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Isolendalo Environmental Consulting

PHASE I ARCHAEOLOGICAL AND CULTURAL HERITAGE IMPACT ASSESSMENT SPECIALIST REPORT FOR THE PROPOSED CONSTRUCTION OF IFIDI VEHICULAR BRIDGE LOCATED IN THE AREA OF BERGVILLE WITHIN THE JURISDICTION OF OKHAHLAMBA LOCAL MUNICIPALITY, UTHUKELA DISTRICT. KWAZULU NATAL PROVINCE.

May, 2015

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1st draft report	10th May 2015 (Desktop Study)
2nd draft report	15th May 2015
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DISCLAIMER

Even though all care is taken to identify sites of heritage significance during survey, it's important to mention that the scenery of sites in southern Africa, are often contextualised such that it often is possible that certain sites could be unnoticed during the survey. Accordingly, *Vhubvo Archaeo-Heritage Consultant Cc* and its employees will not be held accountable for such oversights or for costs incurred as a result thereof.

DECLARATION

ABILITY TO CONDUCT THE PROJECT

Munyadziwa Magoma is a professional archaeologist, having obtained his BA degree in Archaeology and Anthropology at University of South Africa (UNISA), an Honours degree at the University of Venda (UNIVEN), and an Masters degree at the University of Pretoria (UP). He is an accredited Cultural Resource Management (CRM) member of the Association for southern African Professional Archaeologists (ASAPA) and Amafa aKwaZulu-Natali. Munyadziwa is further affiliated to the South African Archaeological Society (SAAS), the Society of Africanist Archaeologists (SAfA), and the International Council of Archaeozoology (ICAZ). He has more than seven years' experience in heritage management, having worked for different CRM organisations and government heritage authorities. As a CRM specialist, Munyadziwa has completed well over hundred Archaeological Impact Assessments (AIA) for developmental projects situated in several provinces of the Republic of South Africa. The AIAs projects he has been involved with are diverse, and include the establishment of major substation, upgrade and establishment of roads, establishment and extension of mines. In addition, he has also conducted Heritage Impact Assessments (HIAs) for the alteration to heritage buildings and the relocation of graves. His detailed CV is available on request.

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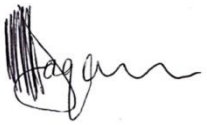

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EXECUTIVE SUMMARY

Introduction and background

Vhubvo Archaeo-Heritage Consultant Cc has been requested by Isolendalo Environmental Consulting to conduct Archaeological and Cultural Heritage for the proposed construction of Ifidi Vehicular Bridge, which according to the demarcation board is within Okhahlamba Local Municipality of Uthukela District in the Kwazulu Natal Province. The aim of the study was to entirely identify and document archaeological sites, cultural resources, sites associated with oral histories, graves and cultural landscapes that may be affected by the proposed construction, these will in turn assist the developer in ensuring proper conservation measure in line with the National Heritage Resource Act, 1999 (Act 25 of 1999) and KwaZulu-Natal Heritage Act, 1997 (Act 10 of 1997). The findings of this study have been informed by desktop study and field survey. The desktop study was undertaken through SAHRIS for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and also for researches that have been carried out in the wider area over the past years, these includes work and researches by amongst others Anderson and Wahl 1999; Bishop 2002; Bryant 1965; Derwent 2006; Huffman 2007; Linde and Grab 2008; Maggs 1986, 1989; Mazel 1981, 1986, 1989, 1998; Mitchell 2002; Moeller 2005; Mthethwa 2002; Ndlovu 2005, 2006, 2009; Whitelaw 1991. From these studies, it became clear that the landscape of the region is affluent of archaeological and historical sites and it covers a long span of human history.

Survey and receiving environment

The area proposed for Ifidi Vehicular Bridge can be assessed with effortlessness. The general area is currently used for low scale farming activities, and can be described as undulating and fairly vegetated with residential sites in the surrounding environs (see Figure 1-3), s, section of the proposed area have eroded as a result of conduction of geo-technical services. Therefore the proposed bridge will traverses on an already disturbed portion of land, which has been extensively disturbed in the recent past through various residential developments and activities related to agriculture, specifically ploughing and crop raising. In fact, the villagers only abscond from ploughing this season because they were alerted of this proposal. If any archaeological sites existed here in the past, it might have been completely disturbed or destroyed during such time when the area was utilised, however caution was taken during survey since stone tools and ceramics materials are known to survive tougher and disturbed conditions. As a result, in order to assertion that the proposed development does not impose any negatively on archaeological, graves and historical sites, the survey of the proposed area as well as the circumference of the proposed area was thoroughly and successfully surveyed. The field survey lasted one day of the 11th of May 2015. Two archaeologists from Vhubvo conducted the survey. As a supplement to the survey, oral interview

was initiated with communities nearby (Mabhulesini village). The oral interviews aim to understand the cultural landscapes and/ or intangible heritage in the area, as well as possibility of known graves. As above said, the aim of the survey was to express the significance of heritage resources that may be found in the proposed area so as to be able to determine whether the proposed project was feasible or not.

Brief background study

Archaeological sites

The area around the proposed site has been of interest to archaeologists due to the concentration of Stone Age sites, and well articulated historical sites. This has resulted in the area being lengthily surveyed for archaeological sites by both academics and contract archaeologists over the past two decades or so. Such has led to documentation of several sites as recorded in the Natal Museum inventory. These include Early, Middle, Later Stone Age sites and Later Iron Age sites, and numerous historical sites. The archaeology of the area thus covers three archaeological periods, namely, the Stone Age, Iron Age and the Historic era. Of these three, Stone Age and historical sites are most likely to be encountered as compared to the Iron Age. Stone Age sites are related to the San people, these people are considered by many as the ancestors of present day Nama-speakers. The Iron Age of the region is related to Bantu-speaking farmers who are the ancestors of many blacks who reside in southern Africa today. The historical era is wide and complex and is associated with early Europeans, these being British immigrants and Voortrekker settlers, also covered in this era are Nguni-speaking segments. Chances of encountering these sites are considered moderate to very low, since the site is vehemently disturbed.

Graves and burials

Although graves have been documented in the area, most of these are found in the farms and are well curated and known. Very few have been accidentally exposed. Likewise locals bury within their homesteads and their grave are know, if any existed in the area, it would have been pointed out during public participation. Possibility of exposing graves (or its content) in this area is considered very low.

Built environment

European settlement of the area started in the late 1830s when the first Voortrekker settlers marked out large farms in this area at large. This will be followed by permanent British settlement in the early 1850s. Structures relating to early Voortrekker and British settlement are as a result found in the area at large. However, these are away from the area proposed for Ifidi Bridge. Built environment is thus unlikely to be impacted by this proposed development.

Survey findings

The Phase I Archaeological and Cultural Heritage Impact Assessment for the proposed construction of Ifidi Vehicular Bridge has identified no significant impacts to archaeological material that will need to be mitigated prior construction. Therefore, no archaeological or cultural heritage remains were documented during the study.

- **Impact statement**

  Despite that the proposed area at large is known to yield archaeological materials, the impact on archaeological and cultural heritage remains is rated as being low, this is because the area is disturbed. Notwithstanding that, the probability of locating any important archaeological remains during construction of the project is likely, as demonstrated on the table below and discussion above. In conclusion this study concurs that the affected site is thus not considered to be very archaeologically sensitive, and as aforesaid, the proposal can proceed without further archaeological studies.

Table 1: Possibility of archaeological/ Heritage materials on site proposed for Ifidi Bridge.

Landscape type	Description	Occurrence still possible	Likely occurrence
Archaeology	Early, Middle and Late Stone Age Early and Late Iron Age	Yes Yes	Rather unlikely Unlikely
Burial and Graves	Pre-colonial burials Graves of victims of conflict Graves older than 100 years Graves older than 60 years Graves younger than 60 years	Yes	Unlikely
Built Environment	Formal public spaces Historical structures Places associated with social identity/ displacement	No	Unlikely
Historic Farmland	Historical farm yards Historical farm workers villages Irrigation furrows Historical routes Distinctive types of planting	Yes	Unlikely
Landscape usage	Sites associated with living heritage e.g., initiation school sites, Sites of political conflict Sites associated with a historic event/person	Yes	Unlikely
Historic rural town	Historic mission settlements	No	No

Restrictions and Assumptions

As required by legislature, no subsurface investigation were undertaken, since a permit from Amafa is required to do so, as a result, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. Should any archaeological/ or grave site be observed during construction, a heritage specialist must immediately be notified.

Public consultation process undertaken as part of the Environmental Impact Assessment is considered sufficient and does not require repetition as part of this study.

Recommendations and Conclusions

It is the responsibility of the developer to notify contractors and workers about archaeological material (e.g., pottery, stone tools, remnants of stone-walling, graves, etc) and fossils that may be located underground. Thus, unavailability of archaeological material does not mean absentee, archaeological material might be hidden underground, and as such the client is reminded to take precautions during construction.

In the event that archaeological materials are unearthed, all construction within a radius of at least 25m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist or Amafa officer should be contacted immediately. In the meantime, it is the responsibility of the contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by Amafa.

The proposed construction can proceed without further archaeological or cultural heritage assessment. This report is void without approval from Amafa.

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ACRONYMS AND ABBREVIATIONS

AIA	Archaeological Impact Assessment
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
MIA	Middle Iron Age
EIA	Early Iron Age
HMP	Heritage Management Plan
LSA	Late Stone Age
MSA	Middle Stone Age
ESA	Early Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency

GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter *(Burra Charter)*:

Archaeological Material: remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

Artifact: Any movable object that has been used, modified or manufactured by humans.

Conservation: All the processes of looking after a site/heritage place or landscape including maintenance, preservation, restoration, reconstruction and adaptation.

Cultural Heritage Resources: refers to physical cultural properties such as archaeological sites, palaeolontological sites, historic and prehistorical places, buildings, structures and material remains, cultural sites such as places of rituals, burial sites or graves and their associated materials, geological or natural features of cultural importance or scientific significance. This include intangible resources such religion practices, ritual ceremonies, oral histories, memories indigenous knowledge.

Cultural landscape: "the combined works of nature and man" and demonstrate "the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external".

Cultural Resources Management (CRM): the conservation of cultural heritage resources, management, and sustainable utilization and present for present and for the future generations

Cultural Significance: is the aesthetic, historical, scientific and social value for past, present and future generations.

Chance Finds: means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

Compatible use: means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Expansion: means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

Grave: A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

Heritage impact assessment (HIA): Refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

Historic Material: remains resulting from human activities, which are younger than 100 years, but no longer in use, including artifacts, human remains and artificial features and structures.

Impact: the positive or negative effects on human well-being and / or on the environment.

***In situ* material:** means material culture and surrounding deposits in their original location and context, for instance archaeological remains that have not been disturbed.

Interested and affected parties Individuals: communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

Interpretation: means all the ways of presenting the cultural significance of a place.

Late Iron Age: this period is associated with the development of complex societies and state systems in southern Africa.

Material culture means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Mitigate: The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

Place: means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Protected area: means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers.

Public participation process: A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters.

Setting: means the area around a place, which may include the visual catchment.

Significance: can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

Site: a spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

1. Introduction

At the request of Isolendalo Environmental Consulting, Vhubvo Archaeo-Heritage Consultant Cc conducted an Archaeological and Cultural Heritage for the proposed construction of Ifidi Vehicular Bridge, which according to the demarcation board is within Okhahlamba Local Municipality of Uthukela District in the Kwazulu Natal Province. The survey was conducted in accordance with the SAHRA Minimum Standards for the Archaeology and Palaeontology. The minimum standards clearly specify the required contents of the report of this nature.

2. Sites location and description

The proposed development is located in the village of Mabhulesini village within Okhahlamba Local Municipality of Uthukela District in the Kwazulu Natal Province. The area proposed for Ifidi Vehicular Bridge can be assessed with effortlessness. The general area is currently used for low scale farming activities, and can be described as undulating and fairly vegetated with residential sites in the surrounding environs (see Figure 1-3), s, section of the proposed area have eroded as a result of conduction of geo-technical services. Therefore the proposed bridge will traverses on an already disturbed portion of land, which has been extensively disturbed in the recent past through various residential developments and activities related to agriculture, specifically ploughing and crop raising. In fact, the villagers only abscond from ploughing this season because they were alerted of this proposal. If any archaeological sites existed here in the past, it might have been completely disturbed or destroyed during such time when the area was utilised, however caution was taken during survey since stone tools and ceramics materials are known to survive tougher and disturbed conditions

Summary of Project Location Details

Province:	Kwazulu Natal
Local Municipality:	Okhahlamba
District Municipality:	Uthukela
Proposed development:	Establishment of Ifidi Vehicular Bridge

Figure 1: A Google iew of the area proposed for the bridge.

Figure 2: View of the area which was extensively surveyed for any archaeological material.

Figure 3: View of section of the proposed area which have eroded and was inspected for density.

Figure 4: An overview of the environs' of the proposed area, note small scale farming in the background.

3. Nature of the proposed project

KZN Department of Transport is proposing to construct a bridge over Ifidi River. This bridge will enable community members to crossways with ease. Currently community transport network are using this crossways for their everyday domestic activities including commuting to school. During rainy season, such commuting becomes impossible, leading to pupil absconding class and also hampering other service delivery.

4. Purpose of the Cultural Heritage Study

The purpose of this Archaeological and Cultural Heritage study was to entirely identify and document archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structure of historical significance that may be affected by the proposed construction, these will in turn assist the developer in ensuring proper conservation measure in line with the National Heritage Resource Act, 1999 (Act 25 of 1999). Impact assessments highlight many issues facing sites in terms of their management, conservation, monitoring and maintenance, and the environment in and around the site. Therefore, this study involves the following:

- Identification and recording of heritage resources that maybe affected by the proposed bridge,
- Providing recommendations on how best to appropriately safeguard identified heritage sites. Mitigation is an important aspect of any development on areas where heritage sites have been identified.

5. Methodology

Background study introduction

The methodological approach is informed by the 2012 SAHRA Policy Guidelines for impact assessment. As part of this study, the following tasks were conducted: 1) literature review, 2), consultations with the developer and appointed consultants, 3), completion of a field survey and 5), analysis of the acquired data, leading to the production of this report.

Physical survey

The walk down of all the area proposed for the bridge and servitudes was conducted successfully, emphases were directed on potential area that can yield archaeological and graves sites. The walk down therefore constitutes walking the wider area. For the purpose of

this report, the general overview has been given in pictograph. The field survey lasted one day of the 11th February 2015. Two Archaeologists from Vhubvo conducted the survey.

Documentation

The general project area was documented. This documentation included taking photographs using cameras a 10.1 mega-pixel Sony Cybershort Digital Camera. Plotting of finds was done by a Garmin etrex Venture HC.

Oral interview

Oral interview was initiated with community members. The oral interviews aim to understand the cultural landscapes and/ or intangible heritage of the area.

Restrictions and Assumptions

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. As a result, should any archaeological/ or grave site be observed during construction, a heritage specialist must immediately be notified.

6. Applicable heritage legislation

Several legislations provide the legal basis for the protection and preservation of both cultural and natural resources. These include the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act (No 103 of 1993); Tourism Act (No. 72 of 1993); Cultural Institution Act (No. 119 of 1998), and the National Heritage Resources Act (Act 25 of 1999). Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50 m in length; and
(c) any development or other activity which will change the character of an area of land, or water -

- *(i) exceeding 5 000 m² in extent;*
- *(ii) involving three or more existing erven or subdivisions thereof; or*
- *(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
- *(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority;*

(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a Provincial Heritage Resources Authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

(a) Places, buildings structures and equipment of cultural significance
(b) Places to which oral traditions are attached or which are associated with living heritage
(c) Historical settlements and townscapes
(d) Landscapes and natural features of cultural significance
(e) Geological sites of scientific or cultural importance
(f) Archaeological and paleontological sites
(g) Graves and burial grounds including-
- *(i) ancestral graves*
- *(ii) royal graves and graves of traditional leaders*
- *(iii) graves of victims of conflict*
- *(iv) graves of individuals designated by the Minister by notice in the Gazette*
- *(v) historical graves and cemeteries; and*
- *(vi) other human remains which are not covered by in terms of the Human Tissue Act,1983 (Act No. 65 of 1983)*

(h) Sites of significance relating to the history of slavery in South Africa
(i) moveable objects, including -
- *(i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens*
- *(ii) objects to which oral traditions are attached or which are associated with living heritage*
- *(iii) ethnographic art and objects*
- *(iv) military objects*
- *(v) objects of decorative or fine art*
- *(vi) objects of scientific or technological interest; and*
- *(vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).*

Section 3 of the National Heritage Resources Act (No. 25 of 1999) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value …' These criteria are the following:

(a) Its importance in the community, or pattern of South Africa's history
(b) Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage
(c) Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage
(d) Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects
(e) Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group
(f) Its importance in demonstrating a high degree of creative or technical achievement at particular period

(g) Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
(h) Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
(i) Sites of significance relating to the history of slavery in South Africa.
Other sections of the Act with a direct relevance to the AIA are the following:

Section 34(1) *No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.*

Section 35(4) *No person may, without a permit issued by the responsible heritage resources authority:*

- *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite*

Section 36 (3) *No person may, without a permit issued by SAHRA or a provincial heritage resources authority:*

- *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside formal cemetery administered by a local authority; or*
- *bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.*

7. Degree of significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. Large sites, for example, may not be very important, but a small site, on the other hand, may have great significance as it is unique for the region.

Significance rating of sites

(i) High (ii) Medium (iii) Low

This category relates to the actual artefact or site in terms of its actual value as it is found today, and refers more specifically to the condition that the item is in.For example, an archaeological site may be the only one of its kind in the region, thus its regional significance is high, but there is heavy erosion of the greater part of the site, therefore its significance rating would be medium to low. Generally speaking, the following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

High

- This is a ‘do not touch’ situation, alternative must be sought for the project, examples would be natural and cultural landscapes like the Mapungubwe Cultural Landscape World Heritage Site, or the house in which John Langalibalele resided.

- Certain sites, or features may be exceptionally important, but do not warrant leaving entirely alone. In such cases, detailed mapping of the site and all its features is imperative, as is the collection of diagnostic artefactual material on the surface of the site. Extensive excavations must be done to retrieve as much information as possible before destruction. Such excavations might cover more than half the site and would be mandatory; it would also be advisable to negotiate with the client to see what mutual agreement in writing could be reached, whereby part of the site is left for future research.

Medium

- Sites of medium significance require detailed mapping of all the features and the collection of diagnostic artefactual material from the surface of the site. A series of test trenches and test pits should be excavated to retrieve basic information before destruction.

Low

- These sites require minimum or no mitigation. Minimum mitigation recommended could be a collection of all surface materials and/ or detailed site mapping and documentation. No excavations would be considered to be necessary.

In all the above scenarios, permits will be required from the South African Heritage Resources Agency (SAHRA) or the appropriate PHRA as per the legislation (the National Heritage Resources Act, no. 25 of 1999). Destruction of any heritage site may only take place when a permit has been issued by the appropriate heritage authority. The following table is used to grade heritage resources.

Level	Significance	Possible action
National (Grade I)	Site of National Value	Nominated to be declared by SAHRA
Provincial (Grade II)	Site of Provincial Value	Nominated to be declared by PHRA
Local Grade (IIIA)	Site of High Value Locally	Retained as heritage
Local Grade (IIIB)	Site of High Value Locally	Mitigated and part retained as heritage
General Protected Area A	Site of High to Medium	Mitigation necessary before destruction
General Protected Area B	Medium Value	Recording before destruction
General Protected Area C	Low Value	No action required before destruction

Table 2: Grading systems for identified heritage resources in terms of National Heritage Resources Act (Act 25 of 1999).

8. Discussion of (Pre-) History of South Africa

South Africa has one of the longest sequences of human development in the world. The prehistory and history of South Africa span the entire known life span of human on earth. It is thus difficult to determine exactly where to begin,a possible choice could be the development of genus *Homo* millions of years ago. South African scientists have been actively involved in the study of human origins since 1925 when Raymond Dart identified the Taung child as an infant halfway between apes and humans. Dart called the remains *Australopithecus africanus*, southern ape-man, and his work ultimately changed the focus of human evolution from Europe and Asia to Africa, and it is now widely accepted that humankind originated in Africa (Robbins *et al.* 1998). In many ways this discovery marked the birth of palaeoanthropology as a discipline.Nonetheless the earliest form of culture known in South Africa is the Stone Age. This prehistoric period during which humans widely used stone for tool-making, stone tools were made from a variety of different sorts of stone. For example, flint and chert were shaped for use as cutting tools and weapons, while basalt and sandstone were used for ground stone. Stone Age can be divided into Early, Middle and Late, it is argued that there are two transitional period.The time frame used for Stone Age period is an approximate and differ from researcher to researcher (see Korsman and Meyer 1999, Mitchell 2002, Robbins *et al.* 1998).

Stone Age

Although a long history of research on the Early Stone Age period of southern Africa has been conducted (Mason 1962, Sampson 1974, Klein 2000, Chazan 2003), it still remains a period were little is known about. These may be due to many factors which includes, though not limited to retrieval techniques used, reliance on secondary, at times unknown sources, and the fact that few fauna from this period have been analysed (Chazan 2003). According to Robbins *et al.*(1998) the Stone Age is the period in human history when stone was mainly used to produce tools. This period began approximately 2.5 million years ago and ended around 200 000 years ago. During this period human beings became the creators of culture and was basically hunters and gatherers, this era is identified by large stone artefacts, such as the pear-shaped hand-axe, cleavers and core tools (Deacon and Deacon, 1999). These tools were probably used to exploit large animals that had died from natural causes, and are usually found near sites where they were manufactured.

The Middle Stone Age overlap with the EIA and possibly began around 100 000 to about 200 000 years ago and extends up to around 35 000 years ago. This period is marked by smaller tools than in ESA. MSA people made a wide range of stone tools from both coarse- and fine-grained rock types, andincluded prepared cores, parallel-sided blades andtriangular points hafted to make spears. Sometimes the rocks used for tools were transported from considerable distances, presumably in bags or other containers, as such tool assemblages from some MSA sites tend to lack some of the preliminary cores and contain predominantly finished products like flakes and retouched pieces. During this period there is also evidence of seeking shelters in caves by MSA people, suggesting enduring or semi-enduring settlement in caves, there possibilityof making fire in some of these caves have also been suggested.

Microlithic Later Stone Age period began around 35 000 and extend to the later 1800 AD, during this period humans were classified as *Homo sapiens* which means this people had thinking capabilities equal to that of modern people. According to Deacon (1984), LSA is a period when human being refined small blade tools, conversely abandoning the prepared-core technique. Refined artefacts such as convex-edge scrapers, borers and segments are associated with this period, as well as large quantity of art and ornaments and the practice of purposeful burials with ornaments. The bearer of the rock art sites are probably the ancestors

of the San people and are found throughout southern Africa, including Western Cape wherein paintings and engravings are eminent. Due to poor preservation, open air sites are mostly less as compared to rock shelters, which are chiefly well preserved.

Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce artefacts. Recently, they have been a debate about the use of the name. Other archaeologist have argued that the word "Iron Age" is problematic and does not precisely explain the event of what happen in southern Africa, as such, the word farming communities has been proposed (Segobye 1998). Nonetheless, in southern Africa this period can be divided into two phases. Early (200 - 1000 A.D) and Late Iron Age (1000 - 1850 A.D). Huffman (2007) has indicated that a Middle Iron Age (900 - 1300 A.D) should be included. According to Huffman (2007:361), until the 1960s and 1970s most archaeologists had not yet recognised a Middle Iron age. Instead they began the Late Iron Age at AD 1000. The Middle Iron Age (A.D. 900 - 1300) is characterised by extensive trade between the Limpopo Confluence and the East Coast of Africa. This has been debated, with other researchers, arguing that the period should be restricted to Shashe-Limpopo Confluence.

The Iron using peoples practiced agriculture and kept domestic animals such as dogs, cattle, goats, sheep and chicken. There is however evidence that sheep spread across southern Africa a few centuries before the arrival of Early Iron Age farmers (Sadr 2004). According to Huffman (2007) there were two streams of Early Iron Age (EIA) expansion in southern Africa, one referred to as the Urewe-Kwale Tradition (or the eastern stream) and another called the Kalundu Tradition (or western stream).

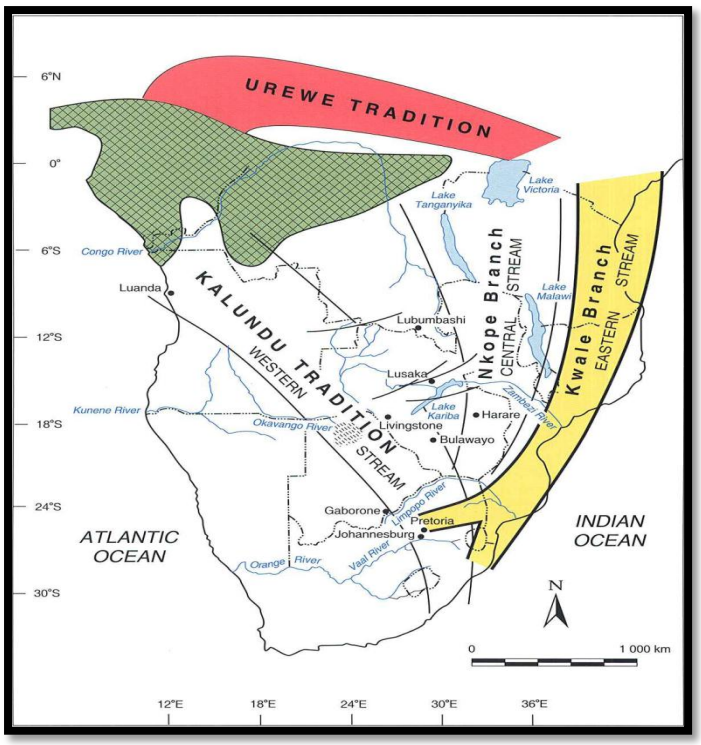

Figure 5: View of the spread of the Early Iron Age movements, namely Urewe-Kwale and Kalundu traditions in southern Africa (From Huffman 2007:122).

Historical Period

Since the arrival of the white settlers - c. AD 1800s - in this part of the country, these settlers were largely self-sufficient, relying on cattle/sheep farming and also hunting. Few towns were established and farming remains the most dominant economy.

9. Discussion of (Pre-) History of the Area around the proposed site

Stone Age

Thousands of years before the arrival of black people in the area, the San used to wonder in the area around Kwazulu Natal (KZN) including the proposed area. Few Early Stone Age (EIA) sites have been documented in KZN, most of the reference of this period is in the form of scatters found mostly in ancestral coastal dunes. The KwaZulu-Natal Museum heritage site inventories reference one site found in the wider area of the proposed site and is dating to this era. The scarcity of EIA sites appears to be correlated in that most of these sites are the remains of open camps, often by the sides of rivers and lakes, and disturbances is imminent in such areas. Several Middle Stone Age site have been documented in the KZN, of these,

Sibudu Cave on the coast of KZN is well known, this site contains evidence for early forms of cognitive human behavioural patterns (Wadley 2005), handful have also been documented in the wider area of the proposed area. Finally, is the Late Stone Age sites, these sites are well reference in KZN and elsewhere in South Africa, most of these are found in caves and thus well preserved, and easy to identify. The uKhahlamba Drakensberg Mountain Range, which is in the region of the proposed area, is known to contain abundance of these sites, predominantly in the form of rock paintings. It is now accepted that rock art sites were sacred sites to the Bushmen, as much as churches are to Christians. The paintings at these sites have been regarded as the finest in the world (Pager 1971). There are over 500 painted rock art shelters in the Drakensberg and well over 50 000 individual painted images (Ndlovu 2009), LSA are also found in the form of refined tools that stand amongst the rest.

Iron Age and Historical era

Although the earliest agricultural sites in KwaZulu-Natal date to between AD 400 and 550, there is no sites dating to the Early Iron Age (EIA) that have been found in the area around the proposed site. Evidence of the first farmers in the area point to around the 14th century, these Later Iron Age sites were most probably inhabited by Nguni-speaking segments (Bryant 1965). The Iron Age structural features that characterised this region include stone wall structures. The earliest known site in this region is known as Moor Park and it dates from 14th century (Huffman 2007). After about 1800, the wider study area is known to have been characterised by wars and battles, particularly between Zulu clans, Zulu's and the Boers /and British, and British and the Boers. Among the well documented and well known battle site located in close proximity to the proposed site is the battle of Isandlwana. This battle is known as the most fearer's battle in KwaZulu-Natal, the battle took place on the 22nd of January 1879 on the hills of Spioenkop. According to Mthethwa (2002), the battle of Isandlwana is important in the history of South Africa, and can be compared to that what the British army suffered at the hands of a native military enemy, and also to what the American's suffered in the hands of Vietnam and also French's defeat at Dien Bien Phu. Accordingly, these battles symbolise hope and determination in the fight by indigenous people against foreign domination (Moeller 2005).

10. Survey findings

The Phase I Archaeological and Cultural Heritage Impact Assessment for the proposed construction of Ifidi Vehicular Bridge has identified no significant impacts to archaeological material that will need to be mitigated prior construction. Therefore, no archaeological or cultural heritage remains were documented during the study.

11. Recommendations and Conclusions

It is the responsibility of the developer to notify contractors and workers about archaeological material (e.g., pottery, stone tools, remnants of stone-walling, graves, etc) and fossils that may be located underground. Thus, unavailability of archaeological material does not mean absentee, archaeological material might be hidden underground, and as such the client is reminded to take precautions during construction.

In the event that archaeological materials are unearthed, all construction within a radius of at least 10m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist or Amafa officer should be contacted immediately. In the meantime, it is the responsibility of the contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by Amafa.

The proposed construction can proceed without further archaeological or cultural heritage assessment.

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APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site *significance*were developed by SAHRA in 2003. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

(a) Historic value

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

(b) Aesthetic value

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

(c) Scientific value

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

(d) Social value

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

(e) Rarity

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

(f) Representivity

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class?
- Is it important in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality?