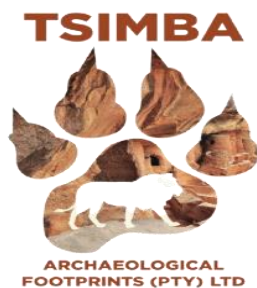


PHASE 1 DESKTOP

CULTURAL HERITAGE IMPACT ASSESSMENT REPORT APPLICATION FOR ENVIRONMENTAL AUTHORISATION

THE PROPOSED CONSTRUCTION OF LITTLEFLOWER TO FAIRVIEW ROAD WARD- 04 IN THE OF THE UBUHLEBEZWE LOCAL MUNICIPALITY

DEVELOPED BY:



DEVELOPED FOR :



DECEMBER 2022

The cover page of the report is a light beige rectangle with a dark brown border. It features the Tsimba logo on the left side. To the right of the logo, the text "AUTHORED BY ROY MUROYI" is written in a dark brown, serif font. Below this, the text "Tsimba Archaeological Footprints (Pty) Ltd" is written in a smaller, dark brown, serif font. Further down, the address "74 Loyeday Street , Johannesburg Gauteng, 2000" is written in a dark brown, serif font. Below the address, the email "Email: rmuroyi23@gmail.com" is written in a dark brown, serif font. At the bottom of the cover page, the website "info@tsimba-arch.co.za" is written in a dark brown, serif font. A small globe icon is positioned to the right of the email address. At the bottom center of the cover page, there is a small illustration of a spear with a blue tip and a brown shaft.


TSIMBA-ARCH.CO.ZA

AUTHOR'S CREDENTIALS

The report was authored by Mr. Roy Muroyi (Archaeologist) holds a Masters Degree in Heritage and another Master's Degree in CDS both from the University of Witwatersrand. Mr. Muroyi is also a holder of an Honours Degree, Archaeology, Cultural Heritage and Museum Studies (Midlands State University). Mr Muroyi has over eight years of industry experience, after leaving the Department of National Museums and Monuments of Botswana where he worked as an Archaeological Impact assessment adjudicating officer Mr. Muroyi then moved to South Africa where has been involved in a range of Cultural Resources Management (CRM) companies before starting Tsimba Archaeological Footprints. He has so far exhumed over 500 historical burials as a professional archaeologist and carried out over a 100 Heritage Impact Assessments.

COPYRIGHT

This report including all its related data, project results and recommendations forming part of the submission and any other subsequent reports or project documents such as the inclusion in the Environmental Impact Assessment (EIA) document for which it is intended for totally vest with the author(s) Mr. Roy Muroyi and the company he represents Tsimba Archaeological Footprints (Pty) Ltd and the client Hanslab Environmental Consultants (Pty) Ltd. No part of this publication may be reproduced distributed or transmitted in any form or by any means including photocopying recording, or other mechanical methods without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other non-commercial uses permitted by copyright.

Author(s)	Signature(s)
Principal Heritage Specialist Mr. Roy Muroyi	
Accreditations	<ul style="list-style-type: none"> ▪ Association of Southern African Professional Archaeologists (ASAPA) 453 ▪ Association of Professional Heritage Practitioners (APHP) C0115 ▪ KZN Amafa and Research Institute

DOCUMENT INFORMATION

DOCUMENT INFORMATION ITEM	DESCRIPTION
Proposed development and location	The proposed development is the constructing of the Littleflower to Fairview Access Road for the community of Fairview in ward 4 of Ubuhlebezwe Municipality in Ixopo Town.
Purpose of the study	To carry out a Desktop Phase 1 Heritage Impact Assessment to determine the presence/absence of archaeological assess their archaeological significance in terms of the NHRA of 1999 and SHARA guidelines.
Topography	See Below
Municipalities	Ubuhlebezwe Municipality
Predominant land use of surrounding area	Residential area
Applicant	Ubuhlebezwe Local Municipality
Site Coordinates	<i>See Table 1-4 Below</i>
Client Details	Hanslab Environmental Consultants (Pty) Ltd
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
Author (s)	Mr. Roy Muroyi (Archaeology and Heritage Specialist)

EXECUTIVE SUMMARY

The Applicant Ubuhlebezwe Local Municipality has through being funded by the Municipal Infrastructure Grant (MIG) identified to provide basic and efficient services by constructing the Littleflower to Fairview Access Road for the community of Fairview in ward 4 of Ubuhlebezwe Municipality in Ixopo Town. To achieve this, they have appointed BI Infrastructure Consultants to provide consulting engineering services for the design and management of the Little flower to Fairview Access Road project.

Hanslab (Pty) Ltd (hereafter referred to as “the EAP”) have been appointed by BI Infrastructure Consultants as the independent Environmental Assessment Practitioner (EAP) to undertake the Basic Assessment for the proposed development Little flower to Fairview

A review of a range of cultural heritage information was undertaken as part of the heritage assessment process. This review included archival information, historical housing and planning documents; thesis's and research documents on apartheid and architecture as well as unpublished manuscripts speaking to the general cultural landscape of the proposed development area. The National heritage databases, lists and registers, other documented information (including heritage impact assessment reports and a range of ethno-historic and archaeological sources at both local and regional levels) were also consulted for information regarding other heritage resources within the vicinity of the Ixopo area.

The scope of work for this Desktop Heritage Impact Assessment was to assess written materials and manuscripts about the broader cultural landscape to be affected by the proposed development. The proposed development area exceeds 5000m² therefore it triggers section 38(1) (a) of the National Heritage Resources Act (NHRA- Act No. 25 of 1999) (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as— The construction of a linear development (road, wall, power line canal etc.) exceeding 300m in length. The objective of the report is to fulfil the requirements of SAHRA in the in terms of Section 38(1) of the NHRA.

Given below are the conclusions made from our literature review of the broader Ixopo area:

- ➔ The greater Ixopo area, has been relatively well surveyed for archaeological heritage sites by the KwaZulu-Natal Museum, post-graduate students from the Universities of Cape Town and the Witwatersrand, and subsequently by private heritage consultants in the last few years.

- ➔ The available evidence, as captured in the Amafa and the KwaZulu-Natal Museum heritage site inventories (therefore, high confidence in data), indicates that this broader Ixopo area contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions.
- ➔ Eighty heritage sites occur within the broader Ixopo area. These range from Early Stone Age, Middle Stone Age, and Later Stone Age to Early Iron Age, Middle and Later Iron Age sites as well as historical sites relating to the rise of the Zulu Kingdom and the subsequent colonial period.
- ➔ Close to the Ixopo area exists one notable Middle Stone Age site, i.e. Segubudu near Stanger have been excavated in the last two decades by the University of the Witwatersrand and yielded impressive archaeological stratigraphies relating to the period associated with the origins of anatomically modern people (Mitchell 2002). The highly reliable KZN Museum archaeological data base also indicates seven archaeological sites in the near vicinity of the project area.

Reasoned Opinion specific to the study area

It is the reasoned opinion of the author of this report that a desktop survey is adequate for this proposed development. The proposed development site is already disturbed and no sub surface finds can be made due to the disturbances. The study area is not known to have any archaeological sites, cultural heritage resources or any significant historical significance. The undertaken archaeological and historical background study revealed that there are no archaeological sites within the immediate vicinity of the proposed development site.

The potential impact of the development on cultural heritage 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). A Phase 1 HIA (with Field Survey) and or mitigation are recommended 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

TABLE OF CONTENTS

AUTHOR'S CREDENTIALS	2
COPYRIGHT	2
DOCUMENT INFORMATION.....	3
EXECUTIVE SUMMARY	4
TABLE OF CONTENTS	6
FIGURES AND TABLES	7
ABBREVIATIONS	8
GLOSSARY	9
1.0 INTRODUCTION	10
2.0 DESCRIPTION OF THE RECEIVING ENVIRONMENT	13
3.0 METHODOLOGY	15
4.0 LEGISLATIVE FRAMEWORK.....	17
5.0 CULTURAL LANDSCAPE ASSESSMENT	18
7.0 REFERENCES	28
APPENDIX A: DEFINITION OF TERMS ADOPTED IN THIS HIA	29
APPENDIX B: LITTLE FLOWER TO FAIRVIEW ROAD UPGRADE.....	31
APPENDIX C: LITTLE FLOWER TO FAIRVIEW ROAD UPGRADE DETAILS.....	32

FIGURES AND TABLES

Figure 1: Aerial view of Site 1 (Google Earth, 2021) 14

Table 1: Site 1 Description 13

ABBREVIATIONS

Acronyms	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
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	<ul style="list-style-type: none"> ▪ Something accomplished, esp. by valour, boldness, or superior ability
Aesthetic	<ul style="list-style-type: none"> ▪ Relating to the sense of the beautiful or the science of aesthetics.
Community	<ul style="list-style-type: none"> ▪ All the people of a specific locality or country
Culture	<ul style="list-style-type: none"> ▪ The sum total of ways of living built up by a group of human beings, which is transmitted from one generation to another.
Cultural	<ul style="list-style-type: none"> ▪ Of or relating to culture or cultivation.
Diversity	<ul style="list-style-type: none"> ▪ The state or fact of being diverse; difference; unlikeness.
Geological (geology)	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Intensified; exceeding the common degree or measure; strong; intense, energetic
Importance	<ul style="list-style-type: none"> ▪ The quality or fact of being important.
influence	<ul style="list-style-type: none"> ▪ Power of producing effects by invisible or insensible means.
Potential	<ul style="list-style-type: none"> ▪ Possible as opposed to actual.
Integrity	<ul style="list-style-type: none"> ▪ The state of being whole, entire, or undiminished.
Religious	<ul style="list-style-type: none"> ▪ Of, relating to, or concerned with religion.
Significant	<ul style="list-style-type: none"> ▪ important; of consequence
Social	<ul style="list-style-type: none"> ▪ Living, or disposed to live, in companionship with others or in a community, rather than in isolation.
Spiritual	<ul style="list-style-type: none"> ▪ Of, relating to, or consisting of spirit or incorporeal being.
Valued	<ul style="list-style-type: none"> ▪ Highly regarded or esteemed

1.0 INTRODUCTION

1.1 Project Background

Tsimba Archaeological Footprints (Pty) Ltd was requested Hanslab Environmental Consultants (Pty) Ltd to conduct a Heritage Impact Assessment (HIA) for the proposed Little flower to Fairview Access Road for the community of Fairview in ward 4 of Ubuhlebezwe Municipality in Ixopo Town. The project will include inter alia the following works:

- ➔ Construction of a portal culvert bridge with a facility for pedestrians consist of a 3No. of barrel of precast box culvert units of 1.8m x 1.8m.
- ➔ Construction of approximately 500m long and 5m wide gravel access road
- ➔ Construction of stormwater drainage facilities along the road and within the vicinity of the bridge to improved drainage
- ➔ Installation of gabions to protect the river banks from erosion
- ➔ Road signage where required

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. 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 a field research.

1.2 The Terms of Reference for 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 practice of performing an impact analysis is not new, however. As Clark (2001, p. 22) observes, "impact analysis is not a particularly special, unusual or complex process;

it is simply a codification of the basic analysis undertaken by any competent conservation adviser". The HIA exists to:

- ➔ Review existing theories and models of cultural heritage resources interpretation and how to develop effective methods of archaeological interpretation for future generations to assist and assist SAHRA in their deliberations;
- ➔ Clarify the extent and ways in which current site context archaeological findings may affect the interpretation of cultural sites for present and future generations;
- ➔ Shed light on the potential challenges and opportunities brought about by the existence of archaeological sites and other conflicting views of the values of a site;
- ➔ Set out the ethical considerations on the interpretation and preservation of archaeological findings given the varied range of approaches available;
- ➔ Explain that the issue of archaeological preservation and conservation as relevant not only National Heritage or Provincial Heritage properties, but also for any significant cultural site;
- ➔ Focus on best practice of interpretation and preservation of archaeological findings.

1.3 The aim: - There are two interlinked aims for this HIA. The first is to identify and document cultural heritage sites, cultural resources, sites associated with oral histories (intangible heritage), graves, cultural landscapes, and any structures of historical significance (tangible heritage) that may be affected within the development footprint. The second aim of this HIA is to assess the archaeological significance of the findings and make recommendations based on the best archaeological practice of interpretation and preservation of archaeological findings

1.4 The findings: - The findings of this report have been informed by desktop data review and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the proposed project. This study was conducted before any activities took place on the proposed development area. The impact assessment study also includes detailed recommendations on how to mitigate and manage negative impacts while enhancing positive effects on the project area.

1.5 Legislative Frame works used

- ➔ The Australia ICOMOS charter for places of cultural significance (the Burra Charter).
- ➔ The principles for the analysis, conservation and structural restoration of architectural heritage (2003)
- ➔ The National Heritage and Resources Act of South Africa No.25 of 1999

- ➔ The Athens Charter, the Restoration of Historic Monuments (1931)
The International Council on Monuments and Sites (1965)
- ➔ The Washington Charter (1987)
- ➔ The International Charter for the Conservation and Restoration of Monuments and sites (the Venice charter 2006).
- ➔ The Organisation of World Heritage Cities (1993).

1.6 Desktop HIA Scope of works

The Proposed project scope of the activities is given in the table below;

- **Desktop study**

Conduct a full desktop study where information on the area is collected to provide a background setting of the archaeology that can be expected in the area.

- **Reporting**

Report on the identification of anticipated and cumulative impacts that the operational units of the proposed project activity may have on the identified heritage resources for all 3 phases of the project; i.e., construction, operation and decommissioning phases. Consider alternatives, should any significant sites be impacted adversely by the proposed project. Ensure that all studies and results comply with Heritage legislation and the code of ethics and guidelines of ASAPA.

- **Reasoned Opinion**

To assist the developer in managing the discovered heritage resources in a responsible manner, and to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

2.0 DESCRIPTION OF THE RECEIVING ENVIRONMENT

2.1 Location

Table 1: Site 1 Description

The project is located within Ward 4 under the Fairview community. The co-ordinates of the road start and road end of each road segment are					
Length	630m				
Road 1	<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">Start</th> <th style="text-align: center;">End</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">30° 09' 29" S 30° 4' 18" E</td> <td style="text-align: center;">30° 9' 39" S 30° 04' 26" E</td> </tr> </tbody> </table>	Start	End	30° 09' 29" S 30° 4' 18" E	30° 9' 39" S 30° 04' 26" E
Start	End				
30° 09' 29" S 30° 4' 18" E	30° 9' 39" S 30° 04' 26" E				
Land Use	Previously Agricultural activities however is now used for residential purposes.				
Soil and basic geology	The roads are in a relatively developed area with mostly moderate to steep slopes. The area is underlain by the sediments of the Karoo Supergroup with the mudstones and lesser sandstones of the Adelaide and Tarkastad Subgroups (Beaufort Group) dominant and some Ecca Group Shale. Sandy and loam sandy soils (of marine origin) occur with mostly sand dunes in the east. Four different formations are found outcropping in the area, Basement Granites, Natal Group Sandstone, Berea Red Sand and Quaternary Sand.				



Figure 1: Aerial view of Site 1 (Google Earth, 2021)

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 broader Ixopo 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

3.3 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) and the NHRA of 1999
- ✚ 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

This HIA is informed and conducted to fulfil the requirements of the National Heritage Resources Act (No 25 of 1999) 38(1) (a) of the National Heritage Resources Act (NHRA- Act No. 25 of 1999) (1) Subject to the provisions of subsections (7), (8) and (9), to any person who intends to undertake a development categorised as—any development or other activity which will change the character of a site—(i) exceeding 5 000 m² in extent; and 4) No person may, without a permit issued by the responsible heritage resources authority— (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite.

4.1 Scope of the Phase 1 HIA (Desktop)

A Phase 1 HIA is a pre-requisite for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of heritage specialist input is to:

- Identify any heritage resources, which may be affected within the broader cultural landscape;
- Assess the nature and degree of significance of such resources;
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;
- Assess the negative and positive impact of the development on these resources; and
- Make recommendations for the appropriate heritage management of these impacts.

4.2 Cultural Heritage Resources Management Policy Objectives

- a. To preserve representative samples of the National archaeological resources for the scientific and educational benefit of present and future generations;
- b. To ensure that development proponents consider archaeological resource values and concerns in the course of project planning; and
- c. To ensure where decisions are made to develop land, the proponents adopt one of the following actions:
 - ➔ avoid archaeological sites wherever possible;
 - ➔ implement measures which will mitigate project impacts on archaeological sites; or
 - ➔ Compensate the local communities for unavoidable losses of significant archaeological value.

5.0 CULTURAL LANDSCAPE ASSESSMENT

5.1 Introduction

In interpreting the cultural heritage significance of any particular landscape, recent heritage management research has shown that it is important to have a clear framework of criteria to assist in consistent assessment of the different host cultural landscapes that occur within the broader proposed development area falls within. These will be based on established practice from other works that have been carried out within the existing cultural landscape. It is likely to be based on a wide range of criteria (archaeological background of the area, historical background of the area, the settlement pattern in the area and degree of apparent human influence, among others) and it will define the degree of significance of the existing cultural landscape.

The question of the value of cultural landscape receptors will need careful consideration. By its very nature the work is concerned with designated cultural landscapes of national value for their cultural heritage values but the cultural landscapes within designated areas do nevertheless vary in their character and quality. It may therefore be appropriate to make a fine-grained assessment of the value of the cultural landscape character areas affected in the designated area. This will draw on statements about the special qualities contributing to the cultural heritage value of individual designated areas, on established criteria such as landscape quality and condition, scenic quality, historic/ heritage value, perceptual aspects and associations, and on other information such as the extent and setting of heritage assets including registered cultural heritage sites, burial grounds and archaeological sites.

5.2 Methodology

The methodology employed in carrying out the cultural landscape assessment of the proposals for the proposed development has been drawn from best practice guidelines and the Landscape Institute and the Institute of Environmental Management & Assessment's "Guidelines for Landscape and Visual Impact Assessment" Second Edition (Spon Press 2002). The aim of these guidelines is to set high standards for the scope and contents of landscape and visual assessments and to establish certain principles that will help to achieve consistency, credibility and effectiveness in cultural landscape impact assessment. Guidance is contained in this publication on some approaches and techniques, which have been found to be effective and useful in practice by landscape professionals. However, the guidelines are not intended as a prescriptive set of rules, and have been adapted to the specific project.

Stage 1: Through a desktop and archival research process the heritage specialist is required to identify those landscape character types/areas of National, Provincial and Regional heritage significance which may be affected by the proposed development. The specialist should also locate information relevant to assessing landscape value for example written historical statements of special qualities.

Stage 2: Initial identification of potential effects the proposed development will bring to the broader regional area and design options to mitigate potential effects;

Stage 3: Design the development taking account of identified potential mitigation measures to avoid negative effects.

Stage 4: Assessment of effects the proposed developments has on the broader cultural landscape and considers its residual effects;

Stage 5: Fitting the cultural landscape assessment into the whole HIA.

5.3 Archaeological background

The Kwa-Dukuza area is a cultural landscape where present Stone Age, Iron Age and Historical period sites are likely to contribute the bulk of the cultural heritage of the region (see Huffman, 2007). Archaeological sites recorded in the project region confirms the existence of Stone Age sites that conform to the generic SA periodization split into the Early Stone Age (ESA) (2.5 million years ago to 250 000 years ago), the Middle Stone Age (MSA) (250 000 years ago to 22 000 years ago) and the Late Stone Age (LSA) (22 000 years ago to 300 years ago). Stone Age sites in the region are also associated with rock painting sites. Cave sites also exist in the broader landscape.

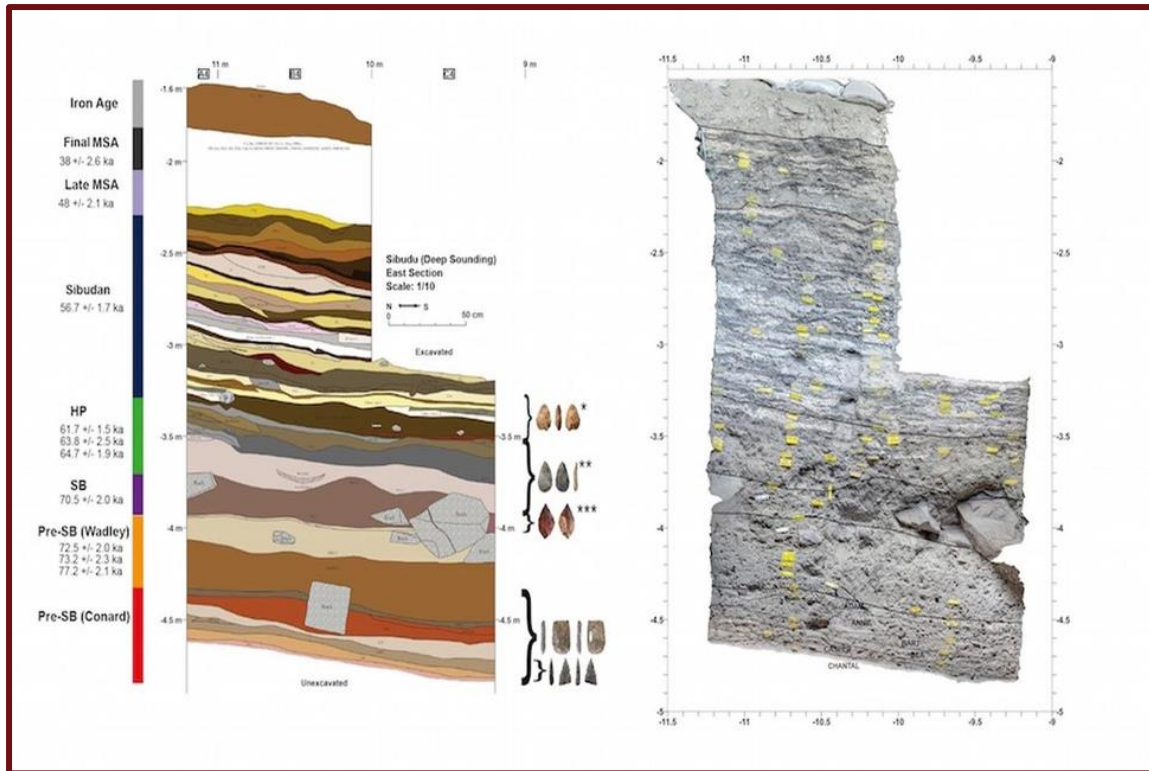


Figure 3: An archaeological excavation trench showing the different layers of Stone Age periods taken from Sibidu cave. Notice the different dates given to the periods (Credit: Rice 1987)

The available evidence, as captured in the Amafa and the KwaZulu-Natal Museum heritage site inventories (therefore, high confidence in data), indicates that this area contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions. Eighty heritage sites occur within this area. These range from Early Stone Age, Middle Stone Age, and Later Stone Age to Early Iron

Age, Middle and Later Iron Age sites as well as historical sites relating to the rise of the Zulu Kingdom and the subsequent colonial period. One notable Middle Stone Age site, i.e. Segubudu near Stanger have been excavated in the last two decades by the University of the Witwatersrand and yielded impressive archaeological stratigraphies relating to the period associated with the origins of anatomically modern people (Mitchell 2002).

The highly reliable KZN Museum archaeological data base also indicates seven archaeological sites in the near vicinity of the project area. These include a midden with Middle Stone Age and later Stone Age material to the immediate south of the study area. Closer to the coast archaeologists have also identified two Early Iron Age sites, and four middens with Later Iron Age material.

Around 1 700 years ago an initial wave of Early Iron Age People settled along the inland foot of the sand dunes on sandy but humus rich soils which would have ensured good crops for the first year or two after they had been cleared. These early agro-pastoralists produced a characteristic pottery style known as Matola. The Matola people also exploited the wild plant and animal resources of the forest and adjacent sea-shore. The communities seem to have been small groups of perhaps a few dozen slash-and burn cultivators, moving into a landscape sparsely inhabited by Later Stone Age San hunter gatherers. By 1 500 years ago another wave of Iron Age migrants entered the area. Their distinct ceramic pottery is classified to styles known as “Msuluzi” (AD 500-700), Ndongondwane (AD 700-800) and Ntshekane (AD 800-900). Three sites belonging to these periods occur along the banks of the Tugela River to the immediate north of the project area.

Some of these, such as the Ndongondwane and Mamba sites have been excavated by archaeologists (Maggs 1989, p.31; Huffman 2007, p.325-462). Some Early Iron Age potsherds have been located by archaeologists from the then Natal Museum closer to Maphumulo but these sites have not been thoroughly investigated. The greater Kwa Dukuza area is also intimately associated with the rise of the Zulu Kingdom of Shaka in the early 1820's. It is at Stanger where King Shaka had his capital Kwa Dukuza and was murdered by his half-brothers Dingane and Mhlangane. The exact spot of Shaka's death is thought to be where an old mahogany tree now grows in the grounds of the Stanger/Kwa Dukuza municipal offices.

The grain pit where Dingane is thought to have secretly buried Shaka is marked by a large rock in the King Shaka Memorial Garden in the town. The Zulu people erected this memorial during the reign of King Solomon (1913-1932). An interpretative centre has since been added. Also in Stanger near King Shaka's memorial, is a small river known as Shaka's spring. From here, unpolluted water was collected for the king's use. Nearby on the Imbozamo River, was Shaka's Bathing Pool and Shaka's Cave where he would rest after swimming. Not much further off is the famous Execution Cliff where executions were carried out on Shaka's orders (Derwent 2006). The battle of Ndongakusuka, which saw the rise of power of King Cetshwayo in 1856, took place near the mouth of the Tugela River to the immediate north east of the study area.

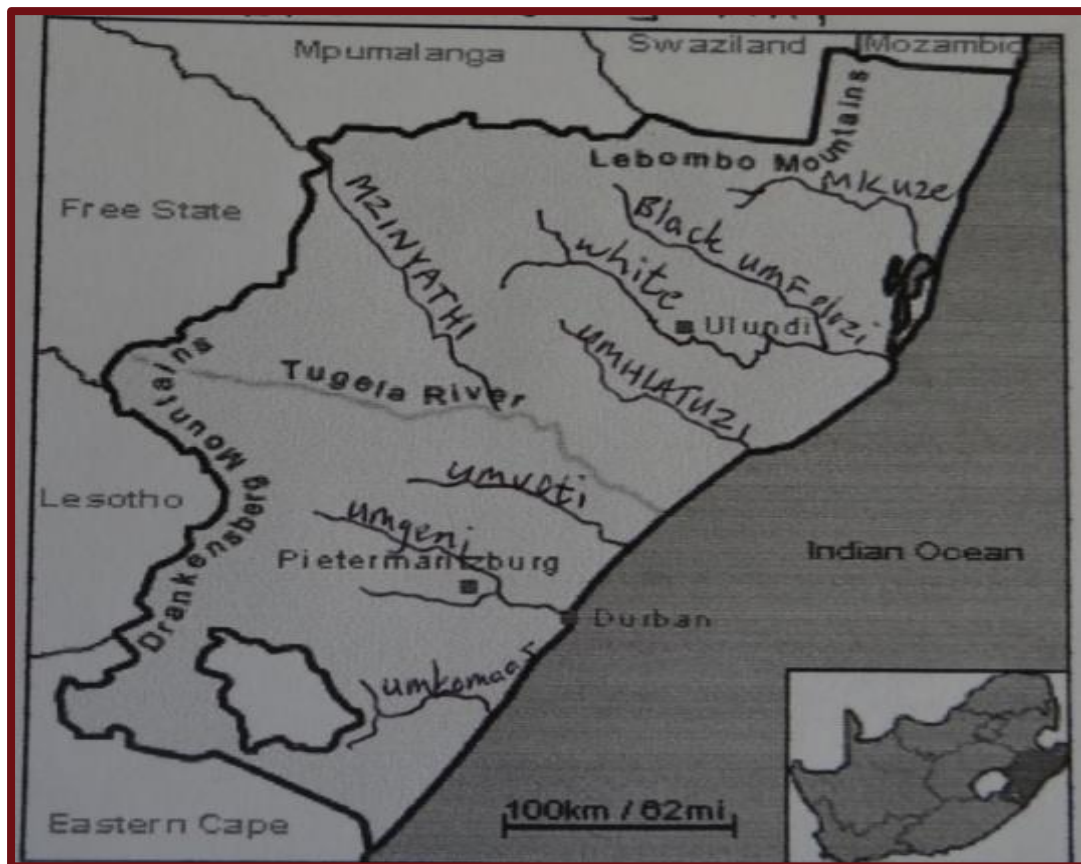


Figure 4: Historical Map showing the jurisdiction of the Zulu nation in 1550 (Map by Tim Brown Tours)

The colonial history of the area starts around 1820 when early English ivory traders established themselves at Port Natal (Durban). Dutch descendants (i.e. Voortrekkers) moved into the area soon after 1834 and established a short lived Boer republic called Natalia. However, by 1845 Natal became a British colony. The Zulus arrived in the area of Durban in the early 1800's meaning they would have not arrived much before the British in the Durban harbour area. Taking into consideration that Durban harbour or Rio De Natal was discovered in 1497 by Vasco De Gama (Portuguese explorer) this means that no Black

African person in South Africa is a true South African or originated in South Africa. The true South Africans as far as I am able to tell are the San (aka the Bushmen) who have lived off the land in South Africa for at least the past 40 000 years. Bushman paintings found in the Drakensberg mountains date back as far as 28 000 years.

In 1879 Zulu-land was invaded by British forces and the area annexed soon thereafter. Colonial buildings dating from the later 19th century as well as subsequent periods abound in the greater Durban and Stanger areas. These, like the archaeological resources of the province, are also protected by heritage legislation.



Figure 5: King Shaka memorial in Kwa-Dukuza

The area also played an important role in the more recent struggle-era history of the country. It was at Groutville, a small village to the south of Stanger/Kwa Dukuza that Chief Albert Luthuli, then president of the African National Congress and Nobel Peace Prize Winner, was based for most of his life (Derwent 2006). His home at Groutville has recently been declared a National Heritage Site and developed into a museum that was officially opened on 21 August 2004. The Luthuli Museum includes the original 1927 home of Chief Albert Luthuli that is situated on 3233 Nokukhanya Luthuli Street. A modern interpretive centre that houses temporary exhibits has also been added to the complex. Set in lovely landscaped gardens, the grounds provide the ideal setting in which to absorb the history and achievements of a man who became the first African to receive the Nobel Prize for Peace. Chief Albert Luthuli was a leader ahead



Figure 6: A portrait of Chief Albert Luthuli



Figure 7: The location of the various battles (British-Zulu War and Anglo-Boer War) that took place near the survey footprint (red are

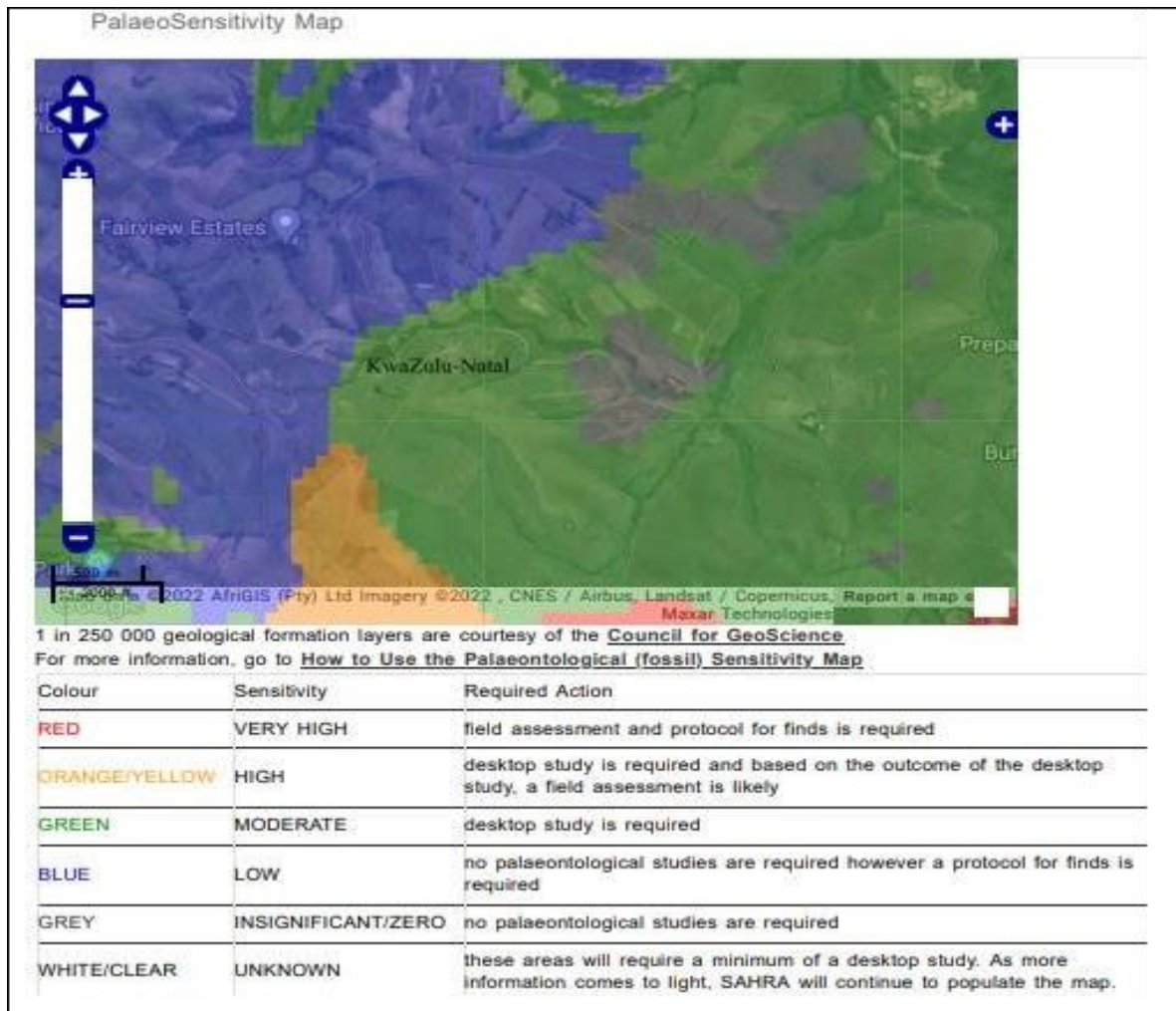


Figure 8:SAHRIS palaeosensitivity map for the site for the proposed development site showing the Paleontological sensitivity of the site to be insignificant to Moderate paleo sensitive. A Desktop Paleontological study is therefore required.

5.4 Significance of Cultural Landscape Impacts

Assessment of significance of the cultural landscape impacts			Landscape receptor sensitivity		
			High	Medium /medium	low
<ul style="list-style-type: none"> 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 Heritagesites 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
Ixopo Cultural landscape			Landscape with National heritage significance Status sites and cultural Landscapes with Provincial heritage Significance Status		

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
---	---

5.4 Conclusions

It is the reasoned opinion of the author of this report that a desktop survey is adequate for this proposed development. The proposed development site is already disturbed and no sub surface finds can be made due to the disturbances. The study area is not known to have any archaeological sites, cultural heritage resources or any significant historical significance. The undertaken archaeological and historical background study revealed that there are no archaeological sites within the immediate vicinity of the proposed development site.

The potential impact of the development on cultural heritage 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). A Phase 1 HIA (with Field Survey) and or mitigation are recommended 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

7.0 REFERENCES

- Beach, D. N. (1980). Migrant Kingdom: Mzilikazi's Ndebele in South Africa.
- Davis Jr, R. H. (1980). R. Kent Rasmussen. Migrant Kingdom: Mzilikazi's Ndebele in South Africa. London: Rex Collings. 1978. Pp. 262.
- Draper, M., & Mare, G. (2003). Going in: The garden of England's gaming zookeeper and Zululand. *Journal of Southern African Studies*, 29(2), 551-569.
- Fowler, K. D. (2008). Zulu pottery production in the lower Thukela basin, KwaZulu-Natal, South Africa. *Southern African Humanities*, 20(2), 477-511.
- Greenfield, H.J., van Schalkwyk, L.O., & Jongsma, T.L. 2000. Surface and subsurface reconnaissance at Ndongondwane: Preliminary results of the 1995–97 field seasons. *Southern African Field Archaeology*, 9, 5–16.
- Loubser, J.H.N. 1993. Ndongondwane: The significance of features and finds from a nineteenth century site on the lower Thukela River, Natal. *Natal Museum Journal of Humanities*, 5, 109– 151.
- Mazel, A.D. 1997. Mzinyashana Shelters 1 and 2: excavation of mid and late Holocene deposits in the eastern Biggarsberg, Thukela Basin, South Africa. *Natal Museum Journal of Humanities* 9: 1-35
- Smith, A. et al 2000. *The Bushmen of Southern Africa: a foraging society in transition*. Cape Town: David Philip
- Watson, H. K. (1996). Short and long term influence on soil erosion of settlement by peasant farmers in KwaZulu Natal. *South African Geographical Journal*, 78(1), 1-6.

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.

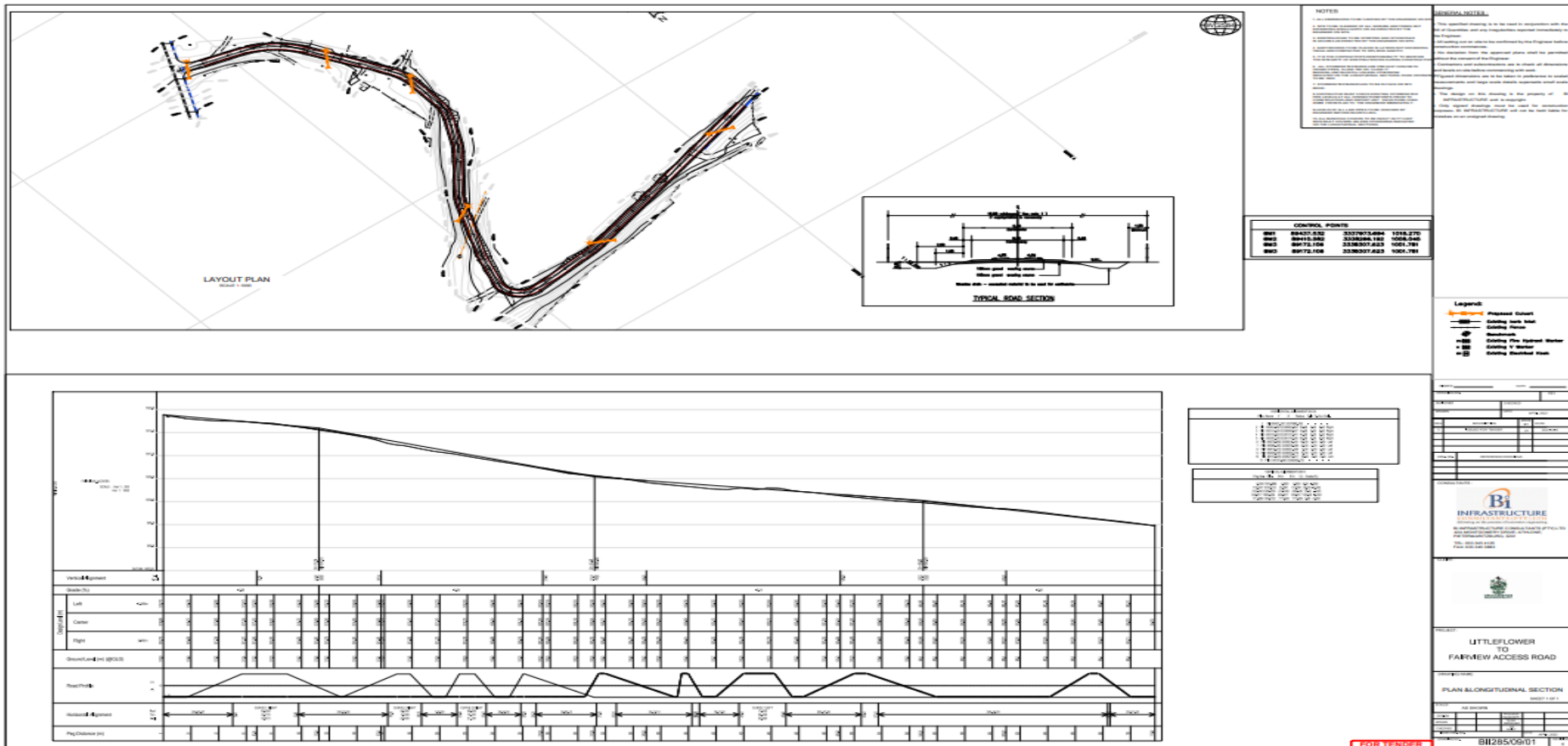
Rehabilitation: The repairing and/ or changing of a structure without necessarily taking the historical correctness thereof into account.

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

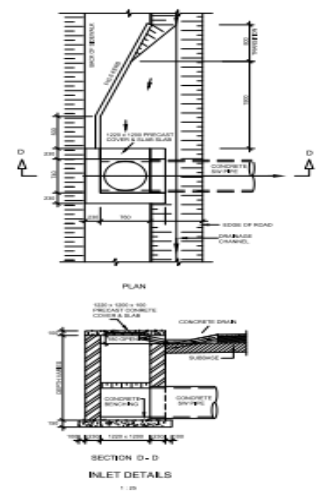
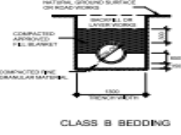
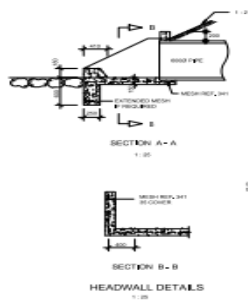
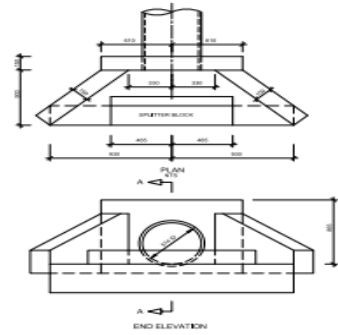
Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artefacts, found on a single location.

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: LITTLE FLOWER TO FAIRVIEW ROAD UPGRADE



APPENDIX C: LITTLE FLOWER TO FAIRVIEW ROAD UPGRADE DETAILS



REVISIONS

NO.	DESCRIPTION	DATE

GENERAL NOTES

This technical drawing is to be read in conjunction with the Bill of Materials and the Project Specifications and the Contract Documents. All dimensions are given in millimeters unless otherwise indicated. All dimensions are to be taken to the center of the member unless otherwise indicated. All dimensions are to be taken to the center of the member unless otherwise indicated. All dimensions are to be taken to the center of the member unless otherwise indicated.

The design of this drawing is the property of BI Infrastructure Limited. All rights reserved. No part of this drawing may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of BI Infrastructure Limited.

BI INFRASTRUCTURE
CONSTRUCTION SERVICES
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

LITTLEFLOWER TO FAIRVIEW ACCESS ROAD

STANDARD DETAILS

PROJECT: **LITTLEFLOWER TO FAIRVIEW ACCESS ROAD**

DATE: **2024-01-01**

BY: **BI INFRASTRUCTURE**

FOR TENDER

BI285/08/02