Annex M

# Cultural Heritage Report Zambia

# THE BATOKA DAM ARCHAEOLOGICAL AND INTANGIBLE HERITAGE REPORT-FEBRUARY 2015

Compiled By Richard Mbewe : NHCC, Livingstone - Zambia.

**[M.A Archaeology ; University of the Witwatersrand, Johannesburg South Africa. B.A. History ; University of Zambia, Lusaka]**

## TABLE OF CONTENTS

## EXECUTIVE SUMMARY

This desk-based and mini reconnaissance assessment of Archaeological and Intangible Cultural Heritage in Zambia likely to be affected by the Batoka Dam proposals was carried out from 14th February to 19th 2015. The objective of this exercise was to update the 1998 Heritage Assessments in accordance with guidelines from the Zambia Environmental Management Agency (ZEMA) EIA Regulations, and the Zambian National Heritage Conservation Commission Act CAP 173 . This assessment also provided new information by investigating additional areas identified as part of the proposed development footprint that were not surveyed in the earlier study.

A total of 61 Archaeological and Traditional (sacred/ritual) sites are recorded in this report. Of these 25 sites were recorded in the previous research, while 36 new ones were located and recorded during the current field reconnaissance. Relevant mitigation measures have been proposed for those sites considered important to the history of the people that hail from this part of Zambia.

This report therefore identifies and describes sites of archaeological, historical and anthropological nature in the study area. It also outlines the potential impacts of the proposed development on these heritage resources. It further highlights possible mitigation measures for the negative impacts. Some recommendations have also been proffered to the developer to enhance the project's heritage sustainability.

This historical and archaeological review has revealed that the sacred or ritual sites in the area are intact and still in use by the local Leya people of Chief Mukuni for either rituals or traditional ceremonies. As such, these sites still have a lot of social and academic significance on the Zambian side of the Zambezi River. Full scale reconnaissance and mapping for the project area is suggested in order to have a complete understanding of the Cultural Heritage of the project area and its surrounding environs.

The report also showed that only two sacred sites (one burial and the other Ritual) lie within the proposed route for the power transmission lines betwee Munwana and Chibule Villages. The report further verified that Chemapato Hill has not been used by the Leya of Chief Mukuni for any rituals or rain-making supplications. The most propable explanation for its existence could be that it was used by early Tonga groups that initially settled in this part of the Zambezi Valley before the arrival of the Leya speaking people of chief Mukuni.

# Introduction

## 1.1 Background of the Project

The Zambezi River Authority (ZRA) is considering developing the proposed Batoka Gorge Hydro-Electric Scheme (HES) on the Zambezi River. This bilateral project between Zambia and Zimbabwe includes the construction of a concrete gravity arch dam that will provide up to 800 MW of electrical power each for Zambia and Zimbabwe with a total capacity of 1600 MW. The proposed Scheme is located approximately 50km downstream of the Victoria Falls within southern Province. A total of five (5) districts namely ; Livingstone, Kazungula, Zimba (newly created), Kalomo and Choma will be affected by the power transmission lines.

The following are the key components of the proposed Batoka HES Project:

- A 181m high dam wall and water impoundment upstream toward Victoria Falls World Heritage Site. The maximum height of the reservoir is tentatively set at 757m above mean sea level at which stage the reservoir surface area will cover approximately 25.6 $km^2$.
    - Powerhouses shall be constructed on each riverbank below the proposed dam wall.
    - Power Transmission lines to Livingstone and Choma,
    - Access roads to the HEP project area and,
    - New permanent residential areas and construction camps

# 2.0 Methodology

The preparation of this archaeological and intangible heritage report comprised three components namely ; desktop review, mini field/reconnaissance survey and oral interviews with the chief's Indunas (advisors). The project baseline determination consisted of an initial desktop review of earlier cultural heritage assessments as well as literature review. This was followed by a six-day field visit to the Batoka HES Project area on the Zambia side. A subsequent desktop review and consultation with Chief Mukuni and his Indunas/headmen over the proposed route for power transmission lines was undertaken. As for the proposed transmission power lines to Choma, the actual alignment is not yet known. However, if these lines will follow the existing transmission lines, then very little work will need to be done. At the moment there are no known archaeological or traditional sites along the existing route of transmission line. The oral interviews proved to be

particularly useful in getting information about the locations and significance of the many sacred and ritual sites within the project area, given that very little is written about them.

The mini field survey was undertaken for six days during the month of February 2015. This method was utilised to identify (on the ground) and describe archaeological and traditional sites in the proposed project area that could have been missed by the 1998 survey. A number of field transects along the lip of the gorge, using purposeful sampling method were made in the area. Using this method, a number of known sites of heritage interest in the project and adjacent areas were assessed. All the identified sites in the area were recorded and referenced using a hand-held Global Positioning System (GPS). Digital photographs of all identified archaeological sites in the area were taken to help with analysis of the same.

## 3.0 Study Limitations

**There were a number of limitations that affected the output of this report as outlined below;**

### 3.1 Inadequate Baseline information of sacred sites

The project area has had very little published research on traditional sites as these are kept as a secret by the elders of the communities. This scenario hampers the location of such sites on topographic map

### 3.2 Field work limitations

This report is informed by a reconnaissance Survey of those areas which current design suggest will be directly impacted by the proposals. In combination with the evidence from the 1993 and 1998 surveys this is sufficient to identify the key cultural constraints in the area. However, once designs for settlement areas and access road alignments are finalised, it is recommended that further intensive, systematic survey is undertaken.

## 4.0 General Desktop Review of Project Study Area

This activity mainly involved desktop study and review of available background information about the project area, including the review of relevant pieces of legislation. Documents reviewed included the generalised plan of the project area, survey maps, and records of the archaeological survey conducted in 1998. Some of these records are housed at Kariba House-ZRA Headquarters in Lusaka, while others were found in Livingstone. A further review was conducted on the other archaeological records held by NHCC at its Documentation Center in Livingstone.

A number of sources were consulted as part of the desk-based assessment and prominent among the were :-

- The 1998 ESIA Report
- The 1995 and 1996 SEA report by IUCN
- The archaeological register kept by the National Heritage Conservation Commission
- The 1993 ESIA Report

Other sources are listed in the bibliography

## 5.0 Legal and Planning Framework

The overall policy on environmental management in Zambia is largely based on the 1982 National Conservation Strategy Report and the 1992 National Environment Plan (NEAP). The National Conservation Strategy (NCS) was adopted as a Policy document by the government in 1985 and this led to the enactments of environmental legislation such as the Environmental Protection and Pollution Control Act (EPPCA) number 12 of 1990 and the establishment of a number of institutions. In 2009 the government launched the National Policy on Environment (NPE) which outlines the the environment and natural resources management policies needed to to address current and future threats to the environment, and provides Policy guidelines for sustainable develpment.

### 5.1 The National Heritage Conservation Commission Act (CAP 173 of 1989)

The Act provides for the conservation of ancient, cultural and natural heritage, relics and objects of aesthetic, historical, prehistoric, archaeological or scientific value by preservation, restoration, rehabilitation, reconstruction, adaptive use and good management. Sections 35 and 36 of this Act requires a developer to state the nature and extent of the development and to report to the Commission any new discoveries of items of archaeological or historical nature. This requirement applies to both the pre and post construction stage, particularly for archaeological resources which might not have been established at the time of the study.

### 5.2 The Environmental Management Act, No. 12 of 2011

This Act and its subsidiary regulations require Environmental Impact Studies for projects. Section 29 of this Act, Part 1, read together with Statutory Instrument No. 28 of the EIA

Regulations of the EPPCA of 1990 provides the framework for conducting and reviewing Environmental Impact Assessments.

## 6.0 Topography and Geology

The Victoria Falls and their immediate surrounding environs manifest elements of the exposed basaltic rock that underlie them. Basalt, the most common variety of the volcanic rock, is composed almost entirely of dark, fine-grained silicate minerals. The underlying Karroo Series Basalt dates to about 180 million years ago. It results from a repeated series of lava extrusions. Between these eruptions there were periods of sedimentation and it is in these lenses of sandstone that fossil remains may occur. Although not known locally, such remains have been found nearby in Lake Kariba Basin where the same geological sequence occurs. The potential for finding these paleontological sites has been raised in previous investigations, but as yet nothing has been found (Chikumbi, 1995).

The basalt forms both sides of the Batoka Gorge as well as constituting the dominant land surface of the Project Area. Generally soils are shallow or have been stripped bare by geomorphological surface processes – surface wash, soil and talus creep and fluvial incision. Away from the deeply incised Batoka Gorge, harder layers of basalt form ridges or plateaux. Where the rock is softer or brecciate, the basalt has decayed to form plains of deep deposits of granular rubble or finer dark soils. The process of seasonal alternate wetting and drying causes these soils to have a distinctive self-churning character.

In general, the geology of the Batoka Gorge is marked by a blanket of Kalahari Sand. The Kalahari Sands formation is comparatively recent in origin and overlies the basalt in many places. It is a relic of an extensive palaeo-lake and palaeo-dune system that was once a feature of this part of the world. The Kalahari sand is underlain by the Karoo beds including sandstones, chalcedony, gravels and clays (Fanshawe, 2010).
The Kalahari sands are the weathered product of the weak upper Karoo sandstone. These sands can be divided into whitish to golden coarse-grained sands of very low fertility, and the transitional grey or brown finer sands.

## 7.0 Archaeological and Historical Baseline

Based on the 1998 survey, IUCN Reports (1995, 1996) and other archaeological records held by the National Heritage Conservation Commission (NHCC) and Livingstone Museum revealed that most of archaeological work in the Victoria Falls area has been conducted on the Zambian side of the Zambezi River out of the Livingstone Museum and the National

Monuments Commission (now NHCC). In Zambia five archaeological areas have been identified and recorded. Hence, the Victoria Falls area and Livingstone in general are well known in terms of their archaeological and historical heritage. As such the archaeological sensitivity of the Zambian side is greater than its neighbours. The following is a brief summary of the known archaeological history on the Zambian side of the Zambezi valley.

## 7.1 The Stone Age

Stone Age Archaeology is well represented in the Zambezi Valley especially on both the Zambia side of the river. This is a result of intensive studies carried out in and around the Victoria Falls area and Livingstone in general. These studies have revealed a rich and long antiquity of human settlement in the Zambezi Valley. The earliest evidence in the area is found in the older gravels in the rocks of the Kalahari sands (Clark, 1995). The chalcedony, quartzite and Sandstone provided early man in the Falls area with raw materials for the manufacture of his implements. However, most glazed and patinated flakes, cores and retouched stone tools are more pronounced on the Zambian side.

To this effect, the Zambezi valley was one of the first places in Central Africa where stone tools were identified in the opening years of the Twentieth Century.

## 7.2 The Early Stone Age (Lower-Middle Pleistocene)

Archaeological evidence has shown that the earliest forms of humans to appear in Zambia belong to the genus Australopithecus. Though there are yet no fossil bone remains of these hominids in Zambia, a large assemblages of the Oldowan stone tools associated with the early hominid groups have been recovered at sites within the area of Victoria Falls and greater Livingstone. The Oldowan industry in the lower pleistocene is characterised by choppers and other heavy duty tools (crushers) made from flakes of various stone materials. These forms of earliest tools are dated to between 1.7 to 1.4 million years before present (BP). These simple, facetted cobblestones are found in secondary contexts in the older alluvial gravels of the Zambezi River (Katanekwa, 1981).

## 7.2 The Middle Stone Age (Upper Pleistocene)

As the Oldowan industry was gradually replaced by the Acheulian industry, so came the specialised manufacture and use of large and well-made tools. Early humans of this cultural epoch had began to attain appreciable level of standardisation in tool making that can be discerned from the Pear-shaped handaxes and straight-edged cleavers. These diagnostic

tool forms date between 1.4 million to 300,000 years ago. These tools have been found both in secondary contexts in the alluvial gravels where they occur as isolated tools, as well as in localised concentrations of several hundred. A particularly important Acheulean site was excavated as a tourist display near Songwe Point Lodge in Zambia.

The Bembezi or Sangoan Tradition (300,000 to 200,000 years BP) represents a later refinement of the lithic tools to smaller, pointed handaxes with the adoption of a more skilled flaking technique. These tools and those of the following Middle Stone Age (dating to between 200,000 to 35,000 years BP) are common throughout the region. The earliest tools in the Charama Tradition are chunky and irregular, but they become more refined with time. There are several temporal and regional variations in the Middle Stone Age with the Bambata Tradition the most common in the Victoria Falls area.

It appears that these early hunter-gatherer communities favoured this part of the Zambezi Valley. Their use of the characteristic Levallois flaking technique, large pyramidal cores, flakes with multi-facetted striking platforms and several standard formal tool forms makes for easy identification of these lithic assemblages. Triangular points, large rectangular blades and chunky scrapers are diagnostic tool forms. These groups are likely to have consisted of roaming bands that followed the larger plains game during their seasonal migrations, hunting being their principle economic sustenance.

## 7.3 The Late Stone Age (Lower-Middle Holocene)

About 40,000 years ago a new microlithic tradition emerged. These assemblages date from 35,000 to recent historic times, although most predate 1,000 AD. The Late or Later Stone Age is characterised by very small lithic artefacts. These microlithic tools were components in larger tools made from organic material, the latter rarely survives. Bladelets, small retouched tools and thumbnail scrapers are diagnostic tool forms, while cores show multiple parallel flaking or are smaller pyramidal forms.

The earliest assemblages combine several characteristic Middle Stone Age tool forms. Incidentally, the the Late Stone Age people did not practice food production or metallurgy, though they achieved an efficient level of socio-economic integration. The hunter-gatherer mode of production which first emrged in the lower pleistocene continued and still remained a viable cultural formation in the middle Holocene. The majority of the LSA sites have been found on the edges of dambos, valleys, along steams and river banks.

In the Zambezi valley, LSA assemblages have been lumped into regional variations of the ‘Wilton Techno-Industrial complex’. The local Zambezi Wilton requires further research in

the light of research elsewhere in the country which shows significant change through time.

It must be noted that in space these sites overlapped with that of the earlier Middle Stone Age sites, but are more often found in locations closer to the margins of the Zambezi and on local high points, especially where there are small natural rock overhangs. In most cases, the spread of occupation by the LSA people in relation to later groups shows that these groups moved in small family groups. Their smaller extent reflects the more limited band structure of these communities. They were somewhat more sedentary, exploiting smaller territories and placing a greater value on plants and small game as principle foods.

## 7.4 Iron Age (Upper Holocene)

At about 2,000 years ago, Zambia like other territories in central-southern Africa was occupied by early agro-pastoral farmers who practiced food production, animal husbandry and metallurgy. Some sites in Zambia show evidence of any early but gradual displacement of the LSA population groups by the Early Iron Age peoples. Iron Age economy implied intensive land use which effectively modified the environment by clearing vegetation and using land for both farming and cattle grazing.

The Iron Age seems to have evolved with the domestication of food plants and animals, and the introduction of iron and copper working technology, which revolutionized agriculture through the use of hoes and axes. Common forms of material evidence found at most Iron Age archaeological sites are pottery, iron slag tuyere (Clay pipes) fragments, iron products such as arrow heads and spears, bodkins, copper ingots, iron bangles and beads.

Research suggests that crop cultivation, the building of permanent village settlements and the working of iron and copper, appear as a cultural package in the opening years of the First Millennium AD. Studies of the remains of these settlements and the changing sequence of pottery decoration have been conducted along the Zambia side of the Zambezi River. A few isolated records suggest that similar sites exist on the Zimbabwean side of the Batoka Gorge.

## 7.5 Farming Community Sites

The cultural complexity and efficiency that was attained during the Iron Age triggered a mass movement of people from their original settlements in search of land, water, peace

and other resources. It was largely this momentum for a rapid flow of the peoples in this region that may have brought the ancestors of the present ethnic groups into Zambia.

The earliest Farming Community villages date to 200 AD. Assigned to the Shongwe Tradition, the earliest groups were scattered pioneers who occupied large, centralised villages built away from the Zambezi and adjacent to large marshy areas (*dambos*) that lie between the palaeo-dunes (Vogel 1971, 1975b). These first groups were gradually replaced or more likely evolved into the current Tonga-speaking communities who traditionally occupied this area. The archaeological record in Zambia suggests that the Toka-Leya have been present in this area since at least the Sixteenth Century AD.

# 8.0 Intangible Heritage

## 8.1 Cultural Context

On the Zambian side there are over Twenty (20) shrines or sacred sites within the Victoria Falls and along the Zambezi River that are revered by the Mukuni Royal Establishment (MRE). Thus the Victoria Falls were not only considered to be a holy place but as the ritual capital and lifeline for the Baleya people (Mukuni, 48:2013). These shrines have become part of cultural and medicinal inheritance of the Leya speaking people. These sites are used for various purposes at different times of the year. Below is a description of some of these sites and their significance for the people of Mukuni chiefdom.

### 8.1.1 Chizabingo Shrine

This shrine is in the vicinity of the Victoria Falls. It is used for invoking leza (God) for good rains during the Basilombelombe Lwiindi ceremony. At this site Chief Mukuni, Bedyango (female co-ruler) and Mutoozi we Namunaki placate the ancestral spirits of the Namunakela royal burial grounds. Here ritual warriors, Basilombelombe, smear their bodies with “Mpemba” - limestone clay - and dress in leaves to symbolize their having become one with nature. As such they are supposed to take up responsibility henceforth to live in harmony with the natural environment. This site is still active and in use for rain-making ceremonies (Nzala, Pers Comm., 2015).

### 8.1.2 Kaanda Kaleza Shrine (Rain Temple)

Literally meaning the rain temple, the people in the chiefdom practice the Leya Tribal Religion as it was before the coming of colonial rule and Christianity. The use of water from the Victoria Falls confirms the tribal belief that the abode of their god was in the Falls area. They believed that god was the one that brings rain and not ancestral spirits. The role of the ancestral spirits was to intercede with god on behalf of the living. At this shrine beer is not allowed as it viewed as a product of human hands which have no magical powers to create rain. This site is significant to locals as it is used to seek solutions to various societal needs (Mukuni, 43:2013).

### 8.1.3 Simukale Cultural Site (17° 55' 16.7"S, 025° 53' 39.7"E)

This is a site of history or memory. It is from whence the current dual origin of the "Bene Mukuni Leya kingdom" of Nsyungu Namutitima (Victoria Falls) was harmonized to bring about gender sensitive dual ruler-ship between Mukuni and Bedyango. This site serves as a place for re-enactment of the journey Mukuni made from Kola (Congo) to Victoria Falls area. It was at this site where Mukuni was received into the Baleya Kingdom (Mukuni, Pers Comm. 2013). Every year the annual Lwiindi ceremony of Mukuni is held at this historical site. The events start with rituals from the grave of the first Mukuni and the final rituals are performed at this site in the presence of invited regional chiefs, presidents and other royals.

Figure 1: Simukale cultural site showing symbolic baobab tree and memrial dias and stairs that represent past chiefs.

### 8.1.4 Namunakela Royal Burial Grove

Like with most chiefdoms, Mukuni has a special place where state functions of tribal importance are conducted. Namunakela is place where coronation of chiefs is done. Further the death of the chief is also announced from this place. Bwande (receiving of first crops from the fields) rites and funerary rites for the departed chief are performed here. This is one of the most active sites in the chiefdom since Bwande is performed every year. This royal grove is to the west of Mukuni village (Mukuni, 44:2013).

### 8.1.5 Kwa-Sichichele Site

This is a royal grave for his majesty Sichichele Mukuni VII who was buried alive after successfully surviving poisoning attempts according to tradition in Namilangu. He was liable to be killed due to symptoms of incipient decay. This was done to avert a situation where pretenders could usurp state functions. He was later exhumed and given a befitting royal burial at Namunakela royal grove (Mukuni, 50:2013).

### 8.1.6 Siloka Island Shrine

This Island previously known as “Long Island” served as one of the Headquarters of Mukuni chiefdom besides Mukuni Royal Village, for Siloka I Mupotola II Mukuni XIV who had established his village on this Island. He was buried on this Island temporarily but was later transferred to Namunakela Royal grove. Arising from this, Siloka Island is a pilgrimage site for the Leya people of Mukuni chiefdom (Mukuni, 47: 2013).

### 8.1.7 Katola Buseka (Bunji Jump Point)[17° 55' 46.7"S, 025° 51' 23.8"E]

This was one of the most valued shrines. It was from here that offerings of most valued possessions were conducted. This shrine is no longer in use though the people still revere it. The offering of valued gifts was done to placate ancestral spirits and ask for blessings in the chiefdom. The offerings called for a cheerful giver or else anyone giving grudgingly would be swallowed up! It is for this reason that chief Mukuni himself took the first Bunji Jump from this place as a way of pleasing the spirits.

### 8.1.8 Nsamba Dwazi [17°55' 20.0"S, 025° 51' 47.8"E]

This shrine is located within the Victoria Falls eastern cataract area. The site is still in use though infrequently. This site is used for disease-cleansing rituals. Here the Bedyango (Female Co-Ruler) exercises her office’s miraculous gift of healing various diseases. This site was partly disturbed by the construction of sluice intake canals for power generation

by ZESCO Ltd. Despite this disturbance, the site is still revered by many elders of the chiefdom.

Figure 2: Nsamba Dwazi shrine in the Victoria Falls

### 8.1.9 Chiposyo (Boling-Pot area)

This is another important shrine in the chiefdom where “holy water” is drawn for rain making rituals. The site is significant in the traditions of the Leya speaking people of chief Mukuni because without it, it would be impossible to carryout rain making activities in the chiefdom.

### 8.2.0 Chisamu Chilikumbede (Lip of the Falls) [17°55' 32.6"S, 025° 51' 47.0"E]

This is also one of the most important shrines in the Victoria Falls area. It is at this point that the ritual warriors commonly known as “Basilombelombe” draw water during the November Lwiindi ceremony also known as ‘Lwiindi la Basilombelombe”.

Figure 3: Rain Warriors Shrine showing grove

## 9.0 Results of Current Archaeological Fieldwork

This section lists all the sites located during the current field reconnaissance carried out between the 14th and 19th February 2015. It provides a general description of each site located, its cultural assemblage and an assessment of site integrity. An evaluation of sites' significance both from community and academic importance was made. Finally, all the sites recorded are individually named.

### 9.1 ZESCO Sub-Station Site

This is a Middle Stone Age site adjacent to the main power generation Sub-station. It is on coordinates : 17 56' 07''S and 25 51' 51.0'' E. This site is currently disturbed by ground clearance during maintenance of the the power station.

**Figure 4 : MSA Artefacts : Source RM 2015**

## 9.2 Gorge Swing Site 1

Located on the northern section of the launch pad for the Gorge Swing activity, this is a Late Stone Age site. It is located on coordinates ; 17 56' 42.3'' S and 25 51' 26.4'' E. This site is completely disturbed by vegetation clearing at the launch pad area.

**Figure 5 : MSA Artifacts from Gorge 1 : Source RM 2015**

## 9.3 Gorge Swing Site 2

Located on the southern end of the activity platform, the site has the following coordinates ; 17 56' 43.5'' S and 25 51' 36.8'' E. This is a Late Stone Age site with an extent of about 100 square meters. The site is still intact.

**Figure 6: MSA Artifacts from Gorge Swing sites**

## 9.4 Gorge Swing site 3

This site is located on coordinates 17 56' 51.6'' S and 25 51' 33.4'' E. It extends to about 50 Square meters. The site is generally in good condition.

## 9.5 Gorge Swing Receiving Point

This is another Late Stone Age site. It is located on coordinates 17 56' 47.3'' S and 25 51' 23.0'' E. The site is still intact besides being near the access road to the Park.

## 9.6 Songwe Gorge Road Site

The site is located on coordinates 17 56' 36.2'' S and 25 51' 23.0'' E. This is another MSA site still intact. It is significant for further research as sits at the confluence of the Songwe River and the Zambezi River. The Zambezi-Songwe river confluence is a very important research area as earlier research has shown a continuous sequence of habitation by all stages of development. Archaeological research by John Desmond Clark at Songwe MSA National Monument site which is just above the confluence, for example, revealed the presence of both ESA and MSA artefacts. In this regard, the Zambezi-Songwe river confluence provides an alternative research site after the earlier excavated site was destroyed by rafting companies that were using the area as orientation and disembarking platform for their clients.

**Figure 7 : MSA artifacts from Songwe Gorge Area**

## 9.7 Old Look out Platform LSA Site

This site is located on top of hill over looking the Victoria Falls. Its coordinates are ; 17 56' 34.6'' S, and 25 52' 09.0'' E. This site heavily disturbed by campers that frequent this area on picnics.

## 9.8 Songwe Gorge MSA/LSA site

This site is a declared National Monument. Its coordinates are 17 58' 03.8'' S and 25 51' 56.4'' E. The size of this site exceeds 100 square meters. The site is partially disturbed by many Rafting companies that launch their activities at this site.

**Figure 8: showing artifacts from Songwe MSA National Monument site**

## 10.0 Songwe Point Site 1

This is a LSA site on coordinates 17 58' 07.5'' S and 25 51' 54.5'' E. The site was once excavated and its artifacts displayed for tourists that visited a Lodge that was constructed here. This site is now completely destroyed by developments that took place here.

## 10.1 Songwe Point Road LSA

This is a big MSA/LSA site located on coordinates 17 58' 08.8'' S and 25 52' 39.8'' E. The stretches over 200 metres on both side of the access road to Songwe gorge. This site is partially disturbed by road construction works.

## 10.2 Songwe Point Site 2

This site shows the shows the occurrence of both LSA and IA settlements. It is on coordinates 17 58' 16.3'' S and 25 52' 03.7'' E. The site extends over 40 square meters and is still intact. It is signigficant for further academic research.

## 10.3 Songwe Point Site 3

Located at the lip of the Songwe Point Gorge, this site bears both the LSA and IA attributes. Pottery and micrilithic stone tools are present. Its coordinates are 17 58' 24.7'' S and 25 52' 11.4'' E. This site was destroyed by the construction of the now gutted Somgwe Point Lodge.

**Figure 9 : Settlement site at Songwe point Lodge**

## 10.4 Rapid 14 Site

This is a LSA site located where Over lands Mission station is built. It streches over 100 square meters. Its coordinates are 17 58' 45.5'' S and 25 53' 07.0'' E. The site is now disturbed by construction of various structures by the missioneries.

## 10.5 Taita Falcon Lodge Site

This site located above rapid 16 and 17. Its coordinates are 17 58' 52.7'' S and 25 54' 39.2'' E. The site has assemblages of both the LSA and IA technologies. The site was disturbed by the construction of the Taita Falcon Lodge structures.

## 10.6 Machenje Road MSA Site

Located near the access road to the proposed power station, the site is still intact. Its coordinates are17 58' 50.6'' S and 25 59' 12,3'' E. The site is likely to be disturbed if the access road to the project area is expanded further to the east.

## 11.0 Observations from the reviewed previous ESIA materials

- **The Proposed Residential Settlements**

  Of particular concern are the footprints of the residential settlements planned for the both the temporary construction staff of the Batoka HES and those permanently employed in its subsequent operations. These locations will have an extensive Cultural Heritage impact as they will cover large areas suited to past human habitation.

  The previous Environmental and Social Impact Assessment (ESIA) reports done in 1993 and 1998 respectively were reviewed for accuracy of information presented. It is noted that these reports covered some of the Cultural Heritage resources in the project area. However, in the process of reviewing these reports, several gaps in the Cultural Heritage Baseline were identified. Firstly, all the 25 sites identified in the 1998 survey were archaeological in nature. No traditional or ritual sites were recorded. Secondly, the report did not record any important historical sites (coronation, memorial and royal burial grounds) that are present in the area. This omission could have created serious tension between the local people and developer.

  Similarly, the report did not make any mention of the rain-making sites in the vicinity of Mukuni village and those in the Victoria Falls area. These sites are important because they regulate what happens in the entire chiefdom.

- **The 1993 and 1998 Assessments**

  Through this assessment, the archaeological history of the region was summarised. A very limited number of sites on the Zambian side were recorded by the consultant. No precise grid references for these sites are given in the 1993 report, although these were later established in the 1998 investigation. Although the 1998 report was comprehensive and several areas were investigated, there is still a need to update the 1998 assessment with photographic records and full location references taken by GPS.

- **Desktop Review of Transmission Lines**

  It is necessary to review the likelihood of possible cultural heritage resources along the two proposed electricity transmission lines linking the Batoka HES to the Victoria Falls Power Station in Livingstone. A desktop review was carried out in order to provide an overview and assist the project engineers in assessing the transmission lines route options. A mini reconnaissance survey to this area and oral interviews

with the chief's advisor were conducted. Therefore, a comprehensive Cultural Heritage Impact Assessment of the proposed transmission line routes to Livingstone and those going north east wards to Choma has not been undertaken. This requires additional work on the ground reconnaissance and a separate Cultural Heritage report for approval.

However, along the current proposed power transmission route there are no known archaeological sites except for two sacred sites; one burial area and a ritual site. These two sites are on the extreme left side of the proposed area near Munwana village. There is need to verify the actual route to avoid destroying or disturbing these important traditional sites.

- **Batoka Gorge Dam Wall site**
  The Batoka dam wall area itself was not fully explored, although investigated to a limited extent. The relief around this area is too steep and lacking in essential resources to support past human settlement on the slopes of this gorge. However, the absence of human habitation may be real but there remains a strong possibility that heritage sites may have been missed along the greater length of the Gorge that were not fully surveyed. On the Zambian side two small caves/overhangs near Taita Falcon Lodge were reported to exist by the lodge owners. However, these small overhangs were ruled out of having any significant archaeological material or let alone supporting human habitation since they occur in the mid section of the gorge slopes. It is practically impossible for humans to reach these overhangs in their current position. It was further reported that only Leopards use these small overhangs as their homes.

## 12.0 Conclusion and Recommendations

The proposed construction of the Batoka gorge HEP project will have both negative and positive impacts on the environment and heritage resources in the area. However, most of the archaeological resources are well above the areas that will be flooded. On the Zambian side of the project, all the archaeological sites recorded are well above the flood level of the reservior. As such, they will not be affected by the flood waters of the new dam. As for those in and near the proposed residential areas and construction camps, the only possible impact will be during land crearing by heavy earth moving equipment.

It must also be noted that most of the sacred sites are within the Victoria Falls World Heritage Site, which is far away from the physical impacts of the construction process. The only two sites that may be impacted negatively by power transmission lines are the two local cemeteries near Munwana and Chibule villages. Some underground archaeological artefacts may also be affected in areas proposed construction since these can only be seen upon excavation of the ground

In order to ensure that the client adheres to the rules and regulations of the state, there is a need to carry out intensive, systematic surveys of all areas directly affected by the proposals, including within Gorge itself. This should be conducted at an appropriate time (July to October) when there is no vegetation cover in the area. It is also recommended that archeologists visit the construction site regularly during the ground breaking period at various construction sites (housing roads, and Dam Wall area).

In the event that archaeological findings are found during the construction and operational phases of the project, the NHCC archaeologist should be contacted as a matter of urgency for specialist advice and interventions.

With regards to the signifiance of Chemapato Hill to the local people of chief Mukuni, no information was made available by our informants. The people chief Mukuni seem not to have any connection or reverence to this site. The chief's advisor (Induna) categorically denied having any ancestral or ritual connection with the hill. He instead infered that the site could have been used by earlier Tonga gropus that originally lived in the area before the arrival of the Leya speaking people.

This belief is reinforced by the fact that pottery found at Chemapato fits into the the Kalomo Tradition that was practiced by the early Tonga groups that lived in this area, but now found on the plateau area of Choma and Kalomo (Vogel, 1971).

## Appendix I

List of all sites identified and recorded in the project area on the Zambia side during the 1998 Survey

| Batoka Dam, Zambia - Cultural Heritage Site Gazetteer | | | | | |
|---|---|---|---|---|---|
| **Site No** | **Name** | **Description** | **Co-ordinates Grid Ref** | **Period** | **Source/Reference** |
| 01 | Chibongo | Archaeological | 042188 | ESA | 1998 Survey |
| 02 | Mukuni | Archaeological | 901199 | MSA | 1998 Survey |
| 03 | Mukuni | Archaeological | 899198 | ESA/MSA | 1998 Survey |
| 04 | Mukuni | Archaeological | 897197 | MULT | 1998 Survey |
| 05 | Sing'andu | Archaeological | 911192 | ESA/MSA | 1998 Survey |
| 06 | Sing'andu | Archaeological | 934187 | MSA | 1998 Survey |
| 07 | Sing'andu | Archaeological | 932188 | EIA | 1998 Survey |
| 08 | Sing'andu | Archaeological | 948185 | EIA | 1998 Survey |
| 09 | Kabozya | Archaeological | 864186 | ESA/MSA | 1998 Survey |
| 10 | Kabozya | Archaeological | 975186 | ESA | 1998 Survey |
| 11 | Proposed Area A | Archaeological | 001182 | LSA | 1998 Survey |
| 12 | Proposed Area B | Archaeological | 001196 | LIA | 1998 Survey |
| 13 | Proposed Area C | Archaeological | 993194 | LIA | 1998 Survey |
| 14 | Proposed Area D | Archaeological | 993192 | LSA/LIA | 1998 Survey |
| 15 | | Archaeological | 014203 | LSA | 1998 Survey |
| 16 | Lombelombe | Archaeological | 044207 | LIA | 1998 Survey |
| 17 | Lombelombe | Archaeological | 051208 | MSA/LSA | 1998 Survey |
| 18 | | Archaeological | 019205 | LSA | 1998 Survey |
| 19 | Chibonga | Archaeological | 043195 | ESA | 1998 Survey |
| 20 | Kanbozya | Archaeological | 951185 | LIA | 1998 Survey |
| 21 | Momba Highlands | Archaeological | 026183 | LIA | 1998 Survey |
| 22 | Momba | Archaeological | 990168 | ESA/MSA | 1998 Survey |
| 23 | Momba | Archaeological | 994166 | MSA/LSA | 1998 Survey |
| 24 | Momba flood plane | Archaeological | 010166 | MSA/LSA | 1998 Survey |
| 25 | kABOZYA | Archaeological | 967114 | MSA | 1998 Survey |

## Appendix II

List of all sites identified and recorded in the project area on the Zambia side during the current Survey (February 2015).

| Batoka Dam, Zambia - Cultural Heritage Site Gazetteer | | | | | |
|---|---|---|---|---|---|
| **Site No** | **Name** | **Description** | **Co-ordinates** | **Period** | **Source/Reference** |
| 01 | ZESCO Sub-Station Site | Archaeological | 17 56, 25 51 | ESA | RM Field Survey |
| 02 | Gorge Swing 1 | Archaeological | 17 51, 25 51 | MSA | RM Field Survey |
| 03 | Gorge swing 2 | Archaeological | 17 56, 25 51 | LSA | RM Field Survey |
| 04 | Gorge swing 3 | Archaeological | 17 56, 25 51 | LSA | RM Field Survey |
| 05 | Gorge Swing Point | Archaeological | 17 56, 25 51 | ESA/MSA | RM Field Survey |
| 06 | Songwe Gorge Rd | Archaeological | 17 56, 25 51 | MSA | RM Field Survey |
| 07 | Look out Platform | Archaeological | 17 58, 25 52 | LSA | RM Field Survey |
| 08 | Songwe Gorge MSA | Archaeological | 17 58 25 51 | MSA/LSA | RM Field Survey |
| 09 | Songwe Point 1 | Archaeological | 17 58, 25 51 | ESA/MSA | RM Field Survey |
| 10 | Songwe point Rd | Archaeological | 17 58, 25 52 | ESA | RM Field Survey |
| 11 | Songwe Point 2 | Archaeological | 17 58, 25 52 | LSA | RM Field Survey |
| 12 | Songwe Point 3 | Archaeological | 17 58, 25 53 | LIA | RM Field Survey |
| 13 | Rapid 14 | Archaeological | 17 58, 25 53 | LSA | RM Field Survey |
| 14 | Taita Falcon Lodge | Archaeological | 17 58, 25,54 | LSA/LIA | RM Field Survey |
| 15 | Machenje | Archaeological | 17 58, 25 59 | MSA | RM Field Survey |
| 16 | Machenje Rd | Archaeological | 17 56, 25 57 | MSA | RM Field Survey |
| 17 | Chibule 1 | Archaeological | 17 54, 26 02 | MSA/LSA | RM Field Survey |
| 18 | New Batoka Gorge Rd | Archaeological | 17 54, 26 05 | LSA | RM Field Survey |
| 19 | Chibule 2 | Archaeological | 17 55, 26 01 | MSA | RM Field Survey |
| 20 | Chizabango Shrine | Traditional | | | Chief Mukuni |
| 21 | Kaanda Ka Leza | Rain Temple | | | Chief Mukuni |
| 22 | Simukale Site | Historical | 17 55, 25 53 | C18th | Chief Mukuni |
| 23 | Namunakela Shrine | Coronation | | | Chief Mukuni |
| 24 | Kwa-Sichichele | Royal Burial | | | Chief Mukuni |
| 25 | Siloka Island | Royal Burial | | | Chief Mukuni |
| 26 | Katola Buseka | Shrine | 17 55, 25 51 | | Chief Mukuni |

| | | | | | |
|---|---|---|---|---|---|
| 27 | Nsamba Dwazi | Ritual shrine | 17 55, 25 51 | | Chief Mukuni |
| 28 | Chiposyo | Rain Rituals | | | Chief Mukuni |
| 29 | Chisamu Chilikumbede | Lwiindi Rituals | 17 55, 25 52 | | Chief Mukuni |
| 30 | Munwana Grave | Local Burial | | | Nzala Ernest |
| 31 | Lumpasa Palace | Residence | | | Chief Mukuni |
| 32 | Gundu | Mukuni Royal Vlge | | C18th | Chief Mukuni |
| 33 | Namakabwa Is | Settlement | | C18th | Chief Mukuni |
| 34 | Namuchila | Sacred Chamber | | C18th | Chief Mukuni |
| 35 | Namunaki | Holy Tomb | | Pre-C18th | Chief Mukuni |
| 36 | Nanjina Palace | Residence-Co ruler | | Pre-C18th | Chief Mukuni |

## 13.0 REFERNCES


Armstrong, A.L. and Jones, N. 1936. The antiquity of man in Rhodesia as demonstrated by stone implements of the ancient Zambezi gravels, south of Victoria Falls. *Journal of Royal Anthropological Institute LXVI*: 331-368.

Bond, G. and Clark, J.D. 1954. The Quaternary Sequence in the Middle Zambezi Valley. *South African Archaeological Bulletin IX (36):* 115-130.

ERM. 2012. *The ERM Impact Assessment Standard v1.0*. Annex B – 5 Cultural Heritage.

Chikumbi D.C 1998. Specialist report on Archaeology and Cultural History Issues. Special report S2 of the environmenta Impact Assessment for the proposed Sun International Hotel, Sandton, Johannesburg.

Clark, J.D. 1950. *The Stone Age Cultures of Northern Rhodesia*. Claremont: The South African Archaeological Society.

Clark, J.D. 1952. Prehistoric Man at the Falls. In Clark, J.D. (ed.), *The Victoria Falls Illustrated: a handbook to the Victoria Falls, the Batoka Gorge and part of the Upper Zambezi Valley*. Livingstone: Commission for the Preservation of Natural and Historical Monuments and Relics: Northern Rhodesia. pp. 57-66.

Clark, J.D. 1955. *Third Pan-African Congress on Prehistory. Excursion Handbook Northern Rhodesia*. Lusaka: Government Printer.

Clark, J.D. 1975. Stone Age man at Victoria Falls. In D.W. Phillipson (ed.), *Mosi-oa-Tunya: a Handbook to the Victoria Falls Region*. Salisbury: Longman Rhodesia. pp. 28-47.

Denbow, J. 1979. Cenchrus ciliaris: an ecological indicator of Iron Age Middens using aerial photography in eastern Botswana. *South African Journal of Science 76: 405-8.*

Du Toit, R.F. 1982. *A preliminary assessment of the Environmental Implications of the proposed Mupata and Batoka Hydro-Electric Schemes (Zambezi River, Zimbabwe).* Harare: Natural Resources Board.

Fagan, B.M., Phillipson, D.W., and Daniels, S.G.H. 1969. *Iron Age Cultures in Zambia (Dambwa, Ingombe Ilede and the Tonga) Vol. 2*. London: Chatto and Windus (National Museum of Zambia Robins Series No. 6).

Huffman, T.N. 1989. *Iron Age Migrations: the ceramic sequence in southern Zambia.* Johannesburg: Witwatersrand University Press.

IUNC 1996. *SEA Report, The Batoka Gorge Hydropower Scheme*. Scanned copy supplied by ZRA.

Katanekwa, N.M 1972. National Monuments of Zambia, Livingstone.

Mitchell, P. 2002. *The Archaeology of Southern Africa*. Cambridge: Cambridge University Press.

Mukuni Munokalya, 2013. Short History of the Mukuni Royal Dynasty

Moore, A. and Cotterill, F. 2010. Victoria Falls: Mosi-oa-Tunya - The Smoke that Thunders. In P. Migoñ, P, *Geomorphological Landscapes of the World*. Springer. pp. 143-153.

Mubitana, K. 1975. The traditional history and ethnography. In D.W. Phillipson (ed.) *Mosi-oa-Tunya: a Handbook to the Victoria Falls Region.* Salisbury: Longman Rhodesia. pp. 59-72.

Phillipson, D.W. 1975. *The Iron Age in Zambia.* Lusaka: National Educational Company of Zambia (The Historical Association of Zambia, Booklet 5).

Phillipson, D.W. 1977 The later prehistory of eastern and southern Africa. London : Heinemann.

Vogel, J. 1971a. *Kamangoza: an introduction to the Iron Age Cultures of the Victoria Falls region*. Lusaka: Oxford University Press (Zambian Museum Papers 2).

Vogel, J.O. 1971b. Kumagzulo: an early Iron Age village site in Southern Zambia (Zambian Museum Papers 3).

Vogel, J.O. 1975a. *Simbusenga: the archaeology of the Intermediate Period of the Southern Zambian Iron Age*. Lusaka: Oxford University Press (Zambian Museum Papers 4).

Vogel, J.O. 1975b. The Iron Age archaeology. In D.W. Phillipson (ed.) *Mosi-oa-Tunya: a Handbook to the Victoria Falls Region*. Salisbury: Longman Rhodesia. pp. 48-59.

ZRA, 1998 EISA Report. Scanned Report Volume 4a. Pp 161-209

Appendix A

# Addendum for the Proposed Quarry Site associated with the BGHES

# ARCHAEOLOGICAL/CULTURAL HERITAGE IMPACT ASSESSMENT ADDENDUM FOR THE PROPOSED QUARRY SITE ASSOCIATED WITH THE BATOKA GORGE HYDRO ELECTRICITY SCHEME – ZAMBIA


COMPILED BY
RICHARD MBEWE
SENIOR ARCHAEOLOGIST [NHCC]

30TH JANUARY 2019
Revised 11 February 2019

# 1.0. Introduction

## 1.1. Background to the Project

The Zambezi River Authority (ZRA) proposes quarry sites in both Zambia and Zimbabwe to facilitate various construction works during the implementation of the Batoka Gorge Hydro-electrical scheme (HES). This report relates to the proposed quarry on the Zambian side and is an addendum to the 2016 archaeological impact assessment (van der Walt & Mbewe 2016) for the Batoka HES, forming part of the overall Environmental Impact Study (EIS) conducted by ERM.

The main aim of the current study is to investigate, identify, assess and document any significant archaeological and other cultural heritage resources in the proposed quarry footprint. The results and recommendations of this addendum should be read in conjunction with earlier baseline studies (van der Walt & Mbewe 2016) conducted on the Zambian side for the proposed settlement areas, access roads, and the Dam wall and transmission corridors. Further, the current study seeks to evaluate any negative impacts and provide mitigation measures on any heritage resources that might be affected by the quarry operations.

## 2.0 Project Description

The ZRA is considering opening up two areas, one in Zambia and the other in Zimbabwe respectively, providing quarry aggregate for the construction phase of the Batoka Gorge HES and other associated infrastructure. On the Zambian side, the area of direct impact was subjected to a field assessment by a professional archaeologist.

## 2.1. Location and size

The proposed quarry site is located on the north bank of the Zambezi River adjacent to the area proposed for the Batoka Dam Wall (Figure 1). The coordinates for the central point of the proposed quarry site is 17º 54’ 59.28” S & 26º 05’ 28.74” E. The main area of direct impact is about 70 hectares within the Southern Province of Zambia within Kazungula District (Katapazi ward), which falls under Chief Mukuni’s Traditional jurisdiction.

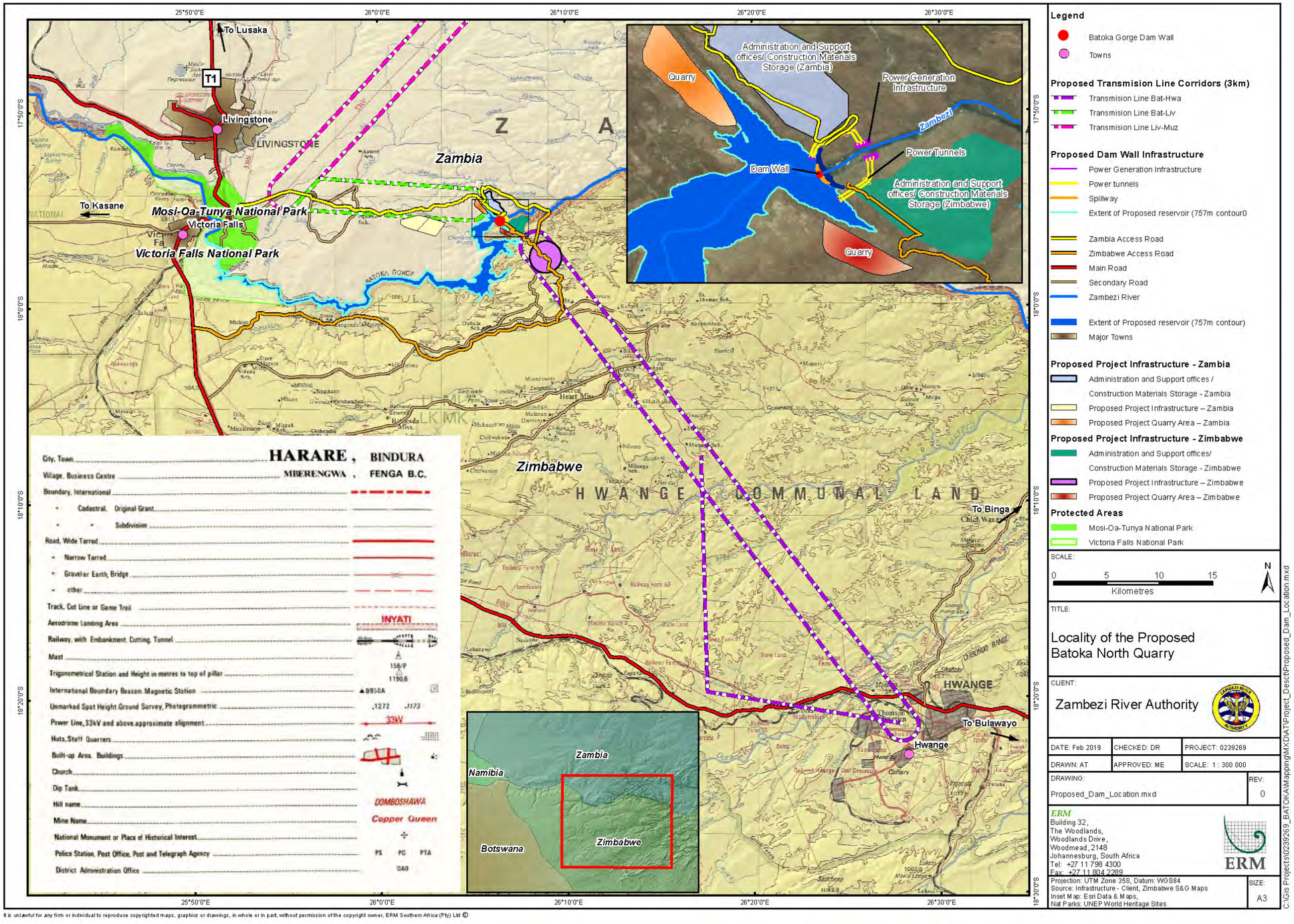




**Figure 1: Locality of the Proposed Batoka North Quarry**

### *2.2. Heritage Assessment TOR*

The Terms of Reference (ToRs) for the Archaeological/Cultural Heritage Impact Assessment for the proposed Batoka HES quarry site in Zambia is outlined below:

***Terms of Reference***

1) A literature review of previous research/assessments conducted on archaeology and cultural heritage baseline;
2) The adopted methodology for the assessment;
3) Description of archaeological and other cultural heritage resources, if any, in the proposed project area;
4) Table showing the list of identified archaeological and cultural heritage sites in the project area;
5) Appendix of photographs of any identified archaeological and cultural heritage sites, and
6) References and bibliography.

## 3.0. Study Team

The team that conducted the current survey consisted of **Richard Mbewe**, a Zambian Archaeologist from the National Heritage Conservation Commission in Zambia. He was accompanied in the field by **Belinda Huddy** from ERM and **Mavis Nawa** from ZRA. **Mr. Mbewe** is a holder of a Master of Arts (MA) in Archaeology (Rock Art Studies) - Wits University, South Africa; Bachelor of Arts Degree (History and English, UNZA). He has also completed a certificate in Cultural Heritage Management, a Certificate in Rock Art Management (Cape Town) and a Certificate in Heritage Impact Assessment (ZEMA). Richard is currently the Senior Conservation Officer-Cultural Heritage [Archaeologist] at the National Heritage Conservation Commission in Zambia.

## 4. 0 Methodology

The following methodologies were employed to determine the potential occurrence of archaeological and heritage sites and the significance of such identified sites.

### 4.1 Literature Review

This activity was undertaken together with information relating to known archaeological and other cultural heritage resources within the proposed quarry site. A variety of primary and secondary sources such as Journals, Textbooks, Heritage Register, National Monument Guide and other professional reports and records were consulted for additional information relevant to the study.

### 4.2 Kick-off meeting

Prior to the fieldwork, a kick-off meeting was held between the author, representatives of both the ZRA and ERM on the morning of 18$^{th}$ January 2019.

### 4.3 Field Surveys (18 January 2019)

A physical survey of the proposed quarry site was conducted on 18th January 2019, primarily on foot, as the rugged terrain (Figure 2) restricted vehicle access. The archaeological survey consisted of non-intrusive methods, relying solely on surface observations. Focal points during the current survey activities concentrated on patches of Pleistocene gravels and drainage lines. Open areas in the natural topography were also surveyed for any evidence of heritage resources. No excavations were conducted.

**Figure2: General view of the proposed quarry site**

### 4.4 Assumptions and limitations

#### *4.4.1 Assumptions*

Although the archaeologist surveyed the area as thoroughly as possible, there is a possibility that some cultural remains may not have been discovered during the surface survey, both due to the subsurface nature of cultural heritage remains and the rugged terrain. It is therefore incumbent upon the developer to inform the relevant heritage authority should any cultural heritage remains be unearthed during the quarrying process, as this study does not claim to have recorded every site/artefact on the landscape.

#### *4.4.2 Limitations*

One limiting factor during the current study was the steep slopes of the quarry site, which made it practically impossible to reach the bottom/base of the gorge for a visual assessment.

### 4.5 Consultation

Before undertaking the field survey, the archaeological consultant, Mr Richard Mbewe consulted Mr Enerst Nzala (special advisor to his Royal Highness Chief Mukuni of the Leya People) on any possibility of the presence of Sacred or Ritual sites in the proposed quarry site. In his response, Mr Nzala confirmed to the consultant that there were no Sacred or Ritual sites within the proposed quarry development footprint (Personal Communication, 15th January 2019).

## 5.0 Findings

The survey was conducted using "West-to-East" transacts within the proposed quarry footprint. Different environmental areas were surveyed for possible heritage resources. These included both open and forested areas (Figure 3).

**Figure 3: Some of the areas surveyed for heritage resources**

No archaeological or other cultural heritage resources were identified in the proposed quarry area. Furthermore, no fossils, graves, sacred or traditional sites were discovered in the study area. This is largely attributed to the fact that the proposed quarry site has never been inhabited by the Leya or any other ethnic group in the past or at present as the area in question is generally hilly, rocky and rugged (Figure 4) and not suited to human settlement.

**Figure 4: Rocky and rugged landscape characteristic of the project area**

## 6. Conclusion

From a heritage perspective, the proposed quarry site is viable as no known heritage resources occur in the impact area. As outlined in the 2016 impact assessment, there are sufficient mitigation measures proposed that will reduce the impacts to chance finds in the project area.

## REFERENCES


1. Burrett, R. 2015. Tangible Cultural Heritage Report – Batoka Gorge Hydro-Electric Scheme, Zimbabwe. Unpublished Report for ERM.
2. Clark, J.D. 1950. *The Stone Age Cultures of Northern Rhodesia*. Claremont: The South African Archaeological Society.
3. Clark, J.D. 1952. Prehistoric Man at the Falls. In Clark, J.D. (Ed.), *The Victoria Falls Illustrated: a hand book to the Victoria Falls, the Batoka Gorge and part of the Upper Zambezi Valley*. Livingstone: Commission for the Preservation of Natural and Historical Monuments and Relics: Northern Rhodesia. pp. 57-66.
4. Katanekwa, N.M 1972. National Monuments of Zambia, Livingstone.
5. Mbewe, R. 2015. The Batoka Dam Archaeological and Intangible Heritage Report-February 2015
6. National Register of Heritage Resources, 2005.
7. Van der Walt, J and Mbewe, R. 2016. Archaeological Impact Assessment For The Infrastructure Component Of The Batoka Gorge Hydro-Electric Scheme, Zambia
8. Vogel, J. 1971a. *Kamangoza: an introduction to the Iron Age Cultures of the Victoria Falls region*. Lusaka: Oxford University Press (Zambian Museum Papers 2).