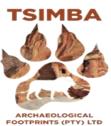


## PHASE 1

ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT APPLICATION FOR ENVIRONMENTAL AUTHORISATION

THE PROPOSED CONSTRUCTION OF EARTH FILLED DAM FOR KZN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, AT ERF NO. 1069, KOKSTAD RESEARCH STATION, WARD 6 OF KOKSTAD LOCAL MUNICIPALITY WITHIN HARRY GWALA DISTRICT





## **DEVELOPED FOR:**





# **JANUARY 2023**



# **AUTHORED BY ROY MUROYI**

Tsimba Archaeological Footprints (Pty) Ltd
74 Loveday Street, Johannesburg Gauteng, 2000
Email: rmuroyi23@gmail.com
info@tsimba-arch.co.za



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 Chikwawa District 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  $\Leftarrow$  Projects with an area over 5000m2  $\Leftarrow$  Heritage buildings/Old buildings (demolitions and alterations)  $\Leftarrow$  Old Bridges (demolitions)  $\Leftarrow$  Water Pipelines, 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 Construction of Earth Filled Dam for KZN Department of Agriculture and Rural Development, at ERF No. 1069, Kokstad Research Station, Ward 6 of Kokstad Local Municipality within Harry Gwala District.
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	Rolling terrain
Municipalities	Kokstad Local Municipality
Applicant	KwaZulu Natal Department of Agriculture and Rural Development (KZN DARD)
Client Details	Emvelo Quality and Environmental Consultants (Pty) Ltd Promenade Building, Unit D2 1st Floor, 24 Lira Link CBD, Richards Bay, 3900. Tel: 035 789 0632, Cell: (081) 218 9684 Email: info@emveloconsultants.co.za
Heritage Consultant	Tsimba Archaeological Footprints (Pty) Ltd 24 Lawson Mansions 74Loveday Street, Johannesburg Gauteng, 2000 E-mail:info@tsimba-arch.co.za rmuroyi23@gmail.com Phone: (+27) 813 717 993

## **EXECUTIVE SUMMARY**

This document details the results of an archaeological and heritage survey (the Survey) of the proposed construction of Earth Filled Dam for KZN DARD, at ERF No. 1069, Kokstad Research Station, Ward 6 of Kokstad Local Municipality within Harry Gwala District. The Archaeology of the Kokstad area in the KwaZulu Natal province has not been fully studied but is associated with Nguni speakers. Therefore, in order to comprehend the archaeology of this area, reference has to made with the archaeology of the greater KwaZulu Natal Province. The Iron Age communities in South Africa, also known as the farming communities, only arrived in modern day South Africa approximately 2000 years ago (Huffman, 2007). In the KZN province, farming communities only arrived around AD1300. They contribute to the multiple historical layering scattering within the borders of the KwaZulu Natal province.

Tsimba Archaeological Footprints discovered four (4) Iron Age sites some 40 kilometres North -West of the proposed development footprint. The sites were discovered on the farm Makhoba, they appear to fit the characteristics of the Early Iron Age Moor Park walling. The sites are characterised by low walling with a rudimentary layout of stones. Moreover, the sites were built on low lying areas, a classic characteristic of the Nguni Early Iron Age in the central KwaZulu Natal Province.

The proposed earth filled dam, is mainly a small stock watering dam and the dam covers an area of 1.6ha. 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.

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 study to some degree follows the requirements of the IFC Performance Standards. Many organizations have incorporated the International Finance Corporation Performance

Standards as a crucial part of their environmental and social risk management (more information on this will be given in the legislative framework section below).

Emvelo Quality and Environmental Consultants (Pty) Ltd (hereafter referred to as "the EAP") have been appointed by KwaZulu Natal Department of Agriculture and Rural Development (KZN DARD) 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 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): therefore, a field work was undertaken over a single field trip. The field work was undertaken with the full cooperation and assistance of the Kokstad Research Station. No archaeological sites/stone tools, heritage monuments, historical buildings, or graves (Cultural Heritage Resources) were revealed during the field survey. However, our literature review process reviewed that;

- → Middle Stone Age artefacts have a wider distribution that extends into and across the Drakensberg including rock shelters with deep Middle Stone Age deposits, found both east and west of the of the study area.
- → The available evidence, as captured in the Amafa Research and Institute suggests that although there has been no systematic archaeological survey of the area several archaeological sites have been recorded in the general area of Kokstad. These sites are Middle and Late Stone Age sites, with some shelters containing rock art. A total of fifty-five rock art sites have been recorded in the greater Kokstad area with the vast majority of these occurring to the west of Kokstad in the foothills of the Maloti Drakensberg mountains, these were recorded through CRM surveys.
- → Four Middle Stone Age sites occur within the greater Kokstad area and eleven Later Stone Age sites occur within the Kokstad area. None are known to be located close to the study area.
- → The area is closely associated with the Anglo-Zulu war of 1879, where the Zulu Kingdom was brought under British colonial rule after King Cetshwayo was captured in August 1879, and taken to exile in Cape Town and ordered never to return to Zululand.

#### Reasoned Opinion

It is the reasoned opinion of the author of this 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. The proposed development site is already disturbed and no sub

surface finds can be made due to the disturbances. The study site 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). Amafa Research and Institute or 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

# TABLE OF CONTENTS

AUTHOR'S CREDENTIALS	2
COPYRIGHT Error! Bookmark not of	defined.
DOCUMENT INFORMATION	4
EXECUTIVE SUMMARY	5
TABLE OF CONTENTS	8
FIGURES AND TABLES	9
ABBREVIATIONS	10
GLOSSARY	11
1.0 INTRODUCTION	12
2.0 DESCRIPTION OF THE RECEIVING ENVIRONMENT	15
3.0 METHODOLOGY	17
4.0 LEGISLATIVE FRAMEWORK	19
5.0 ARCHEOLOGICAL BACKGROUND OF THE STUDY AREA (PRE-HISTORY)	21
6.0 HISTORICAL BACKGROUND OF THE STUDY AREA	23
7.0 DISCUSSION OF FINDINGS	27
8.0 REFERENCES	31
APPENDIX A: DEFINITION OF TERMS ADOPTED IN THIS HIA	32
APPENDIX B: THE PROPOSED DAM POSITION	34
APPENDIX C: PROPOSED DAM LAYOUT DESIGN	35

# FIGURES AND TABLES

	Figure 1: The Cultural Heritage Management concept	13
	Figure 2: A Hydrological Map by Emvelo showing the proposed development site's location	16
	Figure 3:The Burra Charter process: steps in planning for and managing a place of cult	ural
sigr	nificance. (Reproduced from Australia ICOMOS 2013)	20
	Figure 4:View of the terrain gently sloping towards the river stream	28
	Figure 5:View of the North eastern view of the proposed development site	28
	Figure 6: View of an overgrown grass close to the river bank	29
	Figure 7: View of some of the bolders on site	29
	$ thm:proposed_proposed_final_fina$	30
	Figure 9: View of the South Western side of the development site	30
	Table 1: Site 1 Description	15
	Table 2: Table of Events	23
	Table 3: Significance of Cultural Landscape Impacts	25

# **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> <li>Something accomplished, esp. by valour, boldness, or superior ability</li> </ul>			
Acathotic	•			
Aesthetic Relating to the sense of the beautiful or the science of aes				
Community	All the people of a specific locality or country			
Culture	<ul> <li>The sum total of ways of living built up by a group of human beings,</li> </ul>			
	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	<ul> <li>Intensified; exceeding the common degree or measure; strong;</li> </ul>			
	intense, energetic			
Importance	The quality or fact of being important.			
influence	<ul> <li>Power of producing effects by invisible or insensible means.</li> </ul>			
Potential	Possible as opposed to actual.			
Integrity	<ul> <li>The state of being whole, entire, or undiminished.</li> </ul>			
Religious	Of, relating to, or concerned with religion.			
Significant	<ul><li>important; of consequence</li></ul>			
Social	Living, or disposed to live, in companionship with others or in a			
	community, rather than in isolation.			
Spiritual	<ul> <li>Of, relating to, or consisting of spirit or incorporeal being.</li> </ul>			
Valued	Highly regarded or esteemed			

#### 1.0 INTRODUCTION

#### 1.1 Project Background

Tsimba Archaeological Footprints (Pty) Ltd was requested Emvelo Quality and Environmental Consultants (Pty) Ltd to conduct a Heritage Impact Assessment (HIA) for the proposed construction of Earth Filled Dam for KZN DARD, at ERF No. 1069, Kokstad Research Station, Ward 6 of Kokstad Local Municipality within Harry Gwala District.

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 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. 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. The following cultural heritage management concept was followed in this study;

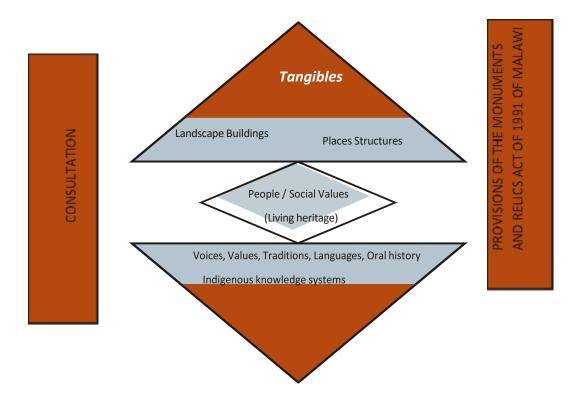


Figure 1: The Cultural Heritage Management concept

#### 1.4. Scope of the Phase 1 HIA

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 through the means of a physical survey;
- 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.

#### 1.5 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.

# 2.0 DESCRIPTION OF THE RECEIVING ENVIRONMENT

Table 1: Site 1 Description

The project will take place within Erf 1069, Portion 0, Kokstad Research Station, Ward 6 of Kokstad Local Municipality. The project area is within Quaternary Catchment T32C of Pongola-Mtamvuma Catchment Management Area.

Catchment Management Area.		
Size	Area occupied by a dam is 1.6ha	
Coordinates	South	East
→ Instream Inlet to Earth filled  Dam	30°30′33.42″S	29°25'10.66"E
→ Western Bank of Earth filled Dam	30°30'33.42"S	29°25'10.66"E
→ Southern Bank of Earth filled Dam	30°30'37.96"S	29°25′5.11″E
→ Eastern Bank of Earth filled Dam	30°30'38.93"S	29°25′12.41″E
→ 200m(600mmø)	Start	End
abstraction pipeline	30°30'38.01"S, 29°25'9.62"E	30°30'41.81"S, 29°25'15.10"E
Ownership		
	Previously Agricultural activities however purposes.	er is now used for residential

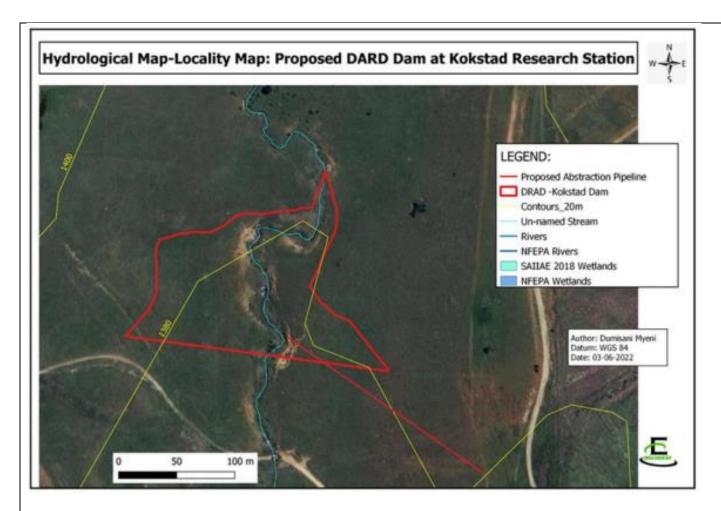


Figure 2: A Hydrological Map by Emvelo showing the proposed development site's location

## 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 Kokstad 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

#### 3.1 Field survey

The field survey lasted for one day, on the 19<sup>th</sup> of December 2022. It was conducted by an Archaeologist from Tsimba Archaeological Footprint through walking. The field survey was conducted with the help of Kokstad Research Station who also showed us the proposed site for development.

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 general development site and the river stream. These areas are likely to 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. The surface was also inspected for possible Stone Age scatters as well as exposed Iron Age implements and other archaeological resources. The survey followed investigated the cultural resources onsite using

the best possible technologies for archaeological field surveys. The general project area was documented through photographs using a Nikon Camera (with built in GPS). A Samsung GPS Logger (2018) was used to record the archaeological finds on site.

#### 3.3 Oral histories/Local Community Consultations

The local community is critical in giving an oral account as well as detailed intangible values of a site. Article 12 of the Burra Charter states the conservation, interpretation and management of a heritage resource should provide for the participation of people for whom the place has significant associations and meanings, or who have social, spiritual or other cultural responsibilities for the place. On route to the site we encountered a few members of the community who were asked about the general cultural landscape of the broader area with the Kokstad Research Station also giving some information about the site.

#### 3.2 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**

#### 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 red together with the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008). The HIA is completed in accordance to requirements of Section 38 (1) (a, b, c) of the NHRA, No. 25 of 1999. This is due to the nature of the proposed development which involves;

#### Any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent

The development may also impact on graves, structures, archaeological and palaeontological resources that are protected in terms of sections 33, 34, 35, and 36 of the KwaZulu-Natal Heritage Act (No. 4 of 2008) as well as sections 34, 35, and 36 of the NHRA.

#### 4.2 Application of the International Finance Corporation Performance Standards

This study to some degree follows the requirements of the IFC Performance Standards. Many organizations have incorporated the IFC Performance Standards as a crucial part of their environmental and social risk management. These standards serve as an international baseline for recognizing and managing environmental and social risk. The environmental, health, and safety (EHS) guidelines from the IFC include technical recommendations along with broad and sector-specific illustrations of exemplary global business practices that satisfy the IFC's Performance Standards.

Table 2: Sections of IFC Standards relevant to heritage resources and their management

GUIDELINE	RELEVANT CHAPTER	DESCRIPTION OF THE REQUIREMENT
IFC Performance Standards	0 1	Minimization and avoidance of impacts from project related activities.
		Engagement with affected communities and the disclosure of relevant information of the relocation process.
	<b>.</b>	Respecting the social and cultural institutions of the displaced persons and any host communities.
	(Consultation) (2012).	The need for consultation with affected communities to identify cultural heritage of importance and involve affected communities and involve the relevant national or local regulatory authorities in the decision-making processes.
	PS 8 – Paragraph 12 (Removal of Non-Replicable Cultural Heritage) (2012).	The removal of cultural heritage must only be considered when no other alternative is available.

#### 4.3 Application of the Burra Charter 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 5).

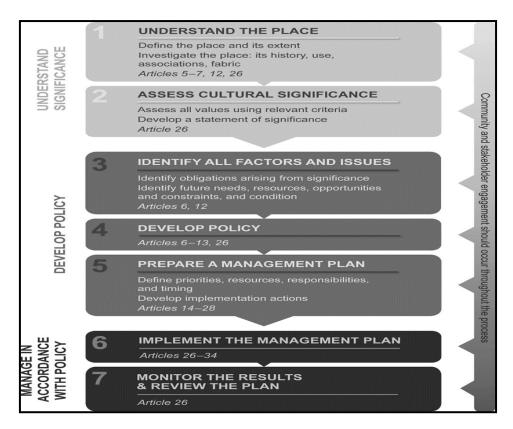


Figure 3:The Burra Charter process: steps in planning for and managing a place of cultural significance. (Reproduced from Australia ICOMOS 2013)

# 5.0 ARCHEOLOGICAL BACKGROUND OF THE STUDY AREA (PRE-HISTORY)

#### 5.1 The Stone Age

The case study area is located in the southern Maloti Drakensberg area of the KwaZulu Natal Province. It falls under the jurisdiction of the Harry Gwala District Municipality. Archaeologists have unearthed stone tools such as hand axes under the 1 800 m contour which suggests that the first inhabitants of the areas predated the first human occupation of the area by 800 000 years. Most sites falling under this period in the Drakensberg area are typified by very few on surface scatters and some stone tools. These are mostly located close to riverine environments and were most probably made by the Homo erectus. One Stone Age site was discovered at Kruisspruit located near Kokstad but the study area is not known to have any Early Stone Age sites (Muroyi, 2019)

The Middle and Later Stone Age communities form part of the layering of human occupation in this area. The Middle Stone Age people were anatomically similar to the modern humans known as Homo sapiens sapiens. These people had the capacity to build sophisticated stone tools. They moved into area approximately 200 000 years ago. These societies were more efficient hunters than their predecessors, the Early Iron Age (Mitchell, 2002). Mitchell further posited that Middle Stone Age communities from the eastern and southern parts of Africa later moved out of the continent and occupied the rest of the world. In the Drakensberg area, most sites occur on both the South African and Lesotho side of the mountain and also in the deep cave deposits.

The immediate predecessors of the San are called the Later Stone Age people. They also made stone tools as suggested by the name designated to them. In comparison to the tool assemblage of the earlier and middle stone age communities, the tools of the Later Stone Age were much smaller, diverse and more efficient. These tools were made before the discovery of iron by modern humans. These communities were responsible for the discovery of the bow and arrow which made them flourish in the Drakensberg. Their ability to exploit the surrounding environment for their own survival was much excellent due to the discovery of more efficient tools (Mitchell, 2002). These communities had developed symbolic expressions as evidenced by the widespread of rock art in the Maloti Drakensberg. The oldest evidence for Later Stone Age occupation of the Maloti Drakensberg was found at Sehonghong Cave in south eastern Lesotho as well as from the Strathalan Cave in the Eastern Cape section of the region (Prins, 2017). Although a lot of research has been done on the Stone Age communities occupying the Drakensberg, no evidence of Stone Age occupation has been found within the actual confines of the study area.

#### 5.2 The Iron Age

The Archaeology of the Kokstad area in the KwaZulu Natal province has not been fully studied but is associated with Nguni speakers. Therefore, in order to comprehend the archaeology of this area, reference has to made with the archaeology of the greater KwaZulu Natal Province. The Iron Age communities in South Africa, also known as the farming communities, only arrived in modern day South Africa approximately 2000 years ago (Huffman, 2007). In the KZN province, farming communities only arrived around AD1300. They contribute to the multiple historical layering scattering within the borders of the KwaZulu Natal province. The subsistence of these communities was partly anchored on iron tool production and the resulting tools were either used domestically or used as trade goods (Huffman 2007). The term "Iron Age" has become obsolete in the current archaeological fraternity because of its derogative nature. The designation "Farming Communities" has become viable mostly because these communities also depended on cattle and crop farming.

Tsimba Archaeological Footprints discovered four (4) Iron Age sites some 40 kilometres North -West of the proposed development footprint. The sites were discovered on the farm Makhoba , they appear to fit the characteristics of the Early Iron Age Moor Park walling. The sites are characterised by low walling with a rudimentary layout of stones. Moreover, the sites were built on low lying areas, a classic characteristic of the Nguni Early Iron Age in the central KwaZulu Natal Province. However, there is a curious rectilinear structure on one of the sites. The presence of rectilinear structures on Moor Park settlements is suggests contact with Europeans which places the site in the 19th century s (Muroyi ,2020 p.16).

Nevertheless, on arrival in South Africa, the Farming communities typically built stone walled sites in low lying areas such as of the foot of hills or cliffs (Huffman, 2004). These sites are classified under the Urewe Tradition. In the KZN province, the stone walled structured have been designated the "Moor Park" Stone structures and have been associated with Nguni speakers (Huffman, 2004 P.2007). Huffman further argues that these stone walled structures are the oldest in South Africa. Around AD1350 the Moor Park communities began to shift their settlements from low lying areas to high lying areas e.g. on hilltops and built low stone walling. These sites have been associated with the so-called Central Cattle Pattern (CCP) in which dwellings were built around cattle kraals.

# 6.0 HISTORICAL BACKGROUND OF THE STUDY AREA

Table 3: Table of Events

Year	Events
1809-1820	The rise of the Zulu kingdom: In the early nineteenth century, the Zulu were ruled by a small
	lineage of some 2,000 members in a chiefdom of some 10,000 Zulus under the rule of the
	Mthethwa. Shaka was born about 1787. Shaka joined the Mthethwa army around about
	1809, where he excelled as a warrior. When Senzangakona died in 1816, Shaka, with the
	support in particular of Dingiswayo – who provided him with a strong military escort – was
	able to wrest power from his half-brother, and designated heir to the chieftaincy, Sigujana.
	The most important tribes in the region on the eve of Shaka's rise to power were the Nguni,
	Hlubi, Ngwane or Matibele, Zulu, Qwabe, Mthethwa, Ndwandwe, Ngwane of Sobuza and
	the Thonga. At the time, Dingiswayo had been expanding his power, and, the Ndwandwe
	under Chief Zwide attacked the Mthethwa in about 1817 or 1818, and captured and killed
	Dingiswayo.After the death of Dingiswayo, Shaka killed the legitimate heir of the Mthethwa
	chieftaincy, and appointed his own favourite, Mlandela, who was raised up from an inferior
	lineage to take up the chieftaincy of the Mthethwa. He also incorporated the Mthethwa
	regiments under Zulu control, and subsequently proclaimed himself the new ruler of the
	Zulu Kingdom.
1860s	Griqua Trek: Under Adam Kok III, the Griqua trekked from the vicinity of Philippolis in the
	Free State after losing their lands to the Voortrekkers. After crossing the Drakensberg they
	settled on the slopes of a mountain which they named after Sir Walter Currie who had
	supported them in settling in the area. The area where they settled was referred to as 'No-
	Man's' land located between the then Cape and Natal colonies (Bulpin 1986: 480). In
	September 1869, Adam Kok founded Kokstad as the capital of Griqualand East on the
	banks of the Mzintlava River. The Griqua's independence was short-lived as East
	Griqualand area was annexed in 1874 by the Cape Colony. On the 5th of April 1892,
	Kokstad became a municipality.
1870s	White settlement in the region: During the last quarter of the century, there was increasing
	encroachment on the part of the Voortrekkers on Zululand. In the meantime, British policy
	towards Southern Africa underwent a major change when Lord Carnarvon was made
	Colonial Secretary in 1874. Carnarvon identified the main problem in South Africa the

	fragmented nature of the region which consisted of British colonies, independent					
	Voortrekker republics and independent African states such as Zululand. The solution to this					
	problem was a confederation of white-ruled states.166 Consequently, it was necessary to					
	bring Zululand into this confederation, which meant annexing the region. Sir Garnet					
	Wolseley, Governor of Natal, suggested that Zululand could be brought under British control					
	on the grounds that Cetshwayo had failed to maintain the 'coronation laws' promulgated by					
	Shepstone in 1873.					
1879	The British ultimately led to the Anglo-Zulu war of 1879, after which the Zulu Kingdom was					
	brought under British colonial rule. Cetshwayo was captured in August 1879, and taken to					
	exile in Cape Town and ordered never to return to Zululand. The Zulu kingdom was					
	subsequently broken up into thirteen chiefdoms, each under an appointed chief, following					
	an agreement reached with the king's leading chiefs and advisors on the 1st September. A					
	British Resident was appointed to serve as a diplomatic link with the appointed Zulu chiefs.					
1890s	At the outbreak of the Anglo Boer War in 1899, black volunteer units were developed in the					
	area and consisted predominantly of Bhaca, Thembu and Mfengu who were taken up in the					
	Thembuland Field Force and the East Griqualand Field Force. Most of these volunteer					
	forces were disbanded in March 1900. Another unit raised during the same war was the					
	Griqua Light Horse. Raised in the Mount Currie, Kokstad and Matatiele districts, the unit					
	comprised 300 men. All the non-commissioned officers were Griquas including Thomas					
	Kok, a relative of Adam Kok.					

Table 4: Significance of Cultural Landscape Impacts

				Landscape	e recep	tor sensitivity	
			H	High		MediumMedium	low
Δερεσ	smar	nt o	f significance of the cultural landscape	andscape with		Regional or Local	A relatively unimportant cultural
impacts		lationalheritage	•	Significance	landscape with few features of		
	De	. d .	olla represent cignificant adverse impacts	ignificance Stat	tus	Heritagesites	value or interest,potentially
-	Y	eu c	ells represent significant adverse impacts  w cells represent significant beneficial	ites and cultura	al	valued	tolerant of substantial change of
	in	ipa	ots	andscapes wit	th	characteristics	the type proposed.
•			cells represent impacts that are not P	rovincial herita	ge	reasonably	
				Significance Sta	tus	tolerant ofchanges	
						of the type	
						proposed.	
			Significant adverse changes, over a significant			High/Medium	
	Major	advers	area, to key characteristics or features or to the	ligh adverse sigr		•	Medium adverse significance
	Ma.	ad o	landscape's character or distinctiveness for more	, ,		significance	·
			than 2 years				
			Noticeable but not significant adverse changesfor more than 2 years or significant adverse changes				
	rat	for more than 6 months but less than 2 years, over	High/Medium		Medium	Low adverse significance	
	Moderat	e 6	a significant area, to key characteristics or efeatures or to the landscape's character or	dverse ignificance		adverse significance	
	_	Ψ,	distinctiveness.	.g		e-ig-inited	
			Netice the adverse the result of the Court				
	<b>+</b>	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	/ledium		Low	Neutral
	giig .			dverse		adverse	
act	<i>o</i> , <i>a</i>		length of time.	significance		significa nce	
imp	<u>च</u>					1100	
ape	Neutral		Any change would be negligible, unnoticeable or there are no predicted changes.	Neutral		Neutral	Neutral
andscape impact	Z		unere are no predicted changes.	ineuliai		iveuirai	Neutrai
_			Noticeable beneficial changes for less than 2				
Magnitude of	L.,	<b>-</b>	years, significant beneficial changes for less than 6 months, or barely discernible beneficial	Andrews brown Cale			Manda
agni	Slight	enefi	The state of the s	<mark>ledium beneficia</mark> ignificance	il .	Low beneficial	Neutral
≥	<b>σ</b> .	ă		ŭ		significan	
	<u> </u>		Kokstad Cultural landscape		Landsca	ce pe with National herita	ge significance Status sites and
							rovincial 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		

## 7.0 DISCUSSION OF FINDINGS

Prior to the commencement of the survey, the archaeologist conducted an initial reconnaissance of the survey area in order to familiarise himself with the local conditions and establish an effective survey methodology. Archaeological visibility within the survey area was typically very low, typically <10% due to thick cover of grass over most of the area. On exposed areas and river banks, the general visibility rose to between 20% and 50% depending on the amount of vegetation on the exposed surfaces. On sand patches and erosion surfaces, the surface and possible archaeological visibility increased to between 70% and 90%.

Tsimba Archaeological Footprints has conducted a number of projects around the proposed development area hence a survey methodology was established taking into account both the regional archaeological signature noted in previous research in the area and the given characteristics of the survey area. The focus of the survey was on areas of high archaeological potential, such as areas along the river stream and sand blowouts and exposed surfaces. The surface was also inspected for possible Stone Age scatters as well as exposed Iron Age implements and other archaeological resources as well as possible marked and unmarked graves. In order to effectively survey the area, two sampling strategies were employed:

- → Systematic pedestrian transects spaced 2 metres apart on exposed areas and along the river stream banks; and
- → Purposive pedestrian inspection of areas with a high possibility of artefactual material being present, such as rocky area and sand patches.

It is estimated that by using this methodology approximately 95% of the survey area was surveyed. The survey also paid special attention to disturbed and exposed layers of soils such as eroded surfaces. These areas are likely to 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.



Figure 4: View of the terrain gently sloping towards the river stream

Figure 5:View of the River stream



Figure 6: View of an overgrown grass close to the river bank



Figure 7: View of some of the bolders on site



Figure 8: A View of the study area where ground visibility was very high during the field survey



Figure 9: View of the South Western side of the development site

## 8.0 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 epistimatological 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: THE PROPOSED DAM POSITION**



# **APPENDIX C: PROPOSED DAM LAYOUT DESIGN**

