




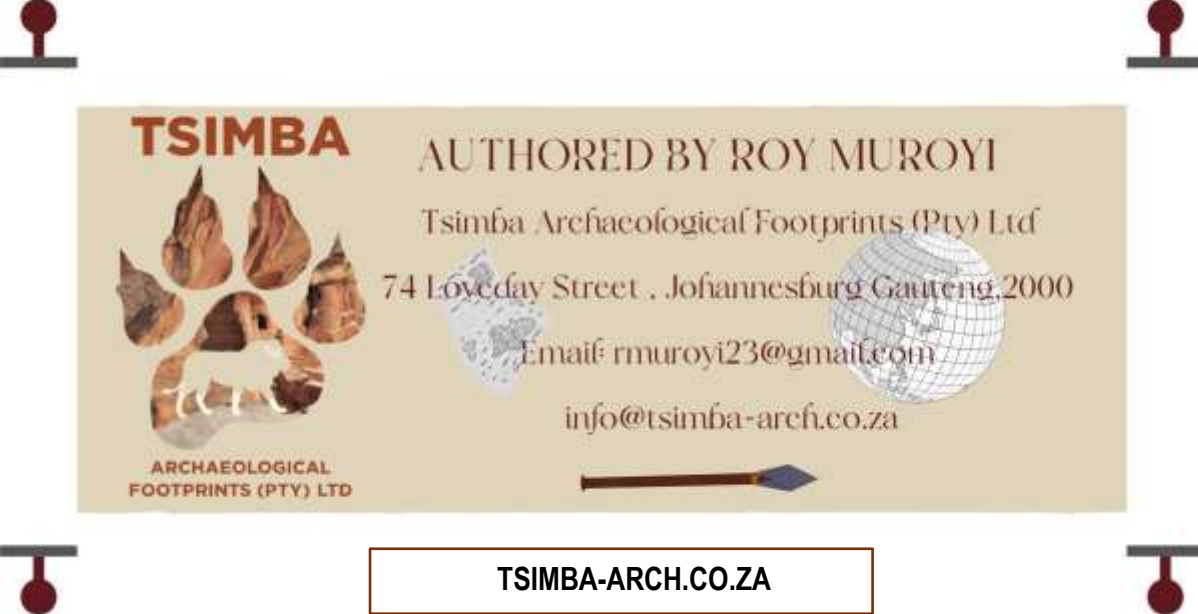
PHASE ONE (1)

ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT APPLICATION FOR ENVIRONMENTAL AUTHORISATION


THE PROPOSED GOQOKAZI COLLECTOR SEWER IN ETHEKWINI MUNICIPALITY, KWA-ZULU NATAL

<p>DEVELOPED BY:</p>  <p>TSIMBA ARCHAEOLOGICAL FOOTPRINTS (PTY) LTD</p>	<p>DEVELOPED FOR :</p>  <p>ENVIROPRO IN ASSOCIATION WITH INKANYEZI WETHU</p>
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JULY 2023



TSIMBA AUTHORED BY ROY MUROYI
Tsimba Archaeological Footprints (Pty) Ltd
74 Loyedday Street . Johannesburg Gauteng.2000
Email: rmuroyi23@gmail.com
info@tsimba-arch.co.za



**ARCHAEOLOGICAL
FOOTPRINTS (PTY) LTD**

TSIMBA-ARCH.CO.ZA

AUTHOR'S CREDENTIALS

The report was authored by Mr. Roy Muroyi, Principal Heritage Specialist and Archaeologist for Tsimba Archaeological Footprints (Pty) Ltd. Roy is a flexible, creative, hard-working and professionally minded cultural heritage specialist with realistic methods. He has over nine years' experience in conducting and compiling Heritage Impact Assessments, Conservation Management Plans and Eco-Tourism Impact Assessments in South Africa, Botswana and the Republic of Malawi.

Roy holds a Master's Degree in Heritage Studies (University of Witwatersrand ,2022) with a research focus on transformational challenges at post-apartheid interpretation of Mapungubwe Interpretation Centre in Musina – Limpopo Province. He further holds another Master's Degree in Diversity Studies (University of Witwatersrand ,2021) focusing his research on Zulu Cultural Heritage Collections (in Kwa-Zulu Natal Province) interpretation using a decolonial lens.

Mr. Muroyi is also a holder of an Honours Degree, Archaeology, Cultural Heritage and Museum Studies (Midlands State University, 2014). His career in Cultural Resources Management kicked off at the Department of National Museums and Monuments of Botswana where he worked as an Archaeological Impact Assessment adjudicating officer in 2013.

After leaving the Department of National Museums and Monuments of Botswana Mr. Muroyi moved to South Africa where he got involved with a number of Cultural Resources Management consulting firms before eventually settling at Tsimba Archaeological Footprints (Pty) Ltd. He has so far conducted over a 100-200 Heritage Impact Assessment reports for proposed Phase 1 and 2 Heritage Impact Assessments for :- Linear developments, Projects with an area over 5000m²,Heritage buildings/Old buildings (demolitions and alterations),Old Bridges (demolitions) Water Pipelines, and etc .

He is accredited by Association of Southern African Professional Archaeologists (ASAPA) under the Cultural Resources Management section. He is also accredited by Association of Professional Heritage Professionals (APHP). He further holds membership with the International Association Impact Assessment South Africa (IAIASa) and KwaZulu-Natal Amafa and Research Institute.

SPECIALIST DECLARATION OF INDEPENDENCE

I, _____ Roy Muroyi _____, declare that –

- *I act as the independent specialist in this application;*
- *I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;*
- *I declare that there are no circumstances that may compromise my objectivity in performing such work;*
- *I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;*
- *I will comply with the Act, Regulations and all other applicable legislation;*
- *I have no, and will not engage in, conflicting interests in the undertaking of the activity;*
- *I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;*
- *all the particulars furnished by me in this form are true and correct; and*
- *I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.*

Signature of the Specialist



DOCUMENT INFORMATION

DOCUMENT INFORMATION ITEM	DESCRIPTION
Proposed development and location	The proposed Goqokazi collector sewer in eThekwini Municipality in Kwa- Zulu Natal
Purpose of the study	To carry out a Phase 1 Heritage Impact Assessment to determine the presence/absence of archaeological assess their archaeological significance in terms of the NHRA of 1999 the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008) and SHARA guidelines.
Topography	The topography of the project area is undulating with steep slopes, majority of the site is sloping towards the east. The area is underlain by transported soils in a form of hillwash and alluvium as well as residual granite.
Municipalities	eThekwini Municipality
Client	eThekwini Municipality
Client Details	EnviroPro (Pty) Ltd Phone: (+27) 31 765 2942 Email: dustin@enviropro.co.za
Heritage Consultant	Tsimba Archaeological Footprints (Pty) Ltd 24 Lawson Mansions 74 Loveday Street, Johannesburg Gauteng, 2000 E-mail: info@tsimba-arch.co.za rmuroyi23@gmail.com Phone: (+27) 813 717 993

EXECUTIVE SUMMARY

Tsimba Archaeological Footprints (Pty) Ltd was requested by EnviroPro (Pty) Ltd to conduct a Phase one (1) Heritage Impact Assessment (HIA) for the proposed Goqokazi collector sewer in eThekweni Municipality in Kwa- Zulu Natal. The Survey focused on three objectives:

- ➔ Examine the designated survey areas to identify any archaeological and cultural heritage sites, as defined by the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008) and section 38 (1) (a, b, c) of the NHRA, No. 25 of 1999.
- ➔ Provide a recording of any sites identified to a standard consistent with a site identification level, including significance assessments, details of the locations and extents of each site; and
- ➔ Assist in the development of site avoidance and management strategies, where necessary.

EnviroPro (Pty) Ltd (hereafter referred to as “the EAP”) have been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the Environmental Impact Assessment (EIA) for the proposed development. A review of a range of cultural heritage information was undertaken as part of the heritage assessment process.

The Phase 1 Cultural Heritage Impact Assessment field survey for the proposed development project identified a place of worship which constitutes living heritage and far as the heritage legislative laws in South Africa are concerned. The place of worship belongs to the Nazareth Baptist Church. This establishment, captured in the attached photographic image, is relevant for consideration during the planning and execution of the sewer pipeline project.

Besides the Nazareth Baptist Church within the vicinity of the sewer pipeline project, no site, features or objects of cultural significance exists within the actual proposed sewer pipeline alignment. The survey therefore notes that there would be no definite or direct impact on cultural heritage resources as a result of the proposed development. This report is an independent view and makes recommendations to Amafa Research and institute based on its findings. The authority will consider the recommendations and make a decision based on conservation principles.

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ABBREVIATIONS

Acronyms	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
DRDLR	Department of Rural Development and Land Reform
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age
GIS	Geographic Information System
GPS	Global Positioning System
HIA	Heritage Impact Assessment
LSA	Late Stone Age
LIA	Late Iron Age
MIA	Middle Iron Age
MSA	Middle Stone Age
SAHRA	South African Heritage Resources Agency

GLOSSARY

Achievement	✚ Something accomplished, esp. by valour, boldness, or superior ability
Aesthetic	✚ Relating to the sense of the beautiful or the science of aesthetics.
Community	✚ All the people of a specific locality or country
Culture	✚ The sum total of ways of living built up by a group of human beings, which is transmitted from one generation to another.
Cultural	✚ Of or relating to culture or cultivation.
Diversity	✚ The state or fact of being diverse; difference; unlikeness.
Geological (geology)	✚ The science which treats of the earth, the rocks of which it is composed, and the changes which it has undergone or is undergoing.
High	✚ Intensified; exceeding the common degree or measure; strong; intense, energetic
Importance	✚ The quality or fact of being important.
influence	✚ Power of producing effects by invisible or insensible means.
Potential	✚ Possible as opposed to actual.
Integrity	✚ The state of being whole, entire, or undiminished.
Religious	✚ Of, relating to, or concerned with religion.
Significant	✚ important; of consequence
Social	✚ Living, or disposed to live, in companionship with others or in a community, rather than in isolation.
Spiritual	✚ Of, relating to, or consisting of spirit or incorporeal being.
Valued	✚ Highly regarded or esteemed

1.0 INTRODUCTION

1.1 Project Background

EnviroPro (Pty) Ltd has been appointed by the eThekweni Municipality to provide Environmental services for the proposed Goqokazi collector sewer in eThekweni Municipality in Kwa-Zulu Natal. In-turn EnviroPro (Pty) Ltd requested Tsimba Archaeological Footprints (Pty) Ltd to conduct a phase one (1) Heritage Impact Assessment (HIA) for the proposed development project. The proposed development layouts area given in **Figure 1**.

The proposed collector sewer will serve 809 formal housing units and 340 informal housing units. The units are categorised as falling under the middle-income group. In order to service the catchment area of the proposed development with the bulk sewer, only one option could be considered, which is the provision of a collector sewer that will collect the sewage produced on the 809 units which are without bulk sewer services. The rest of the proposed housing units already have a bulk sewer pipeline that will serve them. The provision of the collector sewer was the only viable option that would ensure that the sewage generated in the proposed development is collected for discharge purposes. The proposed sewer will tie-in to an existing trunk sewer that will convey the sewage by gravity to the Phoenix wastewater treatment works.

There is an existing 160mm diameter uPVC pipeline situated within the route of the proposed collector sewer and this will be upgraded by means of a pipe-cracking method in order to accommodate the flow from the Goqokazi housing development. An alternative method to the pipe cracking method that was considered was the conventional open trench excavation, this method was considered not viable since there are structures that are built on top of the existing pipeline disallowing the undertaking of open trench excavations.

1.2 Need for HIA

This HIA is designed to assist statutory authorities in identifying and preventing the approval of aggressive developments, understood as the development that destroys the cultural significance of heritage properties. The provisions of the National Heritage Resources Act of 1999 and the KwaZulu-Natal Heritage Act (Act no 4 of 2008) furthermore offer comprehensive protection of the cultural heritage of South Africa as a whole. HIA structure an evaluation of the potential damage or benefits that may accrue to the significance of the cultural heritage assets.

Environmental impact assessments (EIA) are another analytic approach for evaluating the impacts of development, widely adopted as part of the land use planning system in many countries. Whenever relevant, EIA also include cultural heritage as a factor to be evaluated. Both EIA and HIA adopt a similar approach. In brief, first, the overall scope of the study is defined. Second, a baseline survey is carried out to provide a reference point against which impacts can be measured, including a desktop study and/or field research.

Cultural heritage Impact assessments are meant to draw attention to the effects of the proposed project on the heritage place and how these effects can be mitigated. A cultural heritage impact assessment report will therefore include the legislative framework, the consultation process, the cultural and environmental baseline, mitigation as well as monitoring plans. Mitigation measures aim to avoid, minimize, remedy or compensate for the predicted adverse impacts of a proposed project on a cultural heritage resource or site.

1.3 The Objectives of this HIA study are:

Heritage impact assessments (hereinafter referred to as HIA) are applied to cultural heritage assets. This is a recent notion grounded in the requirements to perform environmental assessments at the project or more strategic levels. The general objective of the cultural heritage survey is to record and document cultural heritage remains consisting of both tangible and intangible archaeological and historical artefacts, structures (including graves), settlements and oral traditions of cultural significance. As such the terms of reference of this survey are as follows:

- ➔ Identify and provide a detailed description of all artefacts, assemblages, settlements and structures of an archaeological or historical nature (cultural heritage sites) located on the study area,
- ➔ Estimate the level of significance/importance of these remains in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value,
- ➔ Assess any impact on the archaeological and historical remains within the area emanating from the development activities, and
- ➔ Propose recommendations to mitigate heritage resources where complete or partial conservation may not be possible and thereby limit or prevent any further impact

2.0 DESCRIPTION OF THE RECEIVING ENVIRONMENT

The project location falls within ward 56 and 57 of Inanda in the northern region of the eThekweni Municipality located approximately 30km north of the Durban city centre. The GPS coordinates of the midpoint of the project area are 29°40'51.06"S; 30°57'35.02"E. The area currently comprises of residential units only, no industrial or commercial developments exist in the area. The eThekweni Municipality Housing Department (henceforth referred to as Housing) plans to provide suitable housing units to 2000 beneficiaries within the eThekweni Municipality, the proposed housing topology will be a single story of 40 square meters houses. The provision of a collector sewer to service 809 of the proposed housing units has been requested by Housing. The purpose of this study is to investigate the provision of this collector sewer to service the proposed development as per the request by Housing.

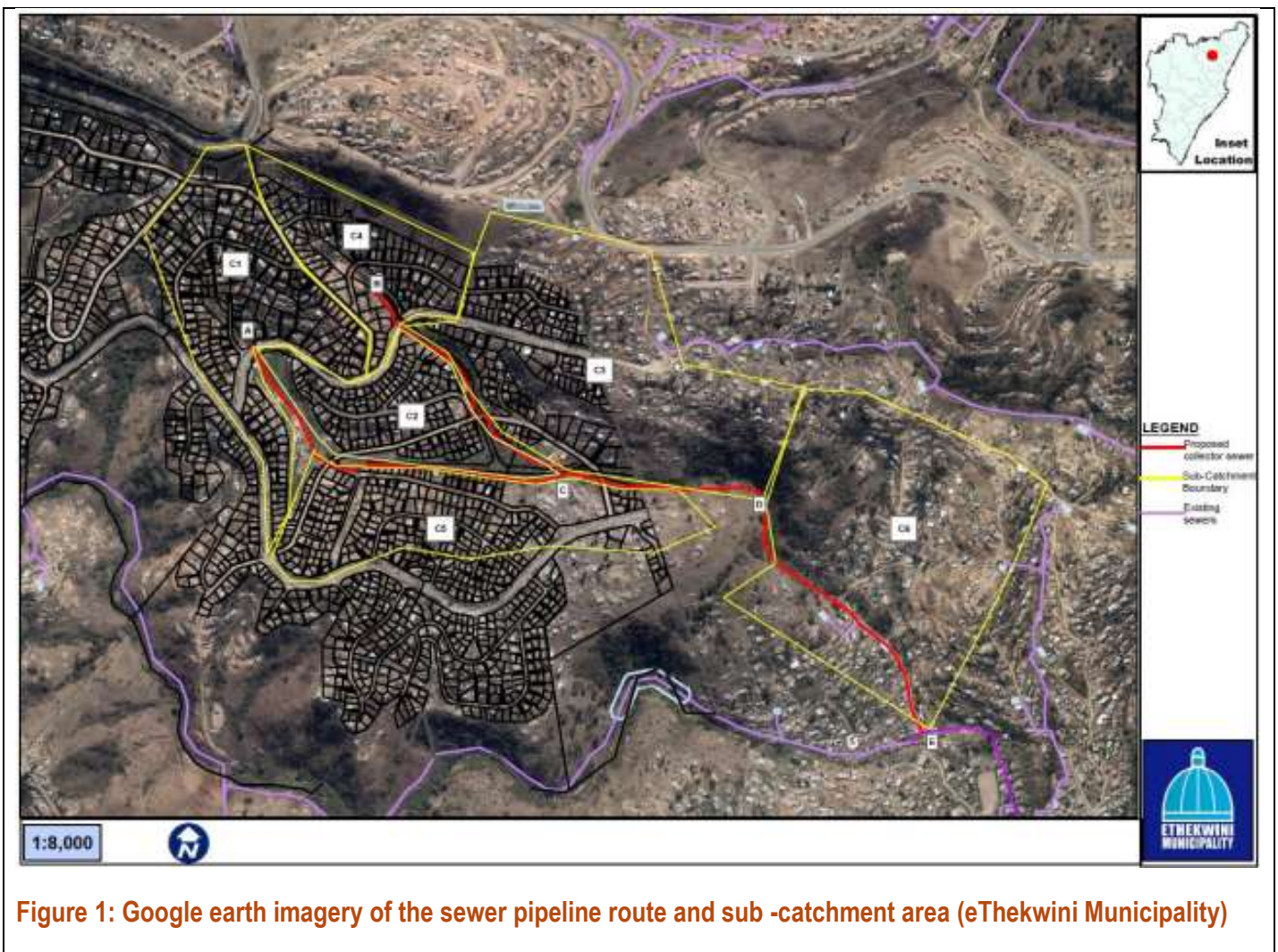


Figure 1: Google earth imagery of the sewer pipeline route and sub -catchment area (eThekweni Municipality)

3.0 METHODOLOGY

3.1 Literature review

The methodology used in this HIA is based on a comprehensive understanding of the current or baseline situation; the type, distribution and significance of heritage resources as revealed through desk-based study and additional data acquisition, such as archaeological investigations, built heritage surveys, and recording of crafts, skills and intangible heritage. This is systematically integrated by the use of matrices with information on the nature and extent of the proposed engineering and other works to identify potential. The following tasks were also undertaken in relation to the cultural heritage and are described in this report:

The background information search of the proposed development area was conducted following the site maps from the client. Sources used in this study included:

- Published academic papers and HIA and PIA studies conducted in and around the region where the proposed infrastructure development will take place;
- Available archaeological literature on the study area was consulted;
- The SAHRIS website and the National Data Base were consulted to obtain background information on previous heritage surveys and assessments in the area; and other planning documents.
- Map Archives - Historical maps of the proposed area of development and its surrounds were assessed to aid information gathering of the proposed area of development and its surrounds

3.2 Field Survey

The field survey lasted for one day, it was conducted on the 8th of July 2023. It was conducted by an Archaeologist from Tsimba Archaeological Footprint through driving and walking. A ground survey, following standard and accepted archaeological procedures, was conducted. The survey also paid special attention to disturbed and exposed layers of soils such as eroded surfaces along the sugar cane fields and the canals. These areas are likely to be exposed or yield archaeological and other heritage resources that may be buried underneath the soil and be brought to the surface by animal and human activities including animal barrow pits and human excavated grounds.

3.3 Data Consolidation and Report Writing

Data captured on the development area (during the field survey) by means of a desktop study and physical survey is used as a basis for this HIA. This data is also used to establish assessment for any possible current and future impacts within the development footprint. This includes the following:

- ✚ Assessment of the significance of the cultural resources in terms of their archaeological, built environment and landscape, historical, scientific, social, religious, aesthetic and tourism value;
- ✚ A description of possible impacts of the proposed development, especially during the construction phase, in accordance with the standards and conventions for the management of cultural environments;
- ✚ Proposal of suitable mitigation measures to minimize possible negative impacts on the cultural environment and resources that may result during construction;
- ✚ Review of applicable legislative requirements that is the NEMA (read together with the 2014 EIA Regulations) the NHRA of 1999 and the KwaZulu-Natal Heritage Act (Act no 4 of 2008).
- ✚ The consolidation of the data collected using the various sources as described above;
- ✚ Acknowledgement of impacts on heritage resources (such as unearthed graves) predicted to occur during construction; and
- ✚ Geological Information Systems mapping of known archaeological sites and maps in the region
- ✚ A discussion of the results of this study with conclusions and recommendations based on the available data and study findings.

4.0 LEGISLATIVE FRAMEWORK

4.1 National Heritage Resources Act (No 25 of 1999)

The appointment of Tsimba Archaeological Footprints (Pty) Ltd is in terms of the National Heritage Resources Act (NHRA), No. 25 of 1999 read together with the KwaZulu-Natal Heritage (Act No. 4 of 2008). The Basic Impact Assessment study includes a Heritage Impact Assessment specialist study, recommendations from the HIA report require Heritage Authority review and comments to be incorporated into the final EA or Record of Decision. This particular Development triggered the following Sections of the Heritage Legislation;

Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length; and

(c) any development or other activity which will change the character of an area of land, or water -

(i) exceeding 5 000 m² in extent;

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority;

(d) the re-zoning of a site exceeding 10 000 m² in extent; or

(e) any other category of development provided for in regulations by SAHRA or a Provincial Heritage

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

Section 3 of the National Heritage Resources Act (25 of 1999) lists a wide range of national resources protected under the act as they are deemed to be national estate. When conducting Heritage Impact Assessment (HIA) the following heritage resources have to be identified:

(a) Places, buildings structures and equipment of cultural significance;

(b) Places to which oral traditions are attached or which are associated with living heritage;

(c) Historical settlements and townscapes;

(d) Landscapes and natural features of cultural significance

(e) Geological sites of scientific or cultural importance';

- (f) *Archaeological and paleontological sites;*
- (g) *Graves and burial grounds including-*
 - (i) *Ancestral graves;*
 - (ii) *Royal graves and graves of traditional leaders;*
 - (iii) *Graves of victims of conflict;*
 - (iv) *Graves of individuals designated by the Minister by notice in the Gazette*
 - (v) *Historical graves and cemeteries;*
 - (vi) *Other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);*
- (h) *Sites of significance relating to the history of slavery in South Africa;*
 - (i) *Moveable objects, including - objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;*
 - (ii) *Objects to which oral traditions are attached or which are associated with living heritage*
 - (iii) *Ethnographic art and objects;*
 - (iv) *Military objects;*
 - (v) *Objects of decorative or fine art; and*
 - (vi) *Objects of scientific or technological interest; and(vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in Section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)*

4.2 The Burra Charter of 1964

This study is further guided by the Burra Charter which offers a framework for heritage management in which multiple—sometimes conflicting—heritage and other values can be understood and explicitly addressed. The Burra Charter is based on the International Charter for the Conservation and Restoration of Monuments and Sites 1964 and was adopted by the Australian International Council on Monuments and Sites (ICOMOS) in 1979. The Burra Charter sets a standard of practice for those who provide advice, make decisions about or undertake works to places of cultural significance and is applicable to all places of cultural significance including natural, indigenous and historic places of cultural value. The Burra Charter provides for a flow chart that sets out the sequence underlining the process of heritage assessment (Figure 6).

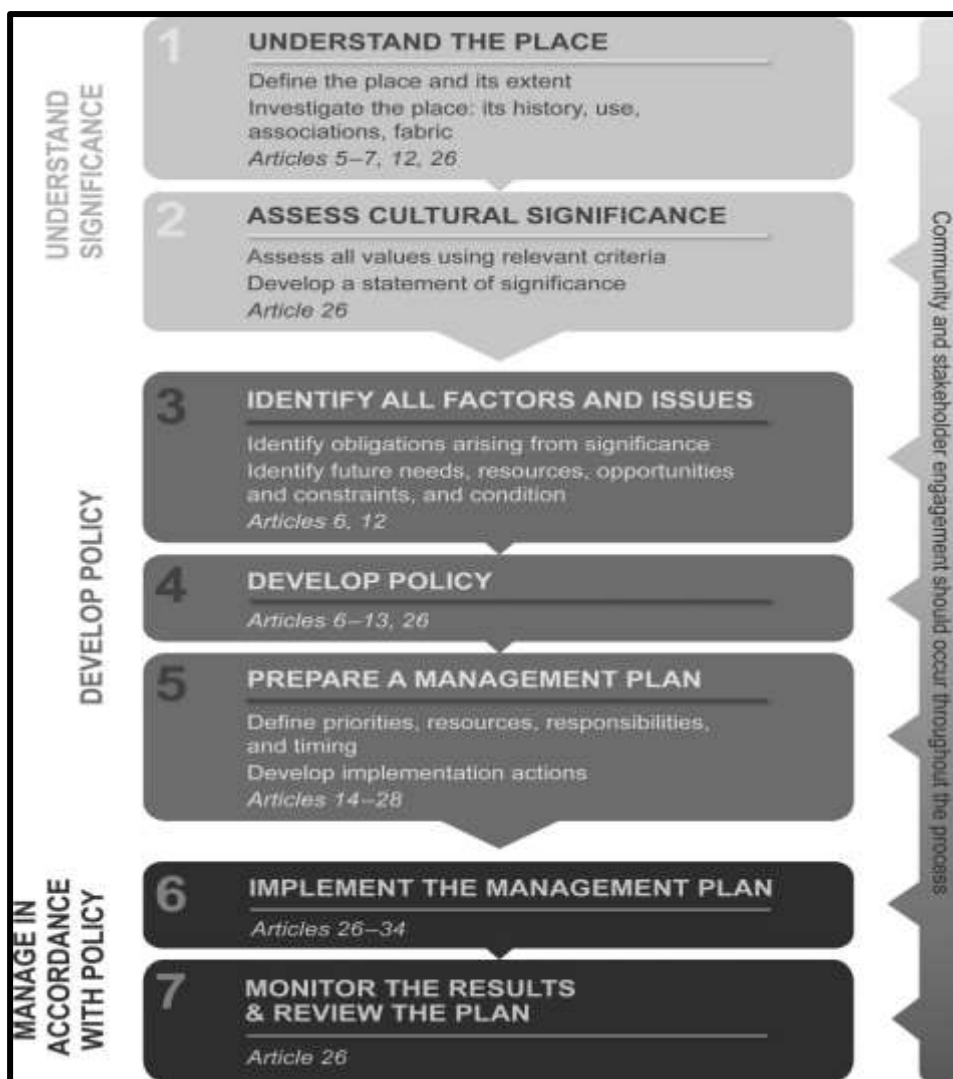


Figure 2: The Burra Charter process: steps in planning for and managing a place of cultural significance. (Reproduced from Australia ICOMOS 2013)

5.0 ARCHEOLOGICAL BACKGROUND OF THE STUDY AREA

This section traces the archeological record of the proposed study area and the broader study area.

ARCHAEOLOGICAL PERIOD	APPROXIMATE DATES <for less than and > for greater than
Earlier Stone Age Tools = Handaxes and cleavers	more than 2 million years ago to >200 000 years ago
Middle Stone Age Tools =Stone flakes such as scrapers, points and blades	<300 000 years ago, to >20 000 years ago
Later Stone Age (Includes gatherer rock art) Tools = Wood, bone, hearths, ostrich eggshell beads and even bedding material	<40 000 years ago, up to historical times in certain areas
Early Iron Age	c. AD 200 - c. AD 900
Middle Iron Age	c. AD 900 – c. AD 1300
Late Iron Age (Stonewalled sites)	c. AD 1300 - c. AD 1840 (c. AD 1640 - c. AD 1840)

Table 1:Archaeological time frames and their descriptions

Many Early Stone Age (ESA) sites, some of which date back more than 2 million years, are typically found on the floodplains of perennial rivers. Stone tools and industry waste may be dispersed over these ESA open spaces, in addition to massive concentrated concentrations varying from pebble tool choppers to essential equipment like cleavers and handaxes. The first hominins that created these stone tools likely did not constantly engage in active hunting, instead relying on opportunistic scavenging of meat from carnivore breeding grounds.

While Middle Stone Age (MSA) sites are often found on flood plains, they are also connected to caves and overhanging rock structures. Large concentrations of knapped stone flakes, including scrapers, points, and blades, as well as related production waste, are the norm at sites. Tools may have been hafted but organic materials, such as those used in hafting, seldom preserve. Limited drive-hunting activities are also associated with this period. Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic

materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material. By using San (Bushman) ethnographic data a better understanding of this period is possible. South African rock art is also associated with the LSA. The following chronological sequence was recently established by prominent Stone Age archaeologists (Lombard et al 2012).

The Silver Leaves ceramics, a facsimile of the Urewe Tradition, portray the earliest agriculturalists in Southern Africa. Mzonjani had taken the place of Silver Leaves by the year 450. By this period, agriculturalists had spread onto the coastal region of what is now KwaZulu-Natal, reaching around 100 km south of Durban, according to the distribution of Mzonjani pottery. This correlation does not apply to the larger ore reserves further inland because the majority of Mzonjani sites are located within six kilometers of the coastline.

In KwaZulu-Natal, the earliest agricultural sites date from approximately AD 400 and 550. All of them are within 15 kilometers of the coast and near to iron ore sources. Agriculturists moved into the KwaZulu-Natal valleys around 650 when climatic conditions improved, where they established themselves along to rivers in savanna or bushveld settings. The manufacturing of metal was important since it gave the implements for farming and hunting. The data shows that metalworkers were present in practically every village, even those that were far from ore sources.

In KwaZulu-Natal, the Kalundu series came to an end in the middle to late 11th century, and the Blackburn facies took its place. Between Ntshekane and Blackburn, there is a clear stylistic divide that has traditionally been seen as denoting major socioeconomic shifts at the beginning of the second millennium. According to Huffman's argument (Huffman 2007), the entrance of Nguni speakers from East Africa provides the greatest explanation for the break in pottery tradition.

There are known Blackburn sites along the coastal region to the north and south of Durban. According to the archives of the KwaZulu-Natal Museum, similar material can be found in Richards Bay, north of the Mhlatuze lagoon. In KwaZulu-Natal, the Blackburn facies evolved into Moor Park, which includes dates ranging from AD 1300 to roughly AD 1650–1700.

6.0 HISTORICAL BACKGROUND

The known historical events which occurred in this area include:

- ➔ The Battle of Tugela which was fought on the slopes of Ndongakasuka in 1838 between a group of settlers from Port Natal under John Cane and Robert Biggar, and an impi of Dingane's forces. King Dingane sent forces to eThekwini to destroy the settlers, but they took refuge in their ships, and were not attacked.
- ➔ The Battle of Ndongakasuka followed in 1856, and was fought between King Mpande's sons Cetshwayo and Mbuyazwe to contest the right of succession to the Zulu throne, provoked by colonial interests.
- ➔ Deteriorating relations between King Cetshwayo and the colonial authorities resulted in the Ultimatum given to King Cetshwayo's izinduna on 11 December 1878 at the Ultimatum Tree on the banks of the Tugela in the eNdongakusuka Municipality area. This led to the invasion of the Kingdom of KwaZulu on 22 January 1879, and the start of the Anglo - Zulu War, which saw the epic battles which have become part of world history.
- ➔ Fort Tenedos was built during the initial phases of the Anglo-Zulu war. Located on the northern bank of Tugela River. The site of this sort is best viewed from Fort Pearson, which is part of the Harold Johnsons Nature Reserve

The Goqokazi area is part of a rich historical past, which in addition to many other events and stories such as the history of the Dunn family at Mangethe. Great battles have been fought by the Zulus against the British in this area through the involvement of King Cetshwayo. Then there is the legacy of the Scottish immigrant, John Dunn, and his 48 Zulu wives and 117 children. Also, culturally significant landmarks such as the Ultimatum Tree being located on the banks of the Thukela River. Goqokazi is part of Inanda Township which is one of the original townships in the eThekwini Metropolitan Municipality. In the 1600s Inanda Township was nothing more than an oasis for the few local Indigenous farmers. Until in the late 1700s when white settlers arrived in the area.

Then in the 1800s, In 1936, Indian farmers joined life in Inanda. They lived harmoniously with their African counterparts in the area. In 1951, July 7, the then government introduced the Group Areas Act, which meant more and more Black people moved into Inanda Township. However, with no proper infrastructure from town-planning, housing, schools, clinics, roads, sanitation, and no water system. Between 1984-1987, there were serious political and racial clashes/riots between the Indian & African communities.

Which drove away all Indian occupants to nearby areas such as Verulam, KwaZulu-Natal, Phoenix, Durban, and Ottawa, KwaZulu-Natal (Wikipedia December as listed 2019).

Table 2: Significance of Cultural Landscape Impacts

Assessment of significance of the cultural landscape impacts			Landscape receptor sensitivity		
			High	Medium	low
□ Red cells represent significant adverse impacts □ Yellow cells represent significant beneficial impacts □ Blue cells represent impacts that are not significant			Landscape with National heritage significance Status sites and cultural Landscapes with Provincial heritage Significance Status	Regional or Local Significance Heritage sites valued characteristics reasonably tolerant of changes of the type proposed.	A relatively unimportant cultural landscape with few features of value or interest, potentially tolerant of substantial change of the type proposed.
Magnitude of landscape impact	Major adverse	Significant adverse changes, over a significant area, to key characteristics or features or to the landscape's character or distinctiveness for more than 2 years	High adverse significance	High/Medium adverse significance	Medium adverse significance
	Moderate adverse	Noticeable but not significant adverse changes for more than 2 years or significant adverse changes for more than 6 months but less than 2 years, over a significant area, to key characteristics or features or to the landscape's character or distinctiveness.	High/Medium adverse significance	Medium adverse significance	Low adverse significance
	Slight adverse	Noticeable adverse changes for less than 2 years, significant adverse changes for less than 6 months, or barely discernible adverse changes for any length of time.	Medium adverse significance	Low adverse significance	Neutral
	Neutral	Any change would be negligible, unnoticeable or there are no predicted changes.	Neutral	Neutral	Neutral
	Slight benefit	Noticeable beneficial changes for less than 2 years, significant beneficial changes for less than 6 months, or barely discernible beneficial changes for any length of time.	Medium beneficial significance	Low beneficial significance	Neutral
Goqokazi Cultural landscape			Regional or Local Significance Heritage sites valued characteristics reasonably tolerant of changes of the type proposed.		
Proposed development site cultural landscape			A relatively unimportant cultural landscape with few features of value or interest, potentially tolerant of substantial change of the type proposed		

7.0 DISCUSSION OF FINDINGS

The field assessment involved a meticulous site walkthrough, conducted on foot, to gather detailed observations and identify any notable features. Furthermore, a vehicle drive was carried out to cover the accessible areas of the site. The field survey for the proposed development project identified a place of worship which constitutes living heritage and far as the heritage legislative laws in South Africa are concerned. The place of worship belongs to the Nazareth Baptist Church.

The Nazareth Baptist Church (Alternatively called "The Nazarite Church" "iBandla lamaNazaretha") is the second largest African initiated church based in South Africa, founded in 1910. It reveres Shembe as a prophet sent by God to restore the teachings of Moses, the prophets, and Jesus. Members are Sabbath-observers and avoid pork, smoking, and premarital sex. It was divided into two groups after the 1976 death of Johannes Galilee Shembe. The larger group was led by Bishop Amos Shembe until his death in 1995, while Rev. Londa Shembe led the smaller group. The Shembe church, captured in the attached photographic image below, is relevant for consideration during the planning and execution of the sewer pipeline project.



Figure 3: View of the Nazareth Baptist Church/ Shembe church

Besides the Nazareth Baptist Church within the vicinity of the sewer pipeline project, no site, features or objects of cultural significance exists within the actual proposed sewer pipeline alignment. The survey

therefore notes that there would be no definite or direct impact on cultural heritage resources as a result of the proposed development. This report is an independent view and makes recommendations to Amafa Research and institute based on its findings. The authority will consider the recommendations and make a decision based on conservation principles.

Given below is a pictographic presentation of the proposed development site;



Figure 4: View of the starting point the sewer collector, visible is the Ohlanga River and the bridge structure



Figure 5: View of shows the type of settlements in the area



Figure 6: View of a portion of the road the sewer collector will be installed



Figure 7: Another portion of the road the sewer collector will be installed



Figure 8: View of a river stream and bridge along the proposed sewer pipeline route



Figure 9: View of the another road portion were the sewer pipeline will followed coupled with electric power lines traversing across the proposed development site.

10.0 CONCLUSIONS

The field survey for the proposed development project identified a place of worship which constitutes living heritage and far as the heritage legislative laws in South Africa are concerned. The place of worship belongs to the Nazareth Baptist Church. This establishment, captured in the attached photographic image, is relevant for consideration during the planning and execution of the sewer pipeline project.

Besides the Nazareth Baptist Church within the vicinity of the sewer pipeline project, no site, features or objects of cultural significance exists within the actual proposed sewer pipeline alignment. The survey therefore notes that there would be no definite or direct impact on cultural heritage resources as a result of the proposed development. This report is an independent view and makes recommendations to Amafa Research and institute based on its findings. The authority will consider the recommendations and make a decision based on conservation principles.

1 1.0 RECOMMENDATIONS

- (i) The Shembe Church / Nazareth Baptist Church should not be disturbed by the proposed development. If the developer wishes to extend the scope of works outside of the proposed development alignment, consultations should be carried out with the church leaders to map the way forward.
- (ii) In the event that any cultural heritage resources are discovered operations exposing archaeological and historical residues, including modern graves, should cease immediately pending an evaluation by the heritage authorities.
- (iii) The potential impact of the development on archaeological resources is **LOW**, therefore a field survey or further mitigation or conservation measures are necessary if cultural heritage resources are found (according to SAHRA protocol).
- (iv) A Chance Finds Procedure should be implemented and a qualified archaeologist must be called on site if cultural heritage resources are found during construction. The following indicators of unmarked sub-surface sites could be encountered;
 - Bone concentrations, either animal or human
 - Ceramic fragments such as pottery shards either historic or pre-contact
 - Stone concentrations of any formal nature

Reasoned Opinion: This project directly improves the lively hoods of South Africans and it is the reasoned opinion of the author of this report, that the proposed project is acceptable. Tsimba archaeological Footprints would therefore like to request Amafa Research and Institute to exercise their discretion and offer a conditional approval for the project.

12.0 REFERENCES

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APPENDIX A: DEFINITION OF TERMS ADOPTED IN THIS HIA

- The terminology adopted in this document is mainly influenced by the NHRA of South Africa (1999) and the Burra Charter (1979).

Adaptation: Changes made to a place so that it can have different but reconcilable uses.

Artefact: Cultural object (made by humans).

Buffer Zone: Means an area surrounding a cultural heritage which has restrictions placed on its use or where collaborative projects and programs are undertaken to afford additional protection to the site.

Co-management: Managing in such a way as to take into account the needs and desires of stakeholders, neighbours and partners, and incorporating these into decision making through, amongst others, the promulgation of a local board.

Conservation: In relation to heritage resources, includes protection, maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance as defined. These processes include, but are not necessarily restricted to preservation, restoration, reconstruction and adaptation.

Contextual Paradigm: A scientific approach which places importance on the total context as catalyst for cultural change and which specifically studies the symbolic role of the individual and immediate historical context.

Cultural Resource: Any place or object of cultural significance

Cultural Significance: Means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance of a place or object for past, present and future generations.

Feature: A coincidental find of movable cultural objects.

Grading: The South African heritage resource management system is based on a grading system, which provides for assigning the appropriate level of management responsibility to a heritage resource.

Heritage Resources Management: The utilization of management techniques to protect and develop cultural resources so that these become long term cultural heritage which are of value to the general public.

Heritage Resources Management Paradigm: A scientific approach based on the Contextual paradigm, but placing the emphasis on the cultural importance of archaeological (and historical) sites for the community.

Heritage Site Management: The control of the elements that make up the physical and social environment of a site, its physical condition, land use, human visitors, interpretation etc. Management may be aimed at preservation or, if necessary at minimizing damage or destruction or at presentation of the site to the public.

Historic: Means significant in history, belonging to the past; of what is important or famous in the past.

Historical: Means belonging to the past, or relating to the study of history.

Maintenance: Means the continuous protective care of the fabric, contents and setting of a place. It does not involve physical alteration.

Object: Artefact (cultural object)

Paradigm: Theories, laws, models, analogies, metaphors and the epistemological and methodological values used by researchers to solve a scientific problem.

Preservation: Refers to protecting and maintaining the fabric of a place in its existing state and retarding deterioration or change, and may include stabilization where necessary. Preservation is appropriate where the existing state of the fabric itself constitutes evidence of specific cultural significance, or where insufficient evidence is available to allow other conservation processes to be carried out.

Protection: With reference to cultural heritage resources this includes the conservation, maintenance, preservation and sustainable utilization of places or objects in order to maintain the cultural significance thereof.

Place : Means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.

Reconstruction: To bring a place or object as close as possible to a specific known state by using old and new materials.

Rehabilitation: The repairing and/ or changing of a structure without necessarily taking the historical correctness thereof into account.

Restoration: To bring a place or object back as close as possible to a known state, without using any new materials.

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artefacts, found on a single location.

Sustainable: Means the use of such resource in a way and at a rate that would not lead to its long-term decline, would not decrease its historical integrity or cultural significance and would ensure its continued use to meet the needs and aspirations of present and future generations of people

APPENDIX B: LIKELIHOOD / PROBABILITY OF IMPACT OCCURRING

	Description	Criteria	Score
Probability	Almost Certain	The impact is expected to occur; Consequence is likely to be of a high frequency; > 90% chance.	3
	Don't Know		
	Highly Likely	The impact will probably occur or has occurred elsewhere before; Likely occurrence/consequence within a 12-month period; > 50% chance of occurrence in this period.	3
	Likely	The impact will occur under certain circumstances; Likely occurrence/consequence within a 12-month period; Approx. 30 - 50% chance of occurrence this period.	2
	Unlikely	The impact could occur under certain circumstances; Consequence could occur within a one-to-five-year timeframe; < 30% chance of occurrence in this period.	
	Rare	Consequence may occur in exceptional circumstances; Consequence has rarely occurred in the industry and is not expected in the life of the project; < 5% chance of occurrence.	1

The risk assessment matrix is used to determine the overall significance of environmental and social impacts, based on the overall consequence and probability of each impact.

The assessment approach considers the impact prior to any potential management controls or mitigation measures, and then assesses the residual impact following the implementation of controls and mitigation strategies.