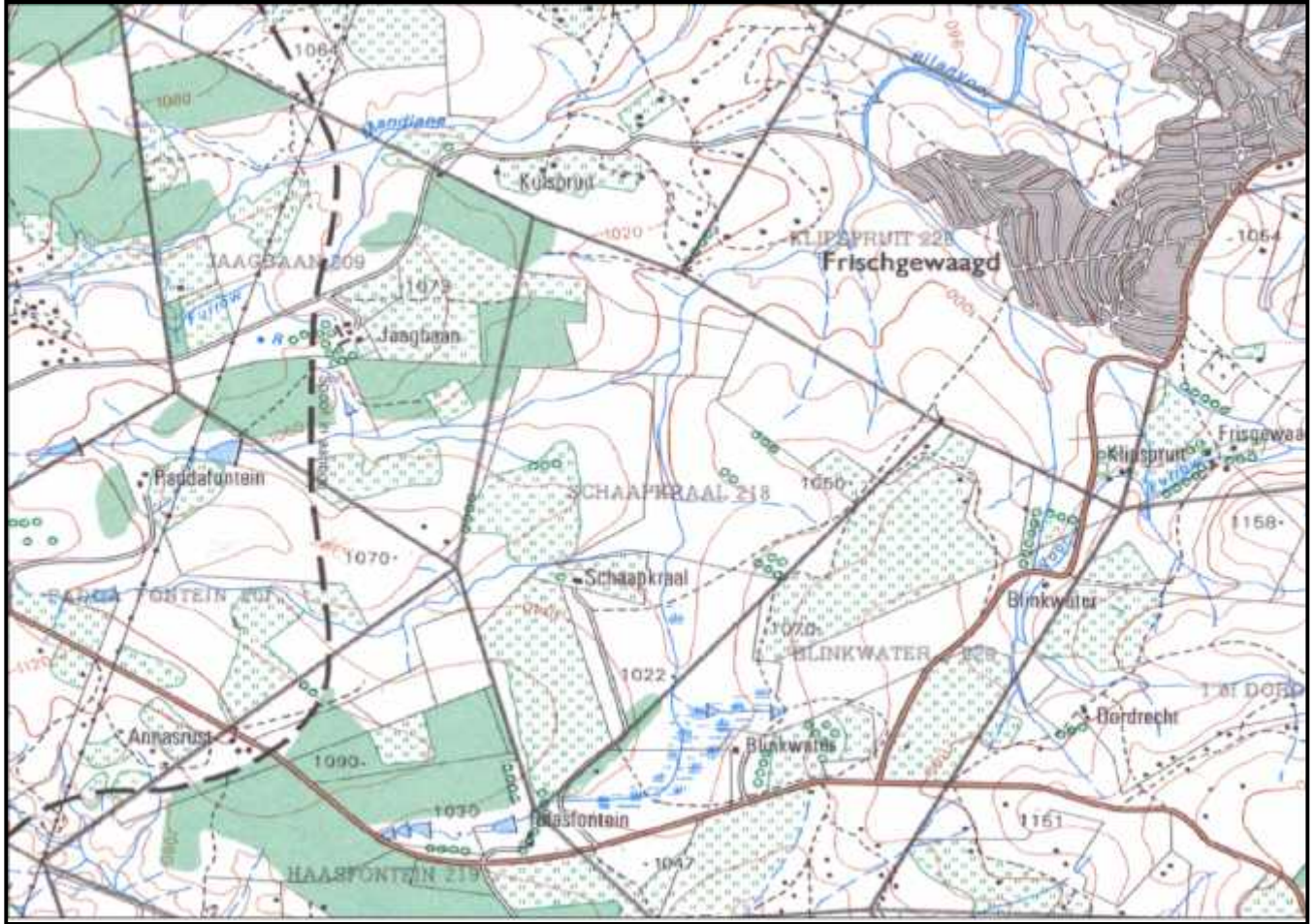


Figure 18- A 1986 1:50.000 Topographic map of the area show minimum development in the area of Mangosuthu Village.

5.3. Deeds Search: N/A

5.4. Field Survey:

The physical survey of Mangosuthu Village development area made a number of observations about Mangosuthu Village. The village has elements of historic and recent cultural activities and features. Among the cultural features that were identified as part of the field survey are historic graves and active/live cemeteries, old foundations and kraals:

Below is the description and field assessment of each of the 10 identified sites:



Site	Mg-01
Type	Cemetery
Density	Approximately 12 graves
Location/Coordinates	S27 23 28.2      E30 56 22.5
Approximate Age (More than 60 Or Less than 60 years old)	More than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 26 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is the old village cemetery located within a stone kraal (Figure 22).</li> <li>• The graves have east-west orientation.</li> <li>• They have stone mound dressing (Figure 19).</li> <li>• They look undisturbed except the area around them which show signs of house foundation and trenches from TLB and what looks to be geo-tech test pits which could also be dug by the villagers (Figure 20). There are also mud bricks associated with the foundations (Figure 21).</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority



								to intervene
--	--	--	--	--	--	--	--	--------------

Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area and Heritage authority to intervene in the protection of the identified graves by engaging the residents who are encroaching on them by constructing houses.
- The intervention could either be through a tribal authority or municipal representative i.e. Ward Council.
- The EAP should also highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities



(& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.

Residual Impacts: Destruction of the graves by villagers who want to construct houses within the cemetery boundaries.

Measures for inclusion in the draft Environmental Management Plan:

<b>OBJECTIVE:</b>	
The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with approximately 12 graves be avoided and treated as a No-Go-Area	
Project component/s	Construction phase of the project
Potential Impact	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively disturbed.
Operational phases of the project	
Potential Impact	The construction of houses around the grave site could lead to issues of access to the gravesite by descendents of the deceased being compromised.
Activity/risk source	Exclusion of the above objectives from the overall Environmental Management Plan
Mitigation: Target/Objective	<ul style="list-style-type: none"> <li>The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>Heritage authority should intervene in the protection of the identified graves by engaging the residents who are encroaching on them by constructing houses. The intervention could either be through a tribal authority or municipal representative i.e. Ward Council.</li> <li>The EAP should also highlight the issue of graves protection and</li> </ul>



	<p>conservation during the PPP.</p> <ul style="list-style-type: none"> <li>All this should be done prior to construction and operational phases of the project</li> </ul>	
Mitigation: Action/control	Responsibility	Timeframe
<ul style="list-style-type: none"> <li>Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should ensure that this site is protected at all times and no construction material or machinery should be placed in the area with graves nor construction activities.</li> <li>The heritage authority should intervene in the protection of the identified graves by engaging the residents who are encroaching on them by constructing houses. The intervention could either be through a tribal authority or municipal representative i.e. Ward Council.</li> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> </ul>	The EAP and ECO	Prior to the construction phase and during construction phase of the project.
Performance Indicator	The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.	
Monitoring	With the approval of the project the EAP and appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.	



Figure 19- Picture showing graves within Mangosuthu-01. Note the stone mound dressing.



Figure 20 - Disturbance near Mangosuthu-01.





Figure 21- Mud bricks west of the cemetery



Figure 22 - Stone kraal wall.



Site	Mg-02
Type	Cemetery
Density	3 graves
Location/Coordinates	S27 23 29.8      E30 56 25.3
Approximate Age (More than 60 Or Less than 60 years old)	More than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 26 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is the old village cemetery located approximately 82m east of Mg-01 and associated stone kraal (Figure 23).</li> <li>• The graves have east-west orientation.</li> <li>• They have stone mound dressing (Figure 23).</li> <li>• They are not disturbed.</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority to intervene



Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area
- The EAP should highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities (& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.

Residual Impacts: Destruction of the graves by villagers who want to construct houses near the cemetery as seen with Mg-01 above.



Measures for inclusion in the draft Environmental Management Plan:

<b>OBJECTIVE:</b>		
The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 3 graves be avoided and treated as a No-Go-Area		
<b>Project component/s</b>	<b>Construction phase of the project</b>	
<b>Potential Impact</b>	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively impacted.	
	<b>Operational phases of the project</b>	
<b>Potential Impact</b>	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
<b>Activity/risk source</b>	Exclusion of the above objectives from the overall Environmental Management Plan	
<b>Mitigation: Target/Objective</b>	<ul style="list-style-type: none"> <li>• The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>• All this should be done prior to construction and operational phases of the project</li> </ul>	
<b>Mitigation: Action/control</b>	<b>Responsibility</b>	<b>Timeframe</b>
<ul style="list-style-type: none"> <li>• Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should ensure that this site is protected at all times and no construction material or machinery should be place in the area with</li> </ul>	The EAP and ECO	Prior to the construction phase and during construction phase of the project.

<p>graves nor construction activities.</p> <ul style="list-style-type: none"> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> </ul>		
<p>Performance Indicator</p>	<p>The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.</p>	
<p>Monitoring</p>	<p>With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.</p>	



Figure 23 - Photos showing a cemetery with 3 graves with stone mound dressing and headstones



Site	Mg-03
Type	Cemetery
Density	3 graves
Location/Coordinates	S27 23 32.5      E30 56 25.4
Approximate Age (More than 60 Or Less than 60 years old)	More than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 26 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is the old village cemetery located approximately 102m east of Mg-01 and associated stone kraal (Figure 24).</li> <li>• The graves have east-west orientation.</li> <li>• They have stone mound dressing (Figure 24).</li> <li>• They are not disturbed.</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority



								to intervene
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Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area
- The EAP should highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities (& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.



Residual Impacts: Destruction of the graves by villagers who want to construct houses

Measures for inclusion in the draft Environmental Management Plan:

<b>OBJECTIVE:</b>		
The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 3 graves be avoided and treated as a No-Go-Area		
<b>Project component/s</b>	<b>Construction phase of the project</b>	
<b>Potential Impact</b>	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively impacted.	
	<b>Operational phases of the project</b>	
<b>Potential Impact</b>	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
<b>Activity/risk source</b>	Exclusion of the above objectives from the overall Environmental Management Plan	
<b>Mitigation: Target/Objective</b>	<ul style="list-style-type: none"> <li>The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>All this should be done prior to construction and operational phases of the project</li> </ul>	
<b>Mitigation: Action/control</b>	<b>Responsibility</b>	<b>Timeframe</b>
<ul style="list-style-type: none"> <li>Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should</li> </ul>	The EAP and ECO	Prior to the construction phase and during



<p>ensure that this site is protected at all times and no construction material or machinery should be place in the area with graves nor construction activities.</p> <ul style="list-style-type: none"> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> </ul>		<p>construction phase of the project.</p>
<p>Performance Indicator</p>	<p>The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.</p>	
<p>Monitoring</p>	<p>With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.</p>	



Figure 24 - Picture showing another cemetery with three graves



Site	Mg-04
Type	Cemetery
Density	24 graves
Location/Coordinates	S27 23 35.1                      E30 56 27.9
Approximate Age (More than 60 Or Less than 60 years old)	Less than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 24 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is an active village cemetery with approximately 24 graves.</li> <li>• The graves have east-west orientation.</li> <li>• They have sand and stone mound dressing as well as a grave with granite dressing and headstone (Figure 25).</li> <li>• The graves are not disturbed.</li> <li>• The grave with granite dressing and headstone is fenced off from the rest of the graves (Figure 25).</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority to



							intervene
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Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area
- The EAP should highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities (& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.

Residual Impacts: Destruction of the graves by villagers who want to construct houses near the



cemetery as seen with Mg-01 above.

Measures for inclusion in the draft Environmental Management Plan:

<b>OBJECTIVE:</b>		
The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 24 graves be avoided and treated as a No-Go-Area		
<b>Project component/s</b>	<b>Construction phase of the project</b>	
<b>Potential Impact</b>	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively impacted.	
	<b>Operational phases of the project</b>	
<b>Potential Impact</b>	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
<b>Activity/risk source</b>	Exclusion of the above objectives from the overall Environmental Management Plan	
<b>Mitigation: Target/Objective</b>	<ul style="list-style-type: none"> <li>The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>All this should be done prior to construction and operational phases of the project</li> </ul>	
<b>Mitigation: Action/control</b>	<b>Responsibility</b>	<b>Timeframe</b>
<ul style="list-style-type: none"> <li>Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should</li> </ul>	The EAP and ECO	Prior to the construction phase and during



<p>ensure that this site is protected at all times and no construction material or machinery should be placed in the area with graves nor construction activities.</p> <ul style="list-style-type: none"><li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li></ul>		construction phase of the project.
<b>Performance Indicator</b>	The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.	
<b>Monitoring</b>	With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.	



Figure 25 - Photo showing the sand and stone mound as well as granite dressing and headstone

Site	Mg-05
Type	Cemetery
Density	2 graves
Location/Coordinates	S27 23 28.7      E30 56 26.7
Approximate Age (More than 60 Or Less than 60 years old)	Older than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 24 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41



Site Description:

- This is an old cemetery with 2 graves.
- The graves have east-west orientation.
- They have stone mound dressing (Figure 26).
- They are not disturbed.

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority to intervene

Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)



Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
<p>Mitigation:</p> <ul style="list-style-type: none"> <li>• The cemetery should be treated as a No-Go-Area</li> <li>• The EAP should highlight the issue of graves protection and conservation during the PPP.</li> </ul>		
<p>Cumulative impacts: cumulative impacts are predicated to result from the construction activities (&amp; associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.</p>		
<p>Residual Impacts: Destruction of the graves by villagers who want to construct houses near the cemetery as evident with Mg-01 above.</p>		

Measures for inclusion in the draft Environmental Management Plan:

<b>OBJECTIVE:</b>	
The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 2 graves be avoided and treated as a No-Go-Area	
Project component/s	Construction phase of the project
Potential Impact	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be





	negatively impacted.	
	<b>Operational phases of the project</b>	
Potential Impact	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
Activity/risk source	Exclusion of the above objectives from the overall Environmental Management Plan	
Mitigation: Target/Objective	<ul style="list-style-type: none"> <li>• The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>• All this should be done prior to construction and operational phases of the project</li> </ul>	
Mitigation: Action/control	Responsibility	Timeframe
<ul style="list-style-type: none"> <li>• Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should ensure that this site is protected at all times and no construction material or machinery should be place in the area with graves nor construction activities.</li> <li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> </ul>	The EAP and ECO	Prior to the construction phase and during construction phase of the project.
Performance Indicator	The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.	



## Monitoring

With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.



Figure 26 - Photo showing a cemetery with 2 graves.



Site	Mg-06
Type	Cemetery
Density	Approximately 315 graves
Location/Coordinates	S27 24 45.3          E30 56 32.9
Approximate Age (More than 60 Or Less than 60 years old)	Less than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 24 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is an active cemetery with approximately 315 graves that could be counted.</li> <li>• The graves have east-west orientation - a typical burial orientation.</li> <li>• They have stone mound dressing and red soils (Figure 27).</li> <li>• They are not disturbed and are visible/noticeable.</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority to intervene



Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area
- The EAP should highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities (& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.

Residual Impacts: Destruction of the graves by villagers who want to construct houses near the cemetery as evident with Mg-01 above.

Measures for inclusion in the draft Environmental Management Plan:



**OBJECTIVE:**

The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 315 graves be avoided and treated as a No-Go-Area

Project component/s	<b>Construction phase of the project</b>	
Potential Impact	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively impacted.	
	<b>Operational phases of the project</b>	
Potential Impact	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
Activity/risk source	Exclusion of the above objectives from the overall Environmental Management Plan	
Mitigation: Target/Objective	<ul style="list-style-type: none"> <li>• The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>• All this should be done prior to construction and operational phases of the project</li> </ul>	
Mitigation: Action/control	Responsibility	Timeframe
<ul style="list-style-type: none"> <li>• Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should ensure that this site is protected at all times and no construction material or machinery should be place in the area with graves nor construction activities.</li> </ul>	The EAP and ECO	Prior to the construction phase and during construction phase of the project.



- The EAP should also highlight the issue of graves protection and conservation during the PPP.

Performance Indicator

The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.

Monitoring

With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.



Figure 27 -Active gravesite with over 315 graves



Site	Mg-07
Type	Cemetery
Density	Approximately 560 graves
Location/Coordinates	S27 23 48.6                      E30 57 14.9
Approximate Age (More than 60 Or Less than 60 years old)	Less than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 24 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is an active cemetery with approximately over 560 grave that could be counted.</li> <li>• The graves have east-west orientation - a typical burial orientation.</li> <li>• They have stone mound dressing and red soils. Some graves have cement and granite dressing and headstones (Figure 28).</li> <li>• They are not disturbed and are visible/noticeable.</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority to



							intervene
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Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area
- The EAP should highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities (& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.

Residual Impacts: Destruction of the graves by villagers who want to construct houses near the





cemetery as evident with Mg-01 above.

Measures for inclusion in the draft Environmental Management Plan:

**OBJECTIVE:**

The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 560 graves be avoided and treated as a No-Go-Area

Project component/s	Construction phase of the project	
Potential Impact	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively impacted.	
	Operational phases of the project	
Potential Impact	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
Activity/risk source	Exclusion of the above objectives from the overall Environmental Management Plan	
Mitigation: Target/Objective	<ul style="list-style-type: none"> <li>The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>All this should be done prior to construction and operational phases of the project</li> </ul>	
Mitigation: Action/control	Responsibility	Timeframe
<ul style="list-style-type: none"> <li>Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should ensure that this site is protected at all</li> </ul>	The EAP and ECO	Prior to the construction phase and during construction phase



<p>times and no construction material or machinery should be place in the area with graves nor construction activities.</p> <ul style="list-style-type: none"><li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li></ul>		of the project.
Performance Indicator	The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.	
Monitoring	With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.	



Figure 28 - Active grave located on the eastern end of the proposed Mangosuthu Village development footprint.



Site	Mg-08 and Mg-09
Type	Kraal and house foundations
Density	
Location/Coordinates	S27 24 01.6          E30 55 18.6
	S27 24 00.7          E30 55 21.5
Approximate Age (More than 60 Or Less than 60 years old)	More than 60 years old
Applicable Section of the NHRA, No 25 of 1999:	Section 34
Applicable Sections of the KZNHA, No.10 of 1997	Section 26 (1)
Applicable Sections of the KZNHB, 2008	Chapter 8 and section 29 (1)
Description: The site is a historic kraal (Figure 29) and remnants of house foundation (Figure 30). Both the house and the kraal are not well preserved (Figures 29 and 30).	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	Low significance	Probable	Construction phase	The site is of low heritage significance and can be destructed

Note! – There are no further actions recommended for this site because it is of low heritage significance



Figure 29- Old kraal foundations



Figure 30 - Remains of house foundation - the bricks have been salvaged.



Site	Mg-10
Type	Cemetery
Density	Approximately 166 graves
Location/Coordinates	S27 24 10.9                      E30 55 05.4
Approximate Age (More than 60 Or Less than 60 years old)	Less than 60 years
Applicable Section of the NHRA, No 25 of 1999:	Section 36
Applicable Sections of the KZNHA, No.10 of 1997	Section 24 (3 & 4)
Applicable Sections of the KZNHB, 2008	Chapter 8 Sections 40 and 41
<p>Site Description:</p> <ul style="list-style-type: none"> <li>• This is an active cemetery with approximately over 166 grave that could be counted.</li> <li>• The graves have east-west orientation - a typical burial orientation.</li> <li>• They have stone mound dressing and red soils (Figure 31).</li> <li>• They are not disturbed and are visible/noticeable.</li> </ul>	

Nature of Impacts, Assessments & Predictions in terms of Standard Heritage & Basic Assessment (i.e. adopted from Standard Environmentally Basic Assessment Guidelines):

Field Rating	Grade	Impact	Impact Significance	Heritage Significance	Certainty of Impacts	Duration	Mitigation
LS	3A	Localised	Low	High significance	Improbable	Long-term : Construction & operational phases	Treat the cemetery as a No-Go-Area for the RDP houses. Heritage authority to intervene



Nature: Construction activities (& development of associated infrastructure) will impact on the identified cemetery by destructing the cemetery markers, exposing the remains and creating access challenges for the relatives of the deceased.

	Without mitigation	With mitigation
Extent	Local (3)	Local (1)
Duration	Short duration (2)	Short duration (2)
Magnitude	Moderate (6)	Minor (2)
Probability	Improbable (2)	Improbable (1)
Significance	(22) Low	(5) Low
Status (positive or negative)	Negative	Positive
Reversibility	Low	Medium
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	

Mitigation:

- The cemetery should be treated as a No-Go-Area
- The EAP should highlight the issue of graves protection and conservation during the PPP.

Cumulative impacts: cumulative impacts are predicated to result from the construction activities (& associated infrastructure development) around the grave site. However, such impacts may not necessarily result from the proposed development, but from villagers who are in search of land to construct houses.

Residual Impacts: Destruction of the graves by villagers who want to construct houses near the cemetery as evident with Mg-01 above.

Measures for inclusion in the draft Environmental Management Plan:



**OBJECTIVE:**

The overall goal is to identify, manage and conserve heritage resources within and immediately around Mangosuthu Village. In order to achieve this goal it is recommended that the cemetery with 166 graves be avoided and treated as a No-Go-Area

Project component/s	<b>Construction phase of the project</b>	
Potential Impact	In the case where the identified cemetery is not avoided and treated as a No-Go-Area during the construction of the 1500 RDP houses it could potential be negatively impacted.	
	<b>Operational phases of the project</b>	
Potential Impact	The construction of houses around the grave site could result to issues of access to the gravesite/cemetery by the descendents of the deceased being compromised.	
Activity/risk source	Exclusion of the above objectives from the overall Environmental Management Plan	
Mitigation: Target/Objective	<ul style="list-style-type: none"> <li>• The cemetery should be treated as a No-Go-Area for the current proposed project.</li> <li>• The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> <li>• All this should be done prior to construction and operational phases of the project</li> </ul>	
Mitigation: Action/control	Responsibility	Timeframe
<ul style="list-style-type: none"> <li>• Should the proposed RDP houses be constructed in the open land near the gravesite the EAPs and the ECO should ensure that this site is protected at all times and no construction material or machinery should be place in the area with graves nor construction activities.</li> </ul>	The EAP and ECO	Prior to the construction phase and during construction phase of the project.



<ul style="list-style-type: none"> <li>The EAP should also highlight the issue of graves protection and conservation during the PPP.</li> </ul>		
<b>Performance Indicator</b>	The type of indicator used here will be Actionable Indicators – this will measure action/progress in terms of completion of the above objectives with the approval of the project against their actual implementation.	
<b>Monitoring</b>	With the approval of the project the EAP and the appointed ECO should ensure that the gravesite is treated as a No-Go-Area and that no construction activities nor machinery or other construction materials are placed within the cemetery.	



Figure 31- Active/live cemetery on the western end of the Mangosuthu Village development footprint



## 6. DISCUSSION

The physical survey of Mangosuthu Village yielded a total of 10 historical sites in form of burial grounds and gravesites (8 sites) and 2 built environment and landscape feature in the middle of old plough fields. Out of the total number of burial grounds and gravesites approximately 5 sites are historic in nature and the rest are active/live cemeteries.

### 6.1. Interpretation of heritage legislations in terms of the identified heritage resources

Based on the type and nature of the identified heritage resources within Mangosuthu Village the following NHRA, No. 25 of 1999 Sections were triggered:

- Section 34 for the built environment and landscape feature which includes historic foundations
- Section 35 for the stone kraal associated with site Mangosuthu-02
- Section 36 for all the cemeteries and/or burial sites

In accordance to the KZNHB, 21 February 2008 - the management of built environment features such as building are managed through Chapter 8 and Section 39 (1). In terms of the KZNHA, No. 10 of 1997 the built environment is managed under Section 26 (1).

For burial grounds and graves sites - Chapter 8 of the KZNHB, Sections 40 and 41 becomes applicable. Section 26 (3 & 4) of the KZNHA, No. 10 of 1997 also becomes applicable.

The stone kraal associated with Mangosuthu-02 would be managed in terms of Chapter 8 and Section 42 of the KZNHB and in terms of Section 26 (6) of KZNHA, No. 10 of 1997.

In terms of the general management of heritage resources within the province Chapter 9 of the KZNHB give guidance on the processes followed.



## 6.2. Impact Evaluations and Assessment Results

The yielded heritage resources within Mangosuthu Village were assessed and evaluated in terms of the above heritage legislations and bills, their levels of heritage significance and potential impact of the proposed development of 1500 RDP houses on them. The sites were assessed in terms of their heritage significance and found to be of high heritage significance (Figure 32):

- Mg-01
- Mg-02
- Mg-03
- Mg-04
- Mg-05
- Mg-06
- Mg-07
- Mg-10

Two site yielded low heritage significance and they were Mg-08 and Mg-09 (Figure 32).

In terms of the potential impact of the proposed development on the identified heritage sites Mg-06, Mg-07 and Mg-10 were assessed to have low impact significance because they are active or live burial grounds and gravesites (Figures 27,28 & 31). There is no doubt that they will not be impacted by the proposed development as they are clearly visible and currently in use or active.

Sites Mg-01 to Mg-5 yielded high low impact significance in terms of the current proposed project. However, if we were to assess these site in terms of future projects or unregulated developments in and around them they would yield high impact significance as they have the potential to be impacted by future developmental projects within Mangosuthu Village, but not the current proposed project of 1500 RDP houses. The high impact significance of these sites results from their assessment based on observed activities in and around them. For example, there are house foundations that have been dug in the area with Mg-01. In the same area holes and what looks to be TLB back bucket/digger have also been noted (e.g. Figures 20 & 21). In informal conversations with some of the village residents we ascertained that- the direct descendents of these graves are not known to most of the villagers and some people within the village have earmarked the area in which they are located as potential development site for houses. This poses a great threat to these graves and high potential risk that they may



be impacted on in the current or near future (Figure 32). Because of the potential threat of these graves, the area in and around them has been defined as a No-Go-Area in terms of the proposed 1500 RDP houses. The same mitigation have been proposed for the active/live grave sites. For sites Mg-01 to Mg-05 the impact by communities may not necessary be averted by this HIA document recommendations. This leaves room for intervention by the relevant heritage authority in consultation with the Edumbe Local Municipality and local tribal authorities if any exist. The intervention should include amongst other means of intervention – demarcation of the graves in the area defined as No-Go-Areas for the proposed 1500 RDP houses and any other community development initiatives. Second to this is to make the communities around the grave sites aware of their importance during the public consultation process of the EIA process of which this HIA document forms part of. This will be more applicable to the EAP and the implementing agent.

## 7. CONCLUSIONS AND RECOMMENDATIONS

Based on the impact evaluation and assessment of heritage significance and potential impact of the proposed development on the identified heritage resources the following conclusions are made about the proposed 1500 RDP house in Mangosuthu and the potential of the proposed development on the identified heritage sites:

### 7.1. Conclusions:

- It is concluded that the current proposed development may have positive impact in terms of reconstruction development programme initiatives set by the Edumbe Local Municipality, Zululand District and subsequently the provincial and national department of human settlement.
- It is also concluded that the 1500 RDP houses project will have low potential impact on the identified resources in that they are mostly visible. High impact may result from other project other this proposed project; for example, local community residents who have already started developing around the grave sites.
- This impact (by communities) will develop further if there are no interventions made by the relevant heritage authority in consultation with either the ward councillors or tribal authority depending on the social-cultural and political structures that are found within the Mangosuthu Village Community.



- We would also like to conclude that the survey did not yield any other archaeological resources in form of Stone Age, Iron Age and Industrial Archaeological resources.
- There were also no historical sites associated with either the Anglo-Zulu War or the Anglo-Boer Wars within the village even though such sites are known to occur in the Paulpietersburg Area such as the Battle of Hlobane further south of Paulpietersburg.

## 7.2. Recommendations

- It is recommended that the proposed 1500 RDP housing scheme should avoid the identified burial grounds and grave sites located within Mangosuthu Village and treat them as No-Go-Areas.
- The EAP of the project should highlight the issue of disturbing ancestral land during the Public Participation Process of the EIA.
- The following sites (i.e. Mg-01 to Mg-05) will require special intervention by either the local government authorities in form of ward councillors or tribal authority representative such as the Induna. Such intervention should include among other things – identification of the people who are trying to construct on the graves and engagement with them about the potential threat of their activities of the above mentioned graves.
- It is further recommended that the developer should appoint an ECO who should pay special attention to these resources during the construction phase of the project. In the case that such resources are disturbed the project construction activities in and around the areas in which these resources are identified should stop and the ECO and the EAP should consult Amafa to come and investigate the finds and make necessary recommendations.

### Other recommendations

- It is recommended that the developer abides to the proposed heritage management measures for the management and mitigation of the identified heritage resources sites within the proposed development footprint prior to project construction and operational phases.
- A letter from the developer acknowledging the recommendations of this report will need to be developed and submitted to the Amafa for the management of burial ground and graves. This letter, together with this heritage report, will aid the adjudication process and assist Amafa to an informed decision in terms of the Review Comment and on the next steps to be followed thereof from a heritage resources management point of view.



- From an independent point of view, we would encourage Amafa to give the project a Positive Review Comment depending on whether the developer agrees with the finding of this report.

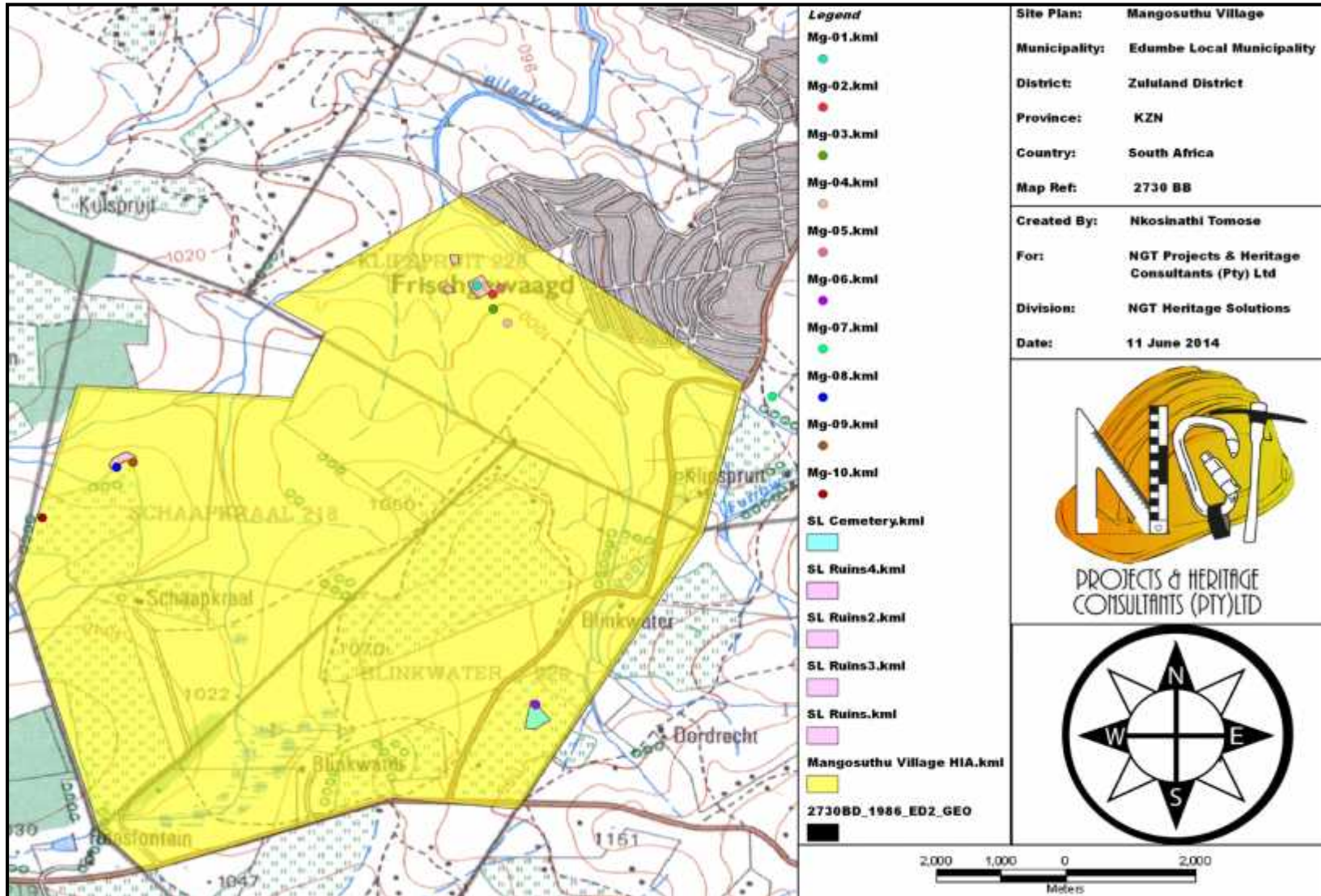


Figure 32 - Distribution of heritage sites in and around Mangosuthu PDAFP (areas marked with brown ink) – green dots.



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