

ENVIRONMENTAL IMPACT ASSESSMENT (EIA): FINAL SCOPING REPORT  
FOR THE  
CONSTRUCTION OF NAMBWA CAMPSITE IN  
BWABWATA NATIONAL PARK (**KWANDO CORE AREA**), ZAMBEZI  
REGION (NAMIBIA)

**SUBMITTED TO:**

THE ENVIRONMENTAL COMMISSIONER

**PROJECT PROPONENT:**

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## **TABLE OF CONTENTS**

<b>CHAPTER 1: INTRODUCTION</b>	<b>4</b>
1.1 Executive Summary and Overview	4
1.2 Project Proponents	6
1.3 Purpose of the EIA	7
1.4 Scope of the EIA Study	8
1.5 Stakeholder Consultations	10
<b>CHAPTER 2: DESCRIPTION OF PROPOSED PROJECT</b>	<b>14</b>
2.1 Location	14
2.2 Project Rationale	15
2.3 Project Description and Alternatives	17
2.4 No Go Alternative	23
<b>CHAPTER 3: LEGAL, REGULATION AND POLICY FRAMEWORK</b>	<b>25</b>
<b>CHAPTER 4: DESCRIPTION OF EXISTING ENVIRONMENT</b>	<b>27</b>
4.1 Physical Environment	27
4.2 Biological Environment	31
4.3. Socio-Economic Environment	35
<b>CHAPTER 5: POTENTIAL ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS</b>	<b>37</b>
5.1 General Considerations	37
5.2 Prediction of Impacts	37
5.3 General Impacts	38
5.4 Impact Criterion and Classification	38
5.5 Potential Impacts	40
<b>CHAPTER 6: ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN</b>	<b>47</b>
<b>SECTION</b>	<b>PAGE</b>

## **APPENDICES**

- APPENDIX A: Letter from MEFT
- APPENDIX B: Concession Operators Contract (MEFT/Concession Unit)
- APPENDIX C: letter from Conservancy
- APPENDIX D: CV. Albertina Simon/COMPANY PROFILE

## **CHAPTER 1: INTRODUCTION**



### **1.1 Executive Summary and Overview**

The importance of environmental protection and conservation measures has increasingly been recognized over the past two decades in Namibia. It is now generally accepted that economic development strategies must be compatible with environmental goals. Specifically, this requires the incorporation of environmental dimensions into the process of development. Hence, it has become important to make choices and decisions that will eventually promote sound development by understanding the environment functions. The proposed development by Mr. Dusty Rodgers of African Monarch Lodges (Nambwa Lodge), **hereafter the Proponent** aims to ensure this balance when developing the Nambwa Campsite **hereafter the Camp**. It also important to note that the **Proponent already has a Concession Operators Contract with Mayuni Conservancy** and a support letter of campsite relocation from MET. **See Appendix A.**

The Bwabwata National Park (Kwando Core Area) is situated at the western bank of the Kwando river in the formerly known (Caprivi strip) in North-Eastern Namibia now called Zambezi region. The park is part of the great Bwabwata National Park and has a size of 1280 km<sup>2</sup>. The park is suitable for 4x4 cars only and there are a lot of passages which are very sand.

The diversified Kwando Core Area impresses with a combination of a large variety of wild animals and fascinating views onto the wetland areas, which are untypical for the Caprivi. From the hills, where the Old Fort Doppies was erected, the visitors can enjoy incredible perspectives of the flood plains, where sitatunga, reedbuck and lechwe antelopes are frequent guests, let alone roan and sable antelope, waterbuck, kudu, impala, giraffe and wildebeest are common in the Kwando Core Area.

Following the river Kwando to the south, the visitor reaches Nambwa Lodge. The lodge offers a relaxing atmosphere, an up-market tented accommodation as well as a shady



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Construction of Nambwa Campsite*

camping site. From the wooden decks of the campsite guests can enjoy awesome views onto the floodplains of the Kwando River.

Further down south, the popular Horse Shoe appears, this lagoon in the shape of a horse shoe attracts countless elephants which come here from midday to late afternoon to drink and bath in the water. It is recommended to allow enough time for driving back to the entrance gate as sometimes the area is crowded with elephants in such a way that the way back takes a little longer than expected, as you enjoy the spectacular wildlife in the park.

The new identified campsite location, within the Bwabwata National Park (Kwando North Concession), is in Zambezi Region and is in a sparsely populated savanna area. Subsistence farming is the key local livelihood and very unreliable due to the low and unpredictable annual rainfall the area receives for the past few year during the dry spell the country experienced. Hence tourism activities in the Region have become more and more important for job creation, poverty reduction and developing the human capital of the people living in the area.

## **CHAPTER 2: DESCRIPTION OF PROPOSED PROJECT**

The overall design of the camp shall be carefully constructed in accordance to its surrounds using a low environment impact design and materials, accommodating up to 54 guests and 6 guides, and 5 to 8 camp staff members.


The proposed project's physical foot-print will be at maximum 2ha. Over the next 5 years, at least N\$ 3,500,000.00 will be invested into the business. Average salaries are envisaged to be N\$ 3500.00 per staff member per month during the first 5 years.

### **The proposed development involves:**

- ♣ The Campsite shall consist of eleven exclusive Camping sites, of which 5 Campsites will share 2 x ablution blocks and 6 x campsites each with individual ablutions. Detail description Table on **page 17**
- ♣ In addition, there shall be a main building which shall include a reception, mini-dining area, bar, kitchen, shop, guest toilets and a swimming pool. This shall command an elevated view over the floodplain.
- ♣ There will also be three staff tents, two x general staff tents and a manager's tent.
- ♣ Activities for guests will include boat cruises, game drives, night drives (subject to approval from MET), star gazing, cultural trips and, possibly but depending upon MET authority, game walks. Angling will also be offered on a strict "catch & release" basis.

### **1.1 Purpose of the Scoping Report (SR)**

This SR serves to determine, analyze and present the environmental management plan (positive and negative) of a proposed development project and associated infrastructure, formulate remedial measures to minimize and mitigate the negative impacts and plan in such a way that enables a rational decision to be made regarding the implementation and management of the proposed project. This EMP scoping report will further contribute to the reduction or mitigation of adverse impacts by generating a number of project alternatives for the proposed campsite development. In general, the purpose of this EMP scoping report is to anticipate and prevent, minimize and/or manage, potentially significant negative impacts of development that may:

- 
- Cost too much money to rectify in the future;
  - Pose risk to lives, livelihood or health of current and future generations;
  - Result in irreplaceable loss of resources and reduced options for future well-being; and,
  - Help to seek opportunities to optimize potential benefits of development.

As a responsible local member, the Proponent is committed to enhance positive biophysical and social environmental impacts of the project while mitigating negative impacts of the project. During the scoping exercise, the Proponent has emphasized that he attaches great importance to environmental sustainability and human well-being. The Proponent also recognizes the strong correlation between environmental sustainability and human well-being through good health that depends on healthy ecosystems, clean water and air. All of the above is further appreciated by the decades of direct observations in the running and management of lodges and safaris in the Namibia.

Therefore, this Environmental Impact Report has been prepared with a view to comply with Namibia's Environmental Assessment Policy of 1995, the Environmental Management Act No. 7 of 2007, Government Notice No. 29 of 2012 (Listed Activities) and the Government Notice No. 30 of 2012 (EIA Regulations).

## **2. EMP Scoping Report Objectives**

The objectives of this plan are to:

- ♣ Describe all environmental safeguards and mitigation measures;
- ♣ provide a monitoring tool for MET and the Joint Management Committee (JMC);
- ♣ minimize negative impacts of the development and operational phases of this project;
- ♣ enhance the positive impacts;
- ♣ provide a tool which allows a succession of managers to have a consistent approach to managing the camp and associated activities;
- ♣ meet the requirements of relevant legislation;
- ♣ allow the operator to monitor environmental impacts; and
- ♣ create awareness among all staff and key stakeholders (including MEFT) of the importance of maintaining sound environmental standards in all operations of the campsite.



**The strategies employed to achieve the objectives include:**

- ♣ Ensure that the developer is aware of the provisions of the EMP during the planning phase;
- ♣ ensure that the EMP is an integral part of the operations procedures for the lodge;
- ♣ incorporate environmental monitoring into the operations of the lodge;
- ♣ create environmental awareness among all staff; and
- ♣ use of the EMP as an agenda item for Joint Management Committee (JMC) or adhoc meetings.

**3. General Requirements for Implementation of the EMP**

**3.1 EMP Administration**

The Campsite operator, management and staff, including the construction team, shall be required to familiarize themselves with the content of the document while the camp Manager shall be tasked with the overall responsibility for the implementation thereof once the Camp is operational.

Ministry of Environment, Forestry & Tourism officials shall be acquainted with the document and they (or their appointed agent) shall monitor during the construction phase together with a representative from Mayuni Conservancy to ensure compliance.

**3.2 Environmental Awareness Training**

**a) Construction Phase**

The operator shall ensure that all his/her staff are aware of the importance and implications of the EMP and the need to commit to the relevant provisions contained in the document.

**b) Operational Phase**

The operational phase shall require that roles and responsibilities for all employees need to be established while the reasons and importance of mitigation measures shall be clearly explained, and this shall be an ongoing process.

The positive socio-economic and biodiversity impacts involve a number of external stakeholders and these relationships require close and regular interventions. The former requires regular meetings with the conservancy through meetings of the JMC.

At least two staff members (guides) shall receive training in wildlife monitoring in order that they may report wildlife sightings to MEFT. Guides shall receive specialist training in big game guiding, guides will be on stand by and readily available for the camp guest that requires their service.



It is also important for all staff to understand the context of the camp development and the links between the concession granted to the conservancy and how this off-sets the costs which conservancy residents for having a national park as a neighbour.

The development of appropriate materials for guests shall also ensure that the camp and the activities are understood within the conservancy/concession context. This should underpin the camp "branding" while there is a need to acknowledge MEFT for their role in making the park relevant, and friendly to it's neighbors.

### **3.3 EMP Monitoring**

Prior to construction and twice during the construction phase the author will visit the site to monitoring compliance during the planning and construction phases. This report thus only deals with the future development and operational phase included for the planning and building phase.

Due to the above-stated, Advance Environmental Consultant (AEC) was appointed by the Proponent to conduct an EMP for the development of the Camp. In terms of Namibia's Environmental Management Act (No. 7 of 2007, Section 27(2j)), Government Notice No. 29 Listed Activities, Section 6) and Government Notice No. 30 (EIA Regulations), the above proposed activity constitutes a number of listed activities which require Environmental Clearance prior to commencement of the project.

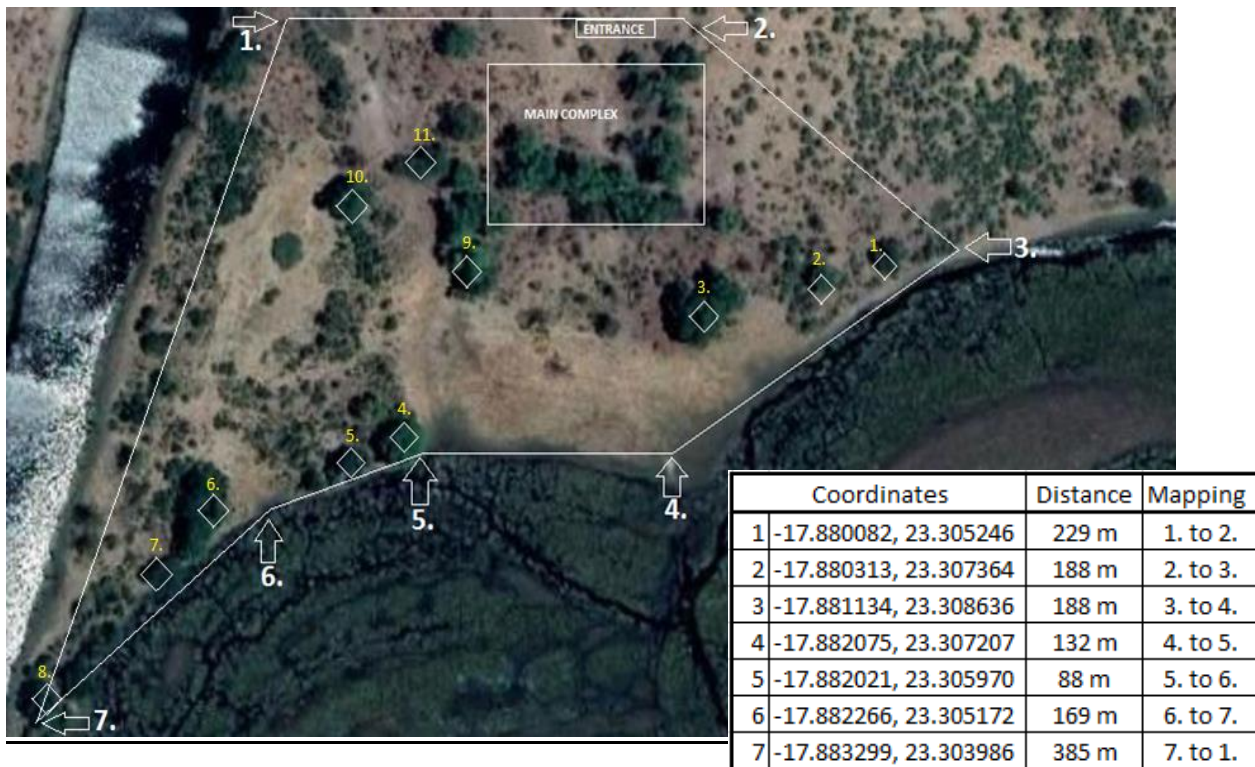


Figure 1: Location of the Leasehold (Google earth, 2019)

### Campsites & Structures

**Campsites:** Each with an individual wooden deck (20 sq mtrs), shared & individual ablutions, fireplace with braai grids, wash up facilities for dishes, electrical power outlet

**Self-Catering Tents:** Each with an individual deck (approx 20 sq mtrs), individual ablutions, self equipped tent, fireplace with braai grids, wash up facilities for dishes, electrical power outlet

**Skybed:** 1 unit with a deck raised approximately 6 meters above the ground, individual ablutions, Self-equipped tent, fireplace with braai grid, wash up facilities for dishes, electrical power outlet

**Main Complex:** Shop, Restaurant, Pool, Laundry & Drying Yard, Kitchen, Solar Room, Staff Tents & Ablutions.

**Structures:** All structures are to be built with Gum Poles, Timber, Canvas, Cladded Corrugated sheets, Reeds, Lipchannel & Composite Decking

## 1.2 Project Proponent

Mr. Rodgers is the son of the soil who owns Nambwa and Kazile Lodge in partnership with the Mayuni and Mashi Conservancy and has been conducting tourism activities in the Kwando core area for over 30 years. The two Lodges (Kazile and Nambwa) are situated along the Kwando River, within the Kwando Core Area of the Bwabwata National Park. The B2 is the main access road to the prominent tourism attraction and leading all the way to Northern Namibia and to the Victoria Falls.

### BACKGROUND

The current campsite at Nambwa Lodge is in constant conflict with the lodge guests, this is because the Lodge and the campsite are located within one area with no distinct separation in between due to the previous approved space that was availed for developmental within the concession.

This has prompted MET, in its revised Tourism Development Plan for the Northeast Region to relocate the campsite from its current location within the designated concession area. It is against this background that the idea of establishing a Campsite with 11 camping sites was born in order to ease the burden and conflict of the current campsite on Mr. Rodgers and the Operator. ***See attached letter from MET on the relocation of the Campsite***

**Appendix A**

### **1.3 Scope of the EMP**

Advance Environmental Consultant (AEC) undertook to carry out and draft the EMP following a well-defined framework. Owing to the importance of Interested and Affected Parties (I&APs) involvement in environmental studies, the EMP ensures that I&APs concerns are address as consultations were central to every step in the awarding and approval of the campsite process by MEFT involving the local communities and surrounding business/lodge owners.

Consultation on this specific project is deemed not necessary by the practitioner, since the campsite is already operational hence the Ministry (MEFT) with its consultant on the North-Eastern Tourism Development Plan (NETDP) had conducted meetings during the development of the TDP. The identified site for the campsite is within the concession area whereas development has been previously approved for tourism facilities.

The EMP comprised of detailed site-specific investigations. Details of each process component are elaborated below.

#### Scoping Exercise


The scoping exercise aimed at identifying and screening all relevant issues related to the project development as well as identifying at the earliest possible time whether any adverse effects existed that could render the proposed project environmentally unacceptable.

Specifically, scoping assisted in:

- Focusing the impact assessment on a manageable number of important questions on which decision making is expected to focus;
- Ensuring that only key issues and reasonable alternatives are examined; and,
- Identifying fatal flaws in the proposed project planning.

#### Existing Environmental Conditions

To establish prevailing environmental conditions for the project area, environmental and socio-economic data including surrounding areas was collected, compiled and analyzed. Findings of the analysis are presented in the following Sections. Biological, zoological, botanical and socio-economic studies carried out in the past for the area provided secondary data for the report.



### Descriptions of Project Activities

Project inputs, activities and outputs during project preparation, construction and operational life stages were reviewed and are described in this section. This section also includes description of project alternatives.

### Analysis of Potential Environmental Impacts

An assessment of environmental effects and benefits of the proposed project regarding biophysical and socio-economic environment has been undertaken as well as an analysis of the impacts' extent, duration, intensity and significance.

### Formulation of Possible Mitigating Measures

Based on the analysis of findings, a number of measures and plans for mitigating the identified possible adverse environmental impacts of the project are proposed. Further, the report proposes measures and plans for enhancing positive environmental impacts of the project. And wherever possible, the costs and benefits of these environmental measures are quantified.

### Elaboration of an Environmental Management Plan

An Environmental Management Plan (EMP) for implementing the proposed mitigating measures during the project preparation, construction and operation phases of the project was developed. The EMP further indicate management responsibilities and time frames.

## **1.4 Stakeholder Consultations**

AEC's approach to environmental assessment studies is aimed at ensuring that wide stakeholder participation and involvement is achieved. Recognizing this, and as part of the transparent consultative process aimed at taking public views into account in determining the EMP, however a public consultative meeting was not held in the conservancy by AEC as similar meetings were held by the TDP consultant team. The meetings were announced locally by MEFT and was also advertised in local newspapers. The meeting was attended by over 100 participants including representatives from the Traditional Authority, Conservancy, Local Lodge Operators and MEFT Parks and Regional office.

The Proponent is in possession of a Concession Operators Contract, **Appendix B**. Thus, the Conservancy, Mashi Traditional Authority and MEFT (Parks Directorate) through the Executive Director has given the Proponent a go-ahead for the development and now seeking the approval of the Environmental Commissioner.



Public Meeting for North Eastern TDP by the Consultant team and MET (22 June 2019)

Key Interested and Affected Parties consulted include:

- Mashi Traditional Authority,
- Zambezi Regional Office,
- Mayuni, Kwando and Mashi Conservancy.
- MEFT Parks and Northeast Regional office,
- Zambezi Lodges Operators and

### **1.5.1 Methodology**

The Interested and Affected Parties (I&APs) consultative process involved meetings, open discussions and interviews with relevant government institutions and representatives from the NGOs. Through this interaction the NETDP Consultant team tried to establish how Interested and Affected Parties understood the dynamics of the environment in which the proposed project is located and any possible underlying causes that could lead to changes over time as a result of implementing the project.

Where the NETDP Consultant team felt it necessary to go more in-depth on a particular matter, Interested and Affected Parties within the project area or surrounding area with either experience or expert knowledge of the study area were identified and interviewed to validate the data already obtained, as well as to get their advice on any additional sources of information that was not readily available. This was useful in interpreting any underlying factors of the trends already observed.

### **1.5.2 Stakeholder Consultation Outcome**

The meetings and informal interviews conducted did not raise any objections against the proposed development nor on the site proposed for the facility. The site for the proposed development is within the Kwando Core Area (Bwabwata National Park) and MET hold exclusive rights over the development of tourism facilities within the Park.

Authorization requirements for this proposed project include:

- An Environmental Clearance Certificate
- Consent from the MEFT – Approval letter (**Appendix A**)
- Consent from the Conservancy - Approved (**Appendix C**)

### **1.5.3 EMP Drafter Team**

AEC is a firm of environmental consultants that has been active in Namibia since its establishment in 2015. AEC is 100% locally owned by Namibian citizens and the company's head office is located in Windhoek, yet operating throughout the country.



AEC staff has extensive experience in a variety of projects related to EMPs, socio- economic and baseline studies, water resources management, sustainable land management, climate change, renewable energy and training of SMEs.

Previous and Current Projects inter alia include:

- EIA and EMP for Fuel Station in Rundu, Katima, Okongo and Grootfontein.
- EIA and EMP the establishment of Sanitation pads in Windhoek.

Albertina Simon, Environmental practitioner:

Ms. Albertina Simon has compiled this Scoping Report and the EMP. she has also carried out the overall environmental assessment and public participation activities. Ms. Simon is a qualified environmental practitioner and a member of the Environmental Assessment Practitioners of Namibia (EAPAN). she is familiar with conducting EIA studies, preparing EIA reports and EMPs, conducting specialist studies which include socio-economic assessments and ecological studies.

## 2.1 Location

The location of the site is situated in the Kwando Core Area, and it is within the Concession area allocated to the conservancy and sub-contracted to the proponent Mr. Rodgers while the actual physical footprint for the Campsite and its support infrastructure is estimated at approximately 2 ha. The new site was selected after discussions and on-site assessments of the proposed new site, and it is located near the existing Nambwa Lodge.

AEC (Figure 2 and Figure 3) – approximately 1 km from Nambwa Lodge. Due to its strategic location, the proposed Camp will not restrict any movement of wildlife, in and out of the area.

The site GPS point is: Latitude:

	Coordinates	Distance	Mapping
1	-17.880082, 23.305246	229 m	1. to 2.
2	-17.880313, 23.307364	188 m	2. to 3.
3	-17.881134, 23.308636	188 m	3. to 4.
4	-17.882075, 23.307207	132 m	4. to 5.
5	-17.882021, 23.305970	88 m	5. to 6.
6	-17.882266, 23.305172	169 m	6. to 7.
7	-17.883299, 23.303986	385 m	7. to 1.



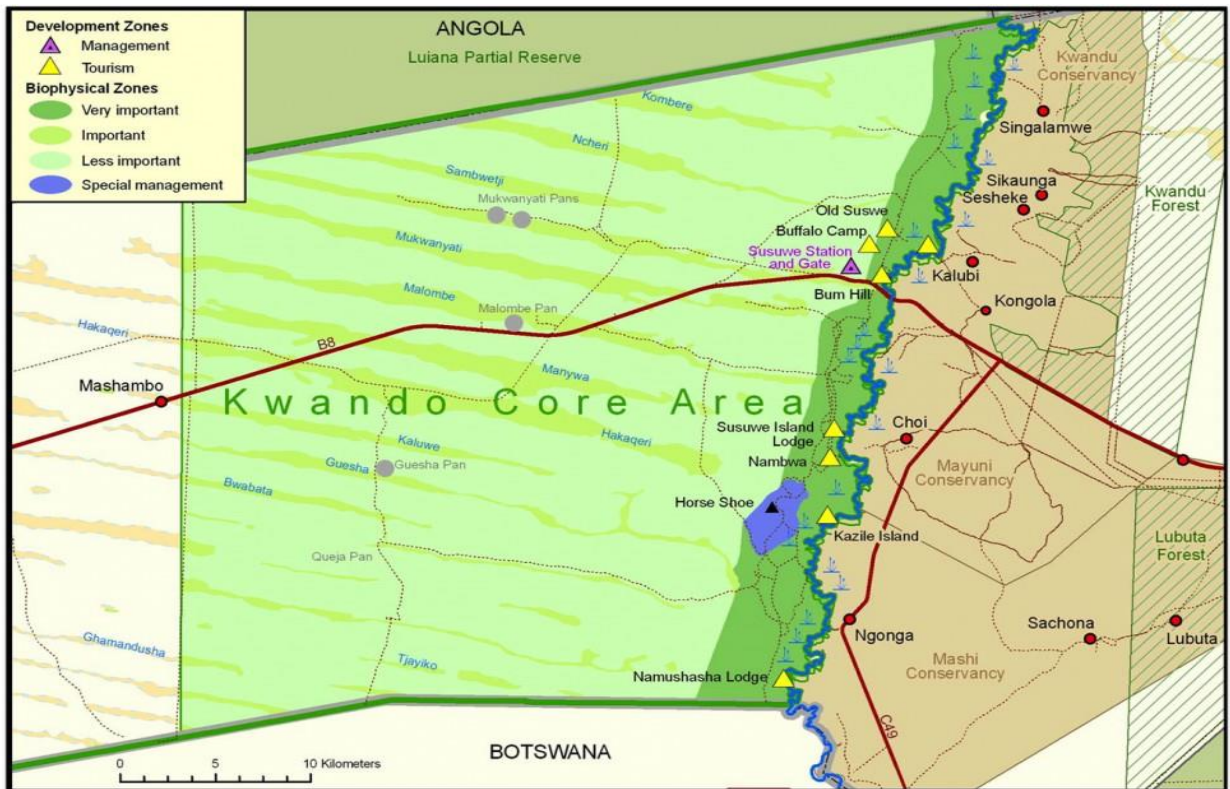


Figure 3: Site location in Relation to other Tourism establishment in the area Nambwa Lodge and Campsite (New) location Circled in Red

## 2.2 Project Rationale

The Conservancy population is estimated to be approximately 9000 people, with high youth unemployment. Tourism Lodge and it's activities is the key local livelihood, the strategic position of the area and Trophy Hunting activities within the Conservancy have become the most vital sources of youth employment and poverty reduction. The Conservancy faces the challenge of balancing subsistence farming activities with the environmental limitations of an arid ecosystem, as well as optimizing benefits from natural resources amongst a society with a long tradition of livestock herding.

It is often difficult to reconcile livestock farming and wildlife such as elephant and large predators, and human-wildlife conflict is a significant challenge faced by most in the Region. Therefore, this proposed project aims to further promote wildlife conservation and ecotourism business opportunities, while at the same time complementing existing job creation and income generating activities in the community.

## **2.3 Project Description and Alternatives**

### **2.3.1 Project Description**

Application for the Environmental Clearance from the Directorate of Environmental Affairs (DEA) is being made for the establishment of 11 campsites and ablutions, together with a common area which includes a Bar, Restaurant, Shop, swimming pool and staff accommodation for the maintenance and management of the campsite (Figure 5 and Figure 6).

Products and services planned to be offered at the proposed Tourism Campsite is to include the following:

- Campsite administration area;
- Accommodation for staff overnighing;
- Game Drives, night drives (subject to MET approval), boat cruises, stargazing and guided walks and walking safaris (subject to approval from MET)
- Restaurant to provide pre-ordered meals for late commers and a place of refreshment.

<b>NAMBWA CAMPSITE: CAMP SITES</b>				
Campsite Number	Number of Cars	Number of Pax	Type of Campsite	Ablution Blocks
1	2	4	Campsite	1, 2 & 3 Shared
2	2	4	Campsite	1, 2 & 3 Shared
3	2	16	Large Campsite	1, 2 & 3 Shared
4	1	4	Self Catering	Individual
5	1	4	Self Catering	Individual
6	2	8	Large Campsite	6 & 7 Shared
7	1	2	Campsite	6 & 7 Shared
8	1	2	Skybed	Individual
9	2	8	Large Campsite	Individual
10	2	4	Self Catering	Individual
11	2	4	Self Catering	Individual
<b>Totals</b>	<b>18</b>	<b>60</b>		
<b>Average No per day</b>	<b>8</b>	<b>24</b>		

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After extensive research, the Proponent has proposed an absolute maximum of 66 people, including both guests and resident staff. Staff housing will be constructed north of the camp about 50m away using similar design and construction materials.

This tourism facility will be an environmentally friendly camp for tourists who wish to travel and experience the abundance of wildlife in the area of the Zambezi Region. It will cater for both guided tours and self-drive tourists.

Activities from the facility are proposed to include game drives in open 4x4 vehicles on existing tourist tracks accompanied by qualified and experienced guides, this service is available to elderly guests who wish not to conduct self-drives. Guided walks with suitably qualified guides will also be possible in some designated areas, as these activities will be linked with those of Nambwa Lodge.

Environmentally friendly ablution facilities will be provided, where wastewater will be collected in septic tanks lined to avoid contamination of soil and groundwater. Waste water will be collected in pre-fabricated septic tanks and treated to speed up the decomposition. The design and operations of these septic tanks will comply to the:

- Department of water affairs & forestry code of practice: volume 1.
- Septic tank systems general guidelines (July 2008).

Water will be extracted from the river for domestic use during construction and operational phase. If need arise, a borehole will be drilled within the Proponent's Concession Area to be used for the facilities during the construction and operational phases. The proponent take cognizance of the good rainfall, however he is fully aware of the past year of dry spell when the river was very low. The river has a back channel where extraction of water is to take place for use at the campsite. Additionally, tourists will be regularly educated about saving water and using water sparingly.

Construction Phase: There will be very little water used during the construction since no permanent large structures will be built. The 11 campsites will be built on elevated structures to avoid water during flood, taking into consideration that the area is Namibia's highest rainfall zone. It is expected that less water will be used during the construction phase.

Operational Phase: It is estimated that the Campsite will at maximum accommodate 54 visitors at 100% occupancy, 5 staff members and 6 guides. This though is an ambitious expectation, due competition from other well-established facilities within a 20km radius from the proposed Nambwa campsite.

Realistically speaking from experience, at 60% occupancy, we can expect 24 visitors, 3 staff members and 2 guides. The water demand for a typical campsite is 130 l per day per person.

The facility therefore will use = (24 visitors+3 staff+2 guides) X 130 l  
= 3770 l per day or

Annually = 3770 l X 365 day  
= 1,4 million liters per year or  
= 1,400 m<sup>3</sup> per year.

The above calculations assume 60% occupancy rate from January to December which is very unlikely. Therefore, the above estimate will be the highest possible water use annually.

No internal roads will be developed, and walkways will be developed in a manner which ensures minimal impact taking the sensitivities of the associated environment into consideration.



Figure 5: Typical Luxury Tents to be used for Accommodation

### 2.3.2 Design and Layout Alternatives

No permanent structure shall be erected, apart from wooden deck. The Campsite main area (including staff accommodation) structure shall consist of canvas-styled tents with wooden or composite deck structures. All efforts will be made to ensure the least environmental impact possible. Most of the individual back of house units (kitchen, office, etc.) will be of a container type unit. The guest campsite will have wooden/ composite decks where the tents will be pitched, and the two staff units will be canvas-styled tents with wooden support structure. A waste management and rubbish removal plan shall be in place and rubbish will be carefully recycled and removed from the site and dumped at the main rubbish site at Kongola, or at the recycle plant at SIJWA (a project developed by the Proponent within the Mayuni Conservancy Area). Firewood shall be sourced from the conservancy or from a controlled source outside the National Park.

To facilitate a low impact development, the selected location is nestled in a natural arena environment and facilitate a low impact camp with few structures.

The construction of the campsite decks structures will be elevated off the ground as possible to avoid flood water during flood and rain season. The natural looking design of the camp will be undertaken with neutral colors to blend in with the environment around it. Only native plants will be planted in the facility, if necessary.

Most of the materials planned for the construction of the camp will be renewable materials. Little or no cement and solid materials will be used. As appropriate, purchase of natural construction and maintenance materials will be harvested/provided (reeds) locally by the community.



Figure 6: Typical Luxury thatched/Tented for the Main and common guest Area at the campsite front and Rear view (this will be Canvased roof and not thatched-roof)



Individual campsite design



self-cater or roof tent site (Courtesy of Nambwa Campsite)

### 2.3.3 Project Site Alternatives

The Proponent has no alternatives site, since the options for the development is pre-determined by MET. Therefore, the proponent does not have the luxury options to explore other sites.

Another key reason for the new site selection is that it is already part of an existing entry road into the area, which will minimize the potential impact on the environment during the camp construction and operational phases. No new roads will need to be constructed as the location links up with Nambwa Lodge in the Park or Concession Area through the existing road network. All vehicle movement for the purpose of construction of the camp, as well as supplying the camp, will be kept on the existing road network and as such limit any interference or disturbance with wildlife movement in the area.

Using the above criteria, the Proponent and African Monarch Lodges agreed that the best suitable site will be the one as decided and presented in this report, and as approved by MEFT. The indications of the limitations on developments and activities to be permitted on the site were provided and reviewed. The current site was selected as it had greater aesthetic features, better ecotourism potential, and would not generate significant negative impacts to the wildlife, other tour operators and other key stakeholders such as the Ministry of Environment and Tourism (MET).

This EIA process did not identify constraints that cannot be mitigated. However, it emphasizes the need for protection of the environment and the need for socio-economic development at the same time.



## **2.4 No-Go Alternative**

**No Go Alternative:** If this option is selected, the development of the camp will not proceed. In essence, the no-go alternative would ultimately imply that the state of the environment would be retained as it is presently, with obvious advantages and disadvantages to the natural environment. The Department of Environmental Affairs in the MET stresses that the no-go alternative should be considered in cases where the proposed development will have a significant negative impact that cannot be effectively or satisfactorily mitigated against.

### **CHAPTER 3: LEGAL, REGULATION AND POLICY FRAMEWORK**

The Table 1 below summarises the legislation and policy guidelines that are relevant to the proposed project and is not exhaustive.

Table 1: Relevant legislations and policy guidelines

<b>Title of legislation, policy or guideline</b>	<b>Implications for proposed project (Please read all Acts with their Regulations)</b>
The Namibian Constitution of 1990	The Constitution clearly indicated that the State shall actively promote and maintain the welfare of the people by adopting policies aimed at management of ecosystems, essential ecological processes and biological diversity of Namibia for the benefit of all Namibians, both present and future.
Water Resources Management Act No. 11 of 2013	This Act protects all water resources in Namibia. The Act also laid down conditions to ensure that proper wastewater treatment is provided, including requirement for wastewater discharge permit from the Directorate of Water Affairs.
Environmental Assessment Policy of Namibia (1995)	The Policy seeks to ensure that the environmental consequences of development projects and policies are considered, understood and incorporated into the planning process, and that the term ENVIRONMENT is broadly interpreted to include biophysical, social, economic, cultural, historical and political components.
Environmental Management Act No. 7 of 2007	The Act provides a list of projects requiring an Environmental Assessment. It aims to promote the sustainable management of the environment and the use of natural resources and to provide for a process of assessment and control of activities which may have significant effects on the environment.
MET Policy Document - Community-Based Tourism Development (June 1995)	<p>This document contains the approved Ministry policy for providing support to, and encouraging the development of, community-run tourism activities and enterprises on communal land.</p> <p>This policy document provides a framework for ensuring that local communities have access to opportunities in tourism development and are able to share in the benefits of tourism activities that take place on their land.</p> <p>Support for the involvement of rural communities in tourism enterprises is important:</p> <ul style="list-style-type: none"> <li>a) to implement the government policy of giving communities access to development opportunities and</li> <li>b) because where tourism is linked to wildlife and wild landscapes, the benefits to local communities can provide important incentives for conservation of these resources.</li> </ul>
Act No.5, 1996 Nature Conservation Amendment ACT, 1996	<p>This amend to the Nature Conservation Ordinance of 1975, provide for an economically based system of sustainable management and utilization of game in communal areas.</p> <p>This amend allows for the formation of Conservancies in communal areas.</p>
Hazardous Substances Ordinance No. 14 of 1974	<p>The Ordinance applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.</p> <p>Hydrocarbons handled during the construction phase may be hazardous thus careful handling and management is vital to prevent spills, explosions, ill-health or death.</p>

*Environmental Impact Assessment, Final Scoping Report  
Construction of Nambwa Campsite*

Pollution Control and Waste Management Bill of 1999	The Bill promote sustainable development and the establishment of the Pollution Control and Waste Management Unit; to prevent and regulate the discharge of pollutants to the air, water and land; to make provision for the establishment of an appropriate framework for integrated pollution prevention and control; to regulate noise, dust and odour pollution; to establish a system of waste planning and management; and to enable Namibia to comply with its obligations under international law in this regard.
Draft Wetlands Policy of 2004	This policy strives to complement existing policy instruments regarding sustainable development and sound natural resource management in Namibia. Its implementation provides a platform for the conservation and wise use of wetlands, thus promoting inter-generational equity regarding wetland resource utilisation. Furthermore, it facilitate the Nation's efforts to meet its commitments as a signatory to the International Convention on Wetlands (Ramsar) and other Multinational Environmental Agreements (MEA's).
National Waste Management Policy, 2010	This policy is focusing specifically on Waste Management and use of various technologies waste treatment and disposal to minimize health risks. It is also geared to have a unified waste management system country wide. This policy provides the necessary guidance on the processes related to waste management in the MOHSS, wider Namibia health and social welfare sectors, and other relevant stakeholders. It is taking into consideration the process of integrated waste management from generation to final disposal. This practice also focus on medical, household, mining, agricultural, and construction waste.
Forest Act No. 12 of 2001 and its amendments	The purpose of this Act guides the use and management of forestry and related resources. The aims of the forest management as per the Act, is to achieve manage of forest "for which forest resources are managed and developed, including the planting of trees where necessary, to conserve soil and water resources, maintain biological diversity and to use forest produce in a way which is compatible with the forest's primary role as the protector and enhancer of the natural environment."
National Heritage Act No. 27 of 2004	The Act provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage Register; and to provide for incidental matters.
Labour Act No. 11 of 2007)	Consolidate and amend the labour law; to establish a comprehensive labour law for all employers and employees; to entrench fundamental labour rights and protections; to regulate basic terms and conditions of employment; to ensure the health, safety and welfare of employees; to protect employees from unfair labour practices; to regulate the registration of trade unions and employers' organisations; to regulate collective labour relations; to provide for the systematic prevention and resolution of labour dispuAEC; to establish the Labour Advisory Council, the Labour Court, the Wages Commission and the labour inspectorate; to provide for the appointment of the Labour Commissioner and the Deputy Labour Commissioner; and to provide for incidental matters.
Public Health Act, No. 36 of 1919 and Amendments and Regulations	This Act makes provision for the prevention and control of infectious diseases, venereal diseases and epidemics. It also regulaAEC sanitation, food and public water supplies.

## CHAPTER 4: DESCRIPTION OF EXISTING ENVIRONMENT

Appropriate standard methodologies were used to describe the existing environment. These included undertaking an inventory of the physical and biological environments, conducting interviews and reviewing of relevant literature. In addition, mapping of the project area was done using a hand held GPS unit and plotted on Google Earth.

Objective	Management Measure	Monitoring Action & Method	Responsibility	Progress 10 <sup>th</sup> June
Environmental Clearance	Apply for environmental clearance	File clearance	Operator	Completed, EMP approved, clearance certificate issued
Adhering to EMP requirements	EMP should be shared and discussed <b>prior</b> to layout of building.	Site plan to ensure that layout of buildings reduces visual impact as per the Scoping Report	Operator	The operator has appointed a person (Juan Marx) to oversee all building operations. He has a copy of the EMP and it is apparent that it is used.
	Organise an awareness meeting with all building staff to ensure awareness and the need for compliance with EMP	Complete EMP awareness training	Contractor	This happens on an ongoing basis. Mr Marx discusses with the sub-contractors responsible for the bungalow structures the layout and together the areas are demarcated with tape.  General workers may need to be informed as to why an EMP is important.
Socio-economic benefits	Develop contract monitoring tool to manage & monitor JV contract	Hold inception meeting with conservancy	JV support staff (IRDNC/CDSS). Need to share with MEFT	Will be done closer to the time before camp becomes operational.
Conserve existing vegetation	Layout & design should incorporate the existing trees & shrubs	Layout & design complies with proposed mitigation. Large specimen trees must not be removed	Contractor	Yes, carefully demarcated. See photo 1.
Minimise land degradation & erosion	Improve the access road to ensure least possible waterlogging threat (drainage structures to be built where required)	Monitor accessibility	Contractor	The operator has ordered culverts for the section of the track most prone to water-logging.

	Position car park using, as far as possible, existing cleared areas	Minimum disturbance of site	Contractor	This will be done towards the end of the construction period.
To preserve scenic quality & maintain "sense of place"	Site tents as far as possible to "nestle" in existing vegetation	Compliance with plans	Contractor	The layout ensures that no significant trees removed and a number included in the design as features.
	Place service areas out of sight of guest areas and position installations/services using the existing vegetation	Compliance with site plan	Contractor	The main service areas in the central area of Nambwa "island" where there are no large specimen trees but where there is existing shrub. This will allow for maximisation of sunlight for the solar panel but which will also screen the services.
	Materials colour should blend in with the site	Discussions between operator and suppliers	Contractor	The main structures thatch and canvas which will blend with existing vegetation.
Minimise impact on energy resources	Design energy systems which use, as far as possible, renewable energy	Cost benefit analysis of most appropriate systems BUT which excludes the use of wood for heating (gas entirely acceptable)	Operator Electrician	<ul style="list-style-type: none"> <li>a) A centralised solar installation shall be installed for electricity with a generator as a back-up when cloud cover reduces power generation.</li> <li>b) Gas shall be used for cooking.</li> <li>c) Hot water shall be heated via solar geysers.</li> <li>d) Water extraction form backwater shall be by a solar powered pump.</li> </ul>
Minimise impact on water resources	Use water-saving devices in toilets and low-flow shower heads	Specified in details	Contractor	Procurement not yet finalised
	Specify water meters to monitor water consumption	Specified in details	Contractor	A single water meter shall be installed
	Place sewerage systems to ensure such that potential for contamination of ground water is minimised	Septic tanks to be positioned out of floodplain waterlogged zone and French drains located in well-drained soils.	Contractor	Each "tent" shall have its own septic tank and soak-away. Soak-aways, however, need a new design as simply a 2x2x2 meter pit at present. The site manager, however, is open to suggestions and a design which follows "best practice" has been shared with him.
	Grey waste water disposal system to be built as should not be piped to septic tanks	French drains to be positioned in well-drained soil. MET (or agent to approve lay-out)	MET (or agent to approve lay-out)	Design has incorporated this
	Fat traps to be installed at scullery/kitchen	Ensure that specified in details	Operator	These have been purchased but plumbing still to be done.



Objective	Management Measure	Monitoring Action & Method	Responsibility	Progress
To ensure that provisions of the EMP are implemented during construction	Contractor to report at every site meeting with conservancy & MET representative (or representative) on implementation of EMP	Included in site meeting notes	Operator	Operator's agent noted all comments and requested information on soak-aways which has been forwarded to him.
	Contractor to conduct training & awareness for workers	Workers awareness & training meeting	Operator	Ongoing but probably reasons for an EMP require further awareness training.
	Copy of EMP included as part of contractors instructions and available to all staff and sub-contractors	EMP available on site	Operator	The operator is managing a team of sub-contractors but person responsible for oversight has a copy of the EMP which is used.
	A sign-off procedure should there be any change to the EMP or should there be any deviation from the clauses or intention of the EMP	Updates and instructions included in construction instructions	Contractor MET	There has only been one non-significant deviation – concrete slabs (100 mm) cast for service areas but this off-set by no use of concrete in bungalows.
Minimise damage to environment during construction	Demarcate area which shall be subjected to disturbance	Common understanding on extent of construction area	Contractor	Done – see photo 2.
	Detailed instructions to be issued on rehabilitation of disturbed areas	Instructions shared with contractor	Contractor	Will be done once construction nears completion.
	Protection of woody plants. Where possible these should be incorporated into the design	Compliance with contractor instructions	Contractor	Yes, done. See photo 1.
	Wildlife not to be disturbed, trapped or killed and any offender shall be reported to MET for further action	Incidents to be recorded and reported to MET	Contractor	It is evident that wildlife not disturbed at all. Bushbuck observed in camp while wildlife, including waterbuck and impala, in close proximity to camp. See photo 3.
	To minimise soil or water pollution	Spillages of potentially harmful substances must be cleared immediately and disposed of at an appropriate site	Contractor	No spillages to report.
	To ensure that sound waste management is practiced during the construction phase and should be classified as industrial (oil, metal and chemical based materials); solid waste (normal household waste) and human waste (sewerage)	Management & disposal of waste is undertaken on the principle of removal from the site and disposal at an appropriate dump	Contractor	a) All waste taken to Kongola. b) A new design for soak-aways for septic tanks required and this was been shared with the operator on 11 <sup>th</sup> June. See photo 4 for existing soak-away hole and the damp towards the bottom of the hole. A long narrow and shallower soak-away shall be a better solution and the site manager has willingly agreed to alter the design.
	Servicing of vehicles and equipment not undertaken on site	Servicing outsourced to off-site service providers	Contractor	Vehicles serviced off site.



#### 4.3 Operational Phase

Objective	Management Measure	Monitoring Action & Method	Responsibility	Findings
To ensure that EMP and the Scoping Report understood by management & staff	EMP & Scoping Report incorporated into contract of Campsite Manager	Contract which aligns EMP & Scoping Report	Operator	
	Staff receive training and understand the implications and reasons for the EMP	Training held & roles and responsibilities of various staff members clearly spelt out and included in job descriptions	Campsite Manager	
To ensure that the agreed socio-economic benefits of the JV contract are achieved	Implement contract monitoring tool	Ensure that reviewed and acted upon at JMC meetings between operator and conservancy	Operator Campsite Manager Conservancy MET	
Minimise impacts on vegetation	Existing vegetation in campsite area is not removed except where it is a hindrance to operations	Conduct regular inspections and keep staff informed	Campsite Manager	
	Introduced ornamental plants must only be indigenous to the area	Approval from MET	Campsite Manager	
	Staff do not fell trees or damage vegetation	Inform staff of policy as well as the repercussions should there be non-compliance. Include in code of conduct for staff	Campsite Manager	
	Track network at the site is confined and that no new tracks developed without authority from MET	Inform staff and self-drive guests	Campsite Manager	
Minimise impact on wildlife	Ensure that guests are aware of the potential danger of wild animals entering lodge/camping site	Guides to be trained in responding to elephant, hippo and predators	Campsite Manager	
	Staff do not have an impact on wildlife	Staff to be aware of the legal implications and company policy in catching, trapping or killing wild animals	Operator Campsite Manager	
Capitalise on presence of campsite for biodiversity management	Complete wildlife monitoring forms on all game drives as requested by MET	Submit summary to conservancy once per month	Campsite Manager with assistance from MET/NGOs	
	Provide reports on species of special interest as required	Share records with MET (or their appointed partners) as required	Campsite Manager Guides	
	Maintain integrity of the area	Report any suspicious behaviour to MET and conservancy	Campsite Manager Guides	
Minimise land degradation & erosion	Rainfall run-off at campsite does not cause undue erosion	Regular inspections and if required remedial contouring or drainage	Campsite Manager	
	Ensure that tracks used exclusively for camp activities are not subjected to erosion or excessive waterlogging	Undertake inspections regularly and, if required, install additional drainage or undertake whatever repairs required to rehabilitate and reduce erosion	Campsite Manager	
	Minimise impacts of boat activities on river banks	Training provided to boat guides on the impacts of boat wakes on	Campsite Manager Guides	



		exposed river banks and methods to reduce impacts		
To preserve scenic quality & "sense of place"	Mitigation measures implemented during construction phase are maintained	Regular inspections of screens etc. hiding services & installations are functional and if required repair	Campsite Manager	
Minimise impact on water resources	Staff are aware of the need to not use water wastefully	Undertake staff training	Campsite Manager	
	Water usage & consumption is within the "best practice guidelines"	Monitor water usage on a monthly basis and calculate usage per guest and for staff members and compare against targets	Campsite Manager	
	There is no leakage from water systems	Undertake regular inspections of all water pipes	Campsite Manager	
Minimise soil & water pollution	Spillages of potentially harmful substances must be cleared immediately and disposed of at an appropriate site	Inspection and follow-up clean-ups if required	Campsite Manager	
	Functional septic tanks	Undertake regular inspections and, if required, de-sludge	Campsite Manager	
	Functional fat traps	Inspect & clean on a regular basis and store matter in sealed containers	Campsite Manager	
	Functional soak-aways	Inspect on a regular basis	Campsite Manager	
	Functional and leak-free waste water pipes	Inspect on a regular basis on repair if required	Campsite Manager	
	Use of environment-friendly soaps & detergents	Ensure that procurement specifies this need	Campsite Manager	
	No contamination of soil or water by fuels or oil	Ensure that all fuels stored and managed to reduce risk of spillages	Campsite Manager	





## 5. Environmental Monitoring (Operational Phase)

The following represents key monitoring activities but campsite management may add as the need arises

**Note: Most of the monitoring is the responsibility of the manager BUT he/she may delegate as required but those responsible need to have the task included in job description**

To be Monitored	What needs to be monitored	Frequency	Responsibility	Findings
JV contract	Socio-economic benefits for conservancy delivered by operator	Quarterly	Operator Conservancy MET	
JV contract	Conservancy compliance	Quarterly	Operator Conservancy MET	
Water consumption	Litres used per guest/staff/services	Monthly	Campsite Manager	
Sewerage system	Septic tanks	Every three months	Campsite Manager	
Sewerage pipes	Leaks	Monthly	Campsite Manager	
Grey water pipes	Leaks	Monthly	Campsite Manager	
Fat traps	Functioning equipment	Weekly	Campsite Manager	
Water installations	Functioning of purification equipment	Weekly	Campsite Manager	
Soak-aways	Drainage	Weekly	Campsite Manager	
Tracks	Erosion	Monthly but more intensively after rainfall events	Campsite Manager	
Wildlife	Wildlife sightings during game drives	Every game drive	Guides	
	Species of special interest	Ongoing	Campsite Manager Guides	

### 4.3 Operational Phase

Objective	Management Measure	Monitoring Action & Method	Responsibility	Findings
To ensure that EMP and the Scoping Report understood by management & staff	EMP & Scoping Report incorporated into contract of Campsite Manager	Contract which aligns EMP & Scoping Report	Operator	
	Staff receive training and understand the implications and reasons for the EMP	Training held & roles and responsibilities of various staff members clearly spelt out and included in job descriptions	Campsite Manager	
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Minimise impacts on vegetation	Existing vegetation in campsite area is not removed except where it is a hindrance to operations	Conduct regular inspections and keep staff informed	Campsite Manager	
	Introduced ornamental plants must only be indigenous to the area	Approval from MET	Campsite Manager	
	Staff do not fell trees or damage vegetation	Inform staff of policy as well as the repercussions should there be non-compliance. Include in code of conduct for staff	Campsite Manager	
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	Minimise impacts of boat activities on river banks	Training provided to boat guides on the impacts of boat wakes on exposed river banks and methods to reduce impacts	Campsite Manager Guides	



To preserve scenic quality & "sense of place"	Mitigation measures implemented during construction phase are maintained	Regular inspections of screens etc. hiding services & installations are functional and if required repair	Campsite Manager	
Minimise impact on water resources	Staff are aware of the need to not use water wastefully	Undertake staff training	Campsite Manager	
	Water usage & consumption is within the "best practice guidelines"	Monitor water usage on a monthly basis and calculate usage per guest and for staff members and compare against targets	Campsite Manager	
	There is no leakage from water systems	Undertake regular inspections of all water pipes	Campsite Manager	
Minimise soil & water pollution	Spillages of potentially harmful substances must be cleared immediately and disposed of at an appropriate site	Inspection and follow-up clean-ups if required	Campsite Manager	
	Functional septic tanks	Undertake regular inspections and, if required, de-sludge	Campsite Manager	
	Functional fat traps	Inspect & clean on a regular basis and store matter in sealed containers	Campsite Manager	
	Functional soak-aways	Inspect on a regular basis	Campsite Manager	
	Functional and leak-free waste water pipes	Inspect on a regular basis on repair if required	Campsite Manager	
	Use of environment-friendly soaps & detergents	Ensure that procurement specifies this need	Campsite Manager	
	No contamination of soil or water by fuels or oil	Ensure that all fuels stored and managed to reduce risk of spillages	Campsite Manager	

### 5. Environmental Monitoring (Operational Phase)

The following represents key monitoring activities but campsite management may add as the need arises

Note: Most of the monitoring is the responsibility of the manager BUT he/she may delegate as required but those responsible need to have the task included in job description

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Fat traps	Functioning equipment	Weekly	Campsite Manager	
Water installations	Functioning of purification equipment	Weekly	Campsite Manager	
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Tracks	Erosion	Monthly but more intensively after rainfall events	Campsite Manager	

Wildlife	Wildlife sightings during game drives	Every game drive	Guides	
	Species of special interest	Ongoing	Campsite Manager Guides	

*Environmental Impact Assessment, Final Scoping Report  
Construction of Nambwa Campsite*

**Table 2: Criterion and classification of impacts**

Assessment Evaluation Criteria	Rating (Severity)	
<b>Impact Type</b>	-	Negative
	=	No Impact or Negligible Impact
	+	Positive
<b>Extent of impact</b>	<b>I</b>	Immediate (the site and immediate surroundings)
	<b>L</b>	Local
	<b>R</b>	Regional
	<b>N</b>	National
	<b>IT</b>	International
<b>Duration of impact</b>	<b>ST</b>	Short term (0-5 years)
	<b>MT</b>	Medium term (5-15 years)
	<b>LT</b>	Long term (lifetime of the development)
<b>Intensity of impact</b>	<b>L</b>	Low (where natural, cultural and social functions and processes are not affected)
	<b>M</b>	Medium (where the affected environment is altered but natural, cultural and social functions and processes can continue)
	<b>H</b>	High (where the affected environment is altered to the extent that natural, cultural and social functions and processes will temporarily or permanently cease)
<b>Probability of impact</b>	<b>LP</b>	Low probability (possibility of impact occurring is low)
	<b>P</b>	Probable (where there is a distinct possibility that it will occur)
	<b>HP</b>	Highly probable (where the impact is most likely to occur)
	<b>D</b>	Definite (where the impact will occur)
<b>Significance of impact</b>	<b>L</b>	Low (where natural, cultural and social and economic functions and processes are not affected). In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time-consuming
	<b>M</b>	Medium (where the affected environment is altered but natural, cultural, social and economic functions and processes can continue). An impact exists but is not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of beneficial impacts, other means of achieving this benefit are about equal in time, cost and effort.
	<b>H</b>	High (where the affected environment is altered to the extent that natural, cultural, social and economic functions and processes will temporarily or permanently cease). In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time consuming or a combination of these. In the case of beneficial impacts, the impact is of a Substantial order within the bounds of impacts that could occur.

## **5.1 Potential Impacts**

### **5.5.1 Socio-Economic Impacts**

#### Impact: Increased Employment Opportunities

The development will create additional job opportunities for the local community members of the Conservancy and especially for the Mayuni Conservancy and Kongola residents. At preparatory, construction and operational stages, local Conservancy members will be employed and consequently livelihood support for family members will be improved (short-term and long-term) – in particular as on average support from one job benefits five family members.

#### Impact: Increase in Local Population

The development will not have a significant impact on the population size of the area. The proposed development will source a very small number of highly skilled personnel from outside the Conservancy during the construction phases. All semi-skilled and unskilled staff will be employed from the Conservancy and appropriate training provided. Hence, having staff members at Nambwa Lodge that are skilled. Human presence in the remote project site will though increase. It is not expected that this increase of human presence will significantly negatively impact the wildlife or diminish the eco-tourism experience in the area. It is however expected that this increased human presence will help to manage the currently largely unmanaged campers.

#### Impact: Increase in Local Economic Activities

Trading opportunities among the local people are expected to increase. Food and other household necessities will be sold to the camp and its staff, providing both a short-term and long-term positive economic activity. Additionally, aspects of the business such as wood will be outsourced locally, since wood collection is not allowed inside the National Park. Increased employment numbers within the Conservancy will also support local trade through increased income in the area, including sale of hand crafts.

Impact: Water Supply Availability

The development is unlikely to put pressure on water demand in the area and will not overwhelm the groundwater resources, as campers are known using water sparingly and they spend most of their time in the field.

Impact: Loss on Cultural Site

No significant impact determined. It has become clear that well managed eco-tourism activities in National Parks, has no significant impact and can enhance cultural activities and promote their preservation by linking the camp with the cultural tours into the community.

Impact: Increased Demand for Health Services

During construction and operations, all occupational health related injuries will be referred to the local health facilities for immediate attention, in Kongola. This will not have a significant impact on the capacity of the staff and facilities to meet the demand for health care, since most of the employed people will be from the area and already reside there. HIV and AID programs for the Contractors, Camp Staff and for the local communities will need to be developed and provide so to ensure that all participating people are not exposed to increased risk of HIV spread.

Impact: Worker Safety

During the construction and operation phases, light machinery will be employed for the digging and putting up associated infrastructure. Absence of clear safety guidelines may lead to accidents affecting worker's safety and productivity, however, this will not be the case during the construction of this development and clear safety guidelines will be available and all workers will be briefed and trained accordingly, taking into consideration that the activity is inside the Park and the risk of wild animal.

Impact: Increased Traffic

Increased traffic flow in and out of the area is expected during construction and operations. During operations, this increase is expected to be insignificant. A slightly increase in local traffic can be expected during construction, however, this will be for a limited period of time and the impact is expected to be low. As per our norms, all staff members from the local

community shall be brought in by the river, as is the normal practice currently being practiced at Nambwa Lodge.

Impact: Blasting noise and vibration

No blasting will take place, but limited vibrations from machinery and tools could be perceived as intrusion. This will only occur during limited construction time and a few points in time while drilling poles, cutting and while hammering decks.

### **5.5.2 Environmental Impacts**

Impact: Displacement of people

No impact, as it is in the National Park.

Impact: Machinery noise and vibration

During the construction and operational phases, noise and vibrations from the vehicles and machineries will result into noise and vibration. This impact will be insignificant to Wild animals. The construction workers are the most vulnerable and therefore they should wear protective gear.

Impact: Water quality

No impact.

Impact: Solid Waste Disposal

Waste will be produced at the site during the setting up of supporting infrastructure and digging trenches for the pipeline. Piles of sand cleared or dug out are not environmental pollutant hazard, but can reduce the area aesthetics value, therefore it will be done with little to no significant and site to restore in a shortest time less than a year.

Impact: Air Pollution

The major source of the impact will be dust from vehicles ferrying materials, however most of the material will be ferried via the river to Nambwa Lodge to limit the impact due to distance from local communities, this impact is insignificant. Care should be taken not to expose workers to excessive dust and exhaust fumes.

Impact: Loss of Historical and Cultural Site:

There are no existing historical and cultural site within the site or in its immediate surrounding environment.

Impact: Loss of Productive Land

There is enough grazing and browsing area for the wildlife. The Camp will be build in away that allows free movement of game.

Impact: Loss of Wildlife Habitat, Indigenous Flora and Fauna

The project site will not interfere directly with any existing wildlife routes, browsing and grazing area. However, limited loss of some terrestrial wildlife habitat and flora is expected. However, given the size of the proposed development in relation to the larger landscape, this can be considered insignificant.

Poaching and removal of any plant materials will be closely monitored by the proponent (Nambwa Lodge) and rangers (MET). The Proponent is from the area and they will also ensure that no poaching or removal of plant materials take place.

Impact: Erosion of the Top-Soil

The nature of the project demands the use of machinery during construction. There will be no soil removed for the development that might cause erosion. The nature of development does not require such activity and hence all campsites will be constructed on decks to limit the impact, unless site rehabilitation is not done properly after construction and no regular maintenance is carried out during the operational phase of the project.

Impact: Siltation and Sedimentation

No impact, no major digging will take place.

Impact: Soil degradation

No impact.

The following Tables below present the proposed impact analysis.



Table 3: Evaluation of impacts during pre-construction phase

PRE-CONSTRUCTION PHASE							
Identified Impact	Impact Type	Extent	Duration	Intensity	Probability	Significance	
						Unmitigated	Mitigated
Surface water pollution	=						
Ground water pollution	=						
Soil erosion	=						
Soil pollution	=						
Air pollution	=						
Land use potential	=						
Habitat transformation	=						
Fauna displacement	=						
Damage to Flora	=						
Traffic impacts	=						
Visual & aesthetic impacts	=						
Social	+	L	ST	M	D	L	M
Economic	+	L	ST	M	D	L	M

**Table 4: Evaluation of impacts during construction phase**

<b>CONSTRUCTION PHASE</b>							
Identified Impact	Impact Type	Extent	Duration	Intensity	Probability	Significance	
						Unmitigated	Mitigated
Surface water pollution	=						
Ground water pollution	=						
Soil erosion	-	I	ST	L	LP	L	=
Soil pollution	-	I	ST	L	LP	L	=
Air pollution	-	I	ST	L	P	L	=
Land use potential	-	I	ST	L	P	L	=
Habitat transformation	=						
Fauna displacement	-	I	ST	L	LP	L	=
Damage to Flora	=						
Traffic impacts	-	I	ST	L	P	L	=
Visual & aesthetic impacts	-	I	ST	L	P	L	=
Social	+	L	ST	M	D	M	H
Economic	+	L	ST	M	D	M	H

**Table 5: Evaluation of impacts during operational phase**

<b>OPERATIONS PHASE</b>							
Identified Impact	Impact Type	Extent	Duration	Intensity	Probability	Significance	
						Unmitigated	Mitigated
Surface water pollution	=						
Ground water pollution	=						
Soil erosion	-	I	ST	L	P	L	=
Soil pollution	-	I	ST	L	P	L	=
Air pollution	=						
Land use potential	+	L	LT	M	D	M	L
Habitat transformation	=						
Fauna displacement	=						
Damage to Flora	=						
Traffic impacts	=						
Visual & aesthetic impacts	+	L	LT	M	D	M	H
Social	+	L	LT	M	D	M	H
Economic	+	N	LT	M	D	M	H

## **CHAPTER 6: ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN (EMP)**

From the above identification of adverse and positive impacts measures have been proposed for mitigation. In order to achieve this, an Environmental Management Plan (EMP) has been developed as part of this document.

## **CHAPTER 7: CONCLUSION**

A project of this magnitude will bring with it both positive and negative environmental and socio-economic impacts. These can be localized to the project site or can also affect areas within the project's vicinity. While positive impacts from this development are expected to affect the wider Conservancy and its members, the adverse effects can be considered very localized. For this development project, the positive impacts outweigh the negative impacts to which amelioration measures have been proposed to cushion their impacts.

Therefore, we recommend that the project be considered for approval for implementation, especially since the proposed site for the Camp development is not a sensitive site, some parts are already occupied by the Proponent and unlikely to generate long-term significant negative impacts.

This Scoping Report has revealed that a full EIA will not be required in order to identify gaps in information or to accurately identify all project's aspects that could generate significant negative impacts.

**APPENDICES**

- APPENDIX A: Letter from MEFT
- APPENDIX A1: Design or layout of the campsite
- APPENDIX B: Concession Operators Contract
- APPENDIX C: letter from Conservancy
- APPENDIX D: CV. Albertina Simon/COMPANY PROFILE

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