

## **HOANIB VALLEY CAMP**

### **ENVIRONMENTAL MANAGEMENT PLAN**

**2022**



Prepared for the renewal of Environmental Clearance by Natural Selection  
Safaris (Pty) Ltd

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## **INFORMATION SHEET**

### **PROJECT**

**Renewal of Environmental Clearance: Hoanib Valley Camp**

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## Abbreviations

<b>EC</b>	Environmental Clearance
<b>EMP</b>	Environmental Management Plan
<b>JV</b>	Joint Venture
<b>MEFT</b>	Ministry of Environment, Forestry and Tourism

# **1 INTRODUCTION**

## **1.1 Background**

In 2015, Namibia Tracks and Trails was granted Environmental Clearance (APPENDIX IV) to build and manage a lodge near the confluence of the Hoanib and Obias rivers. The provisional name of the proposed lodge was Camp Obias. In 2017, Natural Selection Safaris 1 (Pty) Ltd bought Tracks and Trails and is now the sole owner of infrastructure, and operator of the lodge.

Natural Selection Safaris and the Sesfontein Conservancy signed a Joint Venture (JV) agreement in August 2017, the name of the lodge was changed to Hoanib Valley Camp, the lodge was built, and it opened for tourists in March 2018.

Hoanib Valley Camp accommodates 14 paying guests and 20 staff. The infrastructure consists of canvas wrapped around wood, mounted on wooden platforms.

## **1.2 Scope of this document**

This Environmental Management Plan (EMP) was compiled in support of an application for renewal of Environmental Clearance and contains a description of the infrastructure and activities offered by the lodge, followed by management actions in table format (Section 4). The tables include an evaluation of factors that could potentially have a negative impact on the environment, and management actions that aim to prevent or mitigate each potential impact.

Current conditions, protocols and management measures were used to compile this EMP. It represents the procedures and processes followed by the management and staff of Hoanib Valley Camp and it replaces the 2015 EMP.

## 2 PROJECT DESCRIPTION

### 2.1 Location

Latitude: -19.268531°

Longitude: 13.314558°

Hoanib Valley Camp is located 50 km southwest of Sesfontein, on the northern bank of the Hoanib River near the confluence with the Obias River (Figure 1 and Figure 2). Access is via the Hoanib riverbed, 4x4 only.

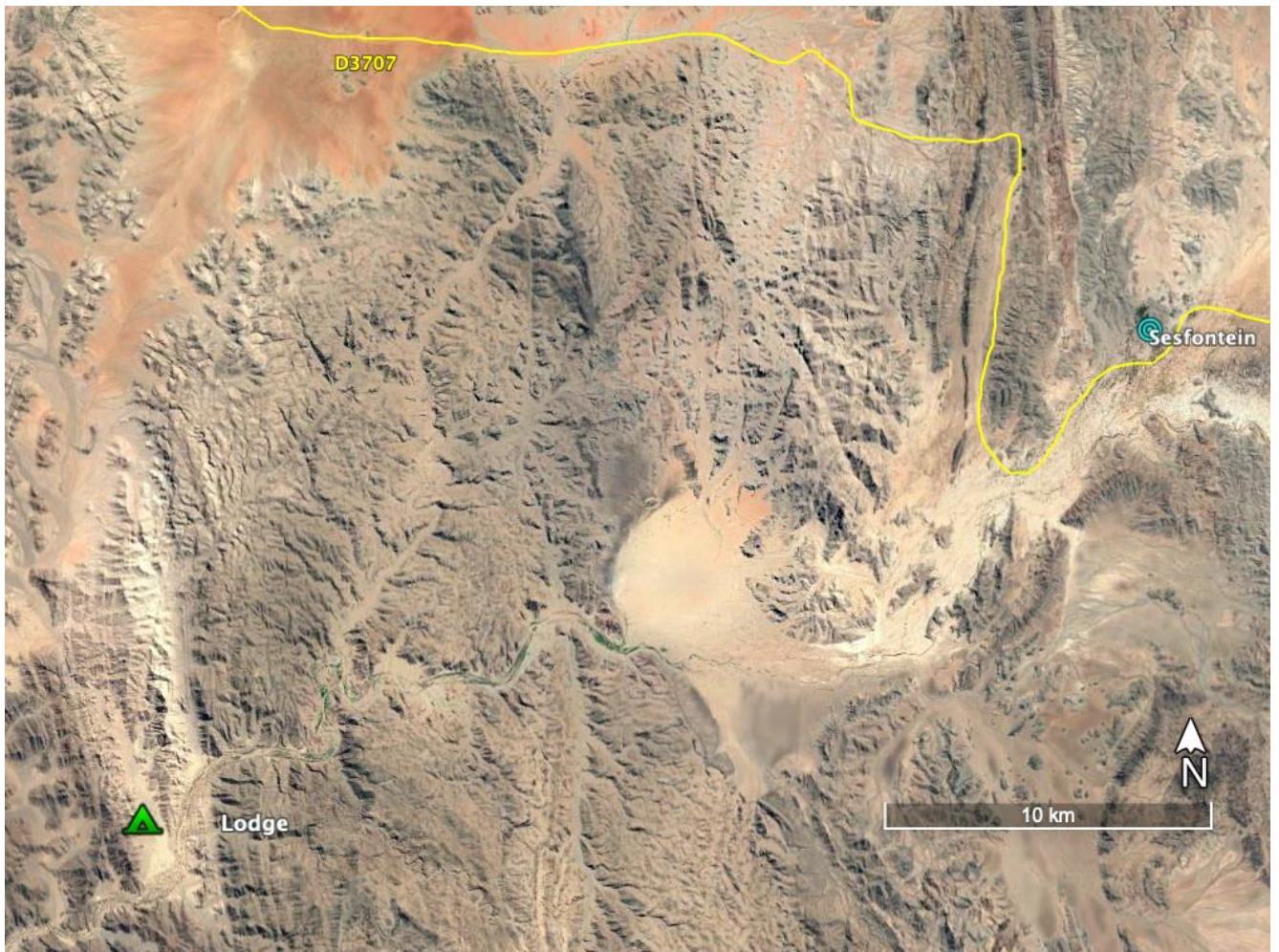


Figure 1. Location of the lodge near Sesfontein.



Figure 2. The lodge (green tent) at the confluence of the Obias and Hoanib rivers.

## 2.2 Activities

- Game drives to look at lions, elephant sand giraffes.
- Rhino tracking.
- Cultural interaction with local Herero and Himba people.

## 2.3 Infrastructure

The total footprint of the lodge and staff village is less than a hectare although the leasehold is for 47 ha. The layout of the lodge is given in Figure 3.



Figure 3. Layout of the lodge and back of house.

- A: Back of house
- B: Main area
- C: Guest lavatory
- D: Guest tents

### 2.3.1 Main area

The main area is a tent structure: canvas wrapped around gumpoles and mounted on a wooden platform (B in Figure 3, and Figure 4). It consists of an inside dining area, outside dining area and lounge (Figure 5). Next to the main area is a guest lavatory, made of canvas wrapped around gumpoles and mounted on a wooden platform (C in Figure 3).



Figure 4. Exterior of the main area.





Figure 5. Interior of the main area.

### 2.3.2 Guest rooms

A total of 14 guests can be accommodated (D in Figure 3). There are six tents, one of which is a family unit with two bedrooms. All the units are en suite.

The guest tents are mounted on raised wooden platforms (Figure 6). They are connected to the main area by walkways demarcated with rocks (Figure 7).

Visiting pilots/guides are accommodated in four canvas structures, all of them en suite (Figure 8).



Figure 6. Guest tents on raised platforms.



Figure 7. Demarcated walkways between the structures.



Figure 8. Rooms for visiting pilots/guides.

### 2.3.3 Staff accommodation

The lodge has 20 permanent staff members, accommodated in a staff village (Figure 9) 200 m behind the kitchen structure.

Management and guides live in 7 en suite units consisting of canvas wrapped around gum poles, mounted on wooden platforms and with corrugated iron roofs under shade cloth. There are 20 single rooms for junior staff who share two ablution blocks: one for men, one for women, each with 4 toilets and 4 showers (Figure 10).



Figure 9. Staff village



Figure 10. Ablution block in staff village.

### 2.3.4 Back of House

The back of house is in a canvas structure, mounted on a wooden floor under a canvas roof (Figure 11). It consists of a kitchen with two storage areas, a walk-in fridge, office, housekeeping store, laundry and two staff toilets (Figure 12).



Figure 11. The back of house.



Figure 12. The office and store rooms inside the back of house building.

## 2.4 Services

### 2.4.1 Water supply and reticulation

Water is supplied by two boreholes, 25 m and 35 m deep, located 1.5 km from the lodge on the bank of the Hoanib River. The boreholes are fitted with submersible low-volume pumps to ensure a stable water level. Water is pumped from the boreholes to 3 holding tanks of 10 000 litres each, placed on a hill behind the lodge from where it flows with gravity to the lodge and all the water outlets.

### 2.4.2 Wastewater and sewage

Sewage treatment consists of a 3-chamber breakdown system. Three underground concrete chambers with a total capacity of 48,000 litres empty under gravity to an evaporation pond. All waste water (including laundry, showers, basins and kitchen) empties into the sewerage.

The kitchen, staff kitchen and workshop are outfitted with fat traps.

Swimming pool backwash water goes into the third chamber of the sewerage.

### 2.4.3 Solid waste

Rubbish bins are provided at point of discharge, e.g. kitchen, laundry and maintenance store rooms. The bins have lids and are animal-proof. The bins are emptied daily into holding cages enclosed by a two metre high diamond mesh fence (Figure 13). Waste is separated on site and sent to Windhoek once a week on the returning food delivery trucks. Recyclable waste goes to a recycling plant and the remainder to a registered landfill. Paper and cardboard are burnt on site in an incinerator.



Figure 13. Holding cages for solid waste.

### 2.4.4 Energy

All the electricity for the lodge and support infrastructure is supplied by a solar array of 118 kWp with a daily output of 325 kWh (Figure 14). The staff village has a separate solar plant of 5 kWp.

A 74 kVa generator is used only as back-up. Generator is housed in a corrugated iron room and the battery pack in a self-contained pre-fabricated unit (Figure 15).



Figure 14. The PV array provides shade for maintenance store rooms.

#### 2.4.5 Workshop and fuel storage

Diesel is stored on-site in five 200 litre drums, placed on a concrete floor (Figure 15). The maintenance storage and work rooms consist of canvas wrapped around wood, on a cement floor and with a corrugated iron roof. Vehicles are serviced on site by a visiting mechanic but are taken to Outjo for major repairs, making an extensive workshop unnecessary.



Figure 15. Diesel storage with battery room to the right.

#### 2.4.6 Roads and tracks

Access is either from the Hoanib River or Obias River. Existing 4x4 tracks are used and are maintained by dragging tyres and by shoring up gradients with shovels. No off-road driving is



allowed, and guide training includes sessions on how to drive with minimum impact on the soil, plants and landscape.

## **2.5 Design and landscaping**

Buildings were designed to blend in with the natural landscape by using wood, canvas and muted colours, as well as keeping roofs below the skyline of hills and ridges. The lines of the roof canvas are curved to mimic the surrounding hills and peaks.

Natural Selection Safaris and our guests consider the natural landscape a source of wonder and beauty, and thus no gardening is done. There is sparse natural vegetation on the site and it is kept intact. Staff are trained to actively preserve naturally occurring vegetation. Walkways ensure that guests and staff walk in designated areas only.

## 3 EMP IMPLEMENTATION

### 3.1 Objectives

Environmental aspects associated with a safari lodge in the northwest of Namibia include:

- Soils, land capability and land use
- Topography
- Biodiversity
- Surface water resources
- Groundwater resources
- Visual environment
- Sewage, waste water, and solid waste management
- Energy efficiency
- Machinery/vehicles on site
- Cultural resources
- General environmental issues

The EMP has several objectives:

- Identify potential impacts associated with the lodge
- Prevent or mitigate negative impacts
- Enhance positive impacts
- Inform the Sesfontein Conservancy and Natural Selection Safaris about their roles and responsibilities
- Provide a monitoring tool for MEFT, Sesfontein Conservancy, and Natural Selection Safaris
- Provide a tool for a succession of managers to apply a consistent ethos and methodology to managing the lodge and its activities

The EMP is a living document that is updated as new information, policies, authority guidelines and technologies are developed and become available.

### 3.2 Compliance

The operator, Natural Selection Safaris, is responsible for compliance with the EMP.

### 3.3 Environmental Awareness Training

Establishing roles and responsibilities for all lodge staff and delivering training in the execution of their duties is an ongoing process.

### 3.4 Monitoring

Compliance with the EMP is monitored regularly.

Key aspects to monitor are given in Table 1 but the lodge manager and Operations Director may add to these and may delegate specific tasks as required by the lodge operations.



Table 1. Aspects that need to be monitored.

The table shows the aspect that needs to be monitored, the measurable unit, the frequency of monitoring, and the person responsible.

To be monitored	Measurable	Frequency	Person
Water consumption	Usage in litres per total bednight *	Monthly	Mgt
Groundwater quality	Fitness for human consumption	Annually	Ops, Mgt
Sewerage system	Septic tanks	Monthly	Maint
Sewerage pipes	Leaks	Daily	Maint
Grey water pipes	Leaks	Daily	Maint
Fat traps	Functioning equipment, clean filter	Weekly	Maint
Water installations	Functioning of purification equipment	Weekly	Maint
Solid waste	Secure storage of solid waste	Daily	Maint
Solid waste	Removal of waste from site	Weekly	Mgt
Soak-aways	Drainage	Weekly	Maint
Tracks & roads	Erosion	Weekly	Mgt, Maint
Wildlife	Wildlife sightings	Every game drive	Guides
Wildlife	Species of special interest	On-going	Guides
Diesel	Records at source tanks and generator	Daily. Monthly summary	Maint
Gas	Usage	Monthly	Maint
Vehicles	Oil leaks, emissions, tyres	Daily	Guides, Maint

\* Total bednights include every person using lodge resources: guests, staff, managers, scientists, contractors

### 3.4.1 Water monitoring

The aim of the water monitoring programme is to assess the consumption and impact of water use on groundwater quality and availability. The Lodge Manager carries out the monitoring programme.

- Groundwater usage is metered and recorded monthly in order to monitor and manage water consumption.
- Groundwater quality is monitored at point of use (lodge kitchen) and tested annually for mineral and bacterial content to ensure that it is fit for human consumption (Test: *Evaluation of drinking water for human consumption, DWA, Namibia, July 1991*).

### 3.4.2 Energy monitoring

Gas: monitored monthly

Diesel: recorded daily and monthly summaries are made



Firewood: only dead wood is collected and sourced from de-bushing operations. Fires are used only for ambience in the evenings and no cooking or heating is done with fire, either in the lodge or in the staff village.

### **3.4.3 Sustainability questionnaire**

The Natural Selection group of companies monitors the sustainable governance of its subsidiaries annually (APPENDIX III).

## **3.5 Environmental Performance Assessment**

Environmental auditing is aimed at ensuring continual improvement in environmental performance. The lodge keeps records of environmental monitoring data, which is included in an annual report to the board of Natural Selection Safaris. The annual report contains details of all changes and new projects.

Monthly summaries of data are sent to the group environmental officer, who uses them to assess the level of compliance with legislative environmental requirements, the commitments made in this EMP, and the requirements of the Sustainability Best Practice Guidelines (APPENDIX II).

## 4 MANAGEMENT ACTIONS

### Table headings

Management actions to mitigate each potential negative impact are proposed in the tables in Section 4. The tables have the following three headings:

#### Nature of impact

Possible impacts on a feature or function of the environment are identified. Description of potential risk sources (impacting activities) and the mechanisms through which an impact may occur are described.

#### Mitigation

Mitigation measures are proposed for each identified impact. These measures consist of specific management actions that need to be carried out in order to avoid, minimise or remedy negative impacts, together with adjustments to respond to unforeseen impacts.

#### Responsibility

Successful implementation of an EMP relies on defined roles and responsibilities. Hoanib Valley Camp has allocated duties to individuals and teams, and they are responsible for carrying out the management actions (Table 2).

Table 2. Responsibility for implementing the EMP.

Person/Team	Responsibilities
Operations Manager (Ops)	Overall responsibility for implementation of EMP Support to lodge staff for implementation of environmental management measures
Maintenance team (Maint)	Maintenance of infrastructure, vehicles, sewerage and solid waste systems
Lodge Management team (Mgt)	Overall management of lodge and activities Supervision of maintenance team, guides and other lodge staff
Guides	Transport of guests Appropriate human-wildlife interactions

### Tools

Natural Selection Safaris has the following protocols that govern the implementation of management actions:

1. Waste management policy (APPENDIX I)
2. Sustainability best practice guidelines (APPENDIX II)
3. Sustainability questionnaire (APPENDIX III)
4. Guide manual (available on request)

## 4.1 Operational phase

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
<b>BIODIVERSITY</b>		
Impacts associated with human-wildlife interaction	Guests and employees are made aware that they are in a sensitive environment, and are taught the appropriate way to interact with wildlife.	Mgt. Guides.
Damage to animal habitats and plants	Trained guides escort guests at all times, no self-drive or walking other than in designated areas.	Guides
	No harvesting of plants or collection of firewood is permitted. No plants or animals may be disturbed, violated, destroyed or removed.	All
	Employees are educated to refrain from the destruction of plants and animals, indiscriminate defecation, waste disposal and pollution of soil and water.	Mgt
Protected animal species are affected by operational activities.	Avoid areas containing nests, burrows or dens.	Mgt. Guides.
Protected plant species are affected by operational activities.	No protected, rare or endangered plants are disturbed, damaged or removed.	Mgt. Guides.
	No Lichen fields may be disturbed by the operational activities	Guides
Damage to plants	Only permitted access roads and paths are used by employees, guest and vehicles at all times.	All
	No off-road driving is allowed.	All
Spread of invasive vegetation	The area is kept free of alien and invasive vegetation.	Mgt. Ops.
<b>SOLID WASTE</b>		
Large volumes of waste are generated	Minimise waste by buying supplies in bulk and using re-usable packaging and transport options.	Ops
	Minimise water bottle waste by promoting local tap water and providing re-usable water bottles to guests.	Mgt. Guides.
Waste management	All physical waste is either recycled or appropriately disposed.	Mgt. Maint.
	No waste is buried anywhere on the farm.	All
	Appropriate waste bins are provided at the point of source. All waste bins are covered and secured to be animal proof.	Mgt. Maint.
	A bird, animal and wind proof waste holding cage is used to store solid waste until it is transported to a municipal dump site. This area is secured and has a concrete floor for maintainance and to prevent ground seepage.	Maint
	Recyclable waste (glass, cans, plastics, paper) is stored on site until there is sufficient volume to be transported for recycling.	Maint
	All waste that cannot be recycled or sold is stored on site in suitable containers, then disposed of at a permitted waste site.	Maint
	Limited amounts of packaging is burned in an incinerator.	Maint
	Organic waste is buried in suitably designed deep, animal proof pits.	Maint
Hydrocarbons cause soil and groundwater contamination	Used hydrocarbons are collected at point of use and stored in sealed containers.	Maint

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
	Used hydrocarbons are despatched to an appropriate waste facility.	Mgt
<b>ENERGY</b>		
Excessive use of fossil fuels	Energy use (electricity, diesel, petrol, paraffin, gas) is metered and monitored. Readings are compared with target usage to ensure optimum efficiency.	Mgt. Maint.
	Generator is used as back-up only.	Mgt
	Geysers are solar powered.	Ops
	All cooking is done with gas.	Ops. Mgt
	All electrical appliances are energy-efficient models. Fridge and freezer doors seal tightly and are kept closed.	Ops. Mgt
Generator noise disturbs the natural quiet	Generator is housed in noise-limiting container; use generator only during daylight or for limited hours.	Ops. Mgt
Firewood collection affects ecosystems and denudes the landscape	Firewood is bought from renewable sources. No firewood is collected on the farm.	All
<b>WATER RETICULATION AND CONSUMPTION</b>		
Loss of water through leaks in reticulation system	Maintenance programme for pipes and tanks is in place. Leaks and faults are repaired immediately upon detection.	Maint
Water conservation measures	Water conservation is actively promoted among guests and staff. Guests are informed of water scarcity and encouraged to participate in water conservation.	Mgt
	Water usage is measured and recorded, then compared with targets to ensure optimum efficiency.	Mgt
<b>SEWAGE AND WASTE WATER</b>		
Contamination of soil, as well as surface and groundwater, due to sewage and waste water discharge	Sewerage system is maintained.	Maint
	Bio-degradable toilet cleaners are used to preserve bacteria in the septic system	Mgt
Ecological impacts	Fat/grease traps are installed at kitchen outlets and maintained.	Maint
	Septic tanks and soak-aways are maintained.	Maint
Unpleasant odours	Qualitative monitoring of odours.	Maint
	The source of unpleasant odours are identified and remedied within 1 week of identification.	Maint
<b>VEHICLE USAGE</b>		
Erosion of roads and tracks	Regular maintenance of roads and tracks.	Maint
	Implement measures to disperse concentrated water flow and repair erosion at such locations.	Maint
Damage to roads and tracks	Low tyre pressure on all operational vehicles.	Mgt. Guides.
	Operational vehicles are 4-wheel drive and of standard width.	Mgt
Off-road driving causes compaction of and damage to soil	No off-road driving is allowed. Only permitted access roads and paths are used by employees, guests and vehicles at all times.	All

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
	Making tracks next to a road is not allowed. Taking shortcuts is not allowed.	All
	New roads and tracks have to be authorised and are developed according to the road plan.	Ops
	Vehicles are parked only in designated parking areas.	All
Exhaust emissions cause air pollution	Vehicles are serviced regularly and monitored for excessive exhaust emissions.	Maint
Driving in rivers disrupts surface water hydrology	Rivers are entered and exited only at existing and designated points. No off-road driving is permitted once a river is exited.	Guides
Driving over flooded or moist areas disrupts surface water hydrology	No driving in seasonally inundated areas when flooded or moist.	Guides
OPERATIONAL ACTIVITIES		
Toiletries and cleaning chemicals cause contamination of the soil, as well as surface and ground water	Kitchen and housekeeping soaps and detergents are biodegradable and eco-friendly.	Mgt
	Biodegradable and eco-friendly guest amenities are provided.	Mgt
Vehicle parking, servicing and other workshop activities cause soil and groundwater contamination	Vehicle servicing is done on impervious, bunded surface or over oil pans.	Maint
Fuel storage and refuelling procedures cause soil and groundwater contamination	Fuel is stored in appropriate receptacles and on bunded surface.	Maint
	Fuel is dispensed over impervious, bunded surface or drip trays.	Maint
Machinery use disturbs the natural quiet	Graders, tractors and power tools are used during daylight only.	Mgt
Contamination of soil by paint, thinners, varnish, turpentine, detergents, etc.	These substances are stored in sealed, clearly marked containers and only in designated store rooms. Care is taken to avoid spills and unnecessary contact with soil, water, vegetation and animals. Decanting is done over a drip tray to prevent spillage and further than 40 m of any natural water source.	Mgt. Maint.
DESIGN AND LANDSCAPING		
Buildings intrude upon the landscape	Infrastructure is designed to blend with the surrounding landscape.	Ops
Light pollution at night	Only subdued or directional lighting is used.	Ops
Towers, raised tanks, telecomms and other support infrastructure have negative visual impacts	Building and maintenance structures and equipment are out of sight of the public & below skyline of ridges/koppies	Ops. Mgt
HEALTH AND SAFETY		
Labour policies	The company is in compliance with all national legislation and regulations governing workplace equity and diversity.	Ops
Staff and guest health and safety	The company is in compliance with all national legislation and regulations governing health and safety measures.	Ops
	Protective clothing, as appropriate to operations, is provided to employees.	Ops

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
	Adequate first aid kits are available and regularly maintained. A suitable number of employees is trained in first aid.	Ops
	On-site staff housing is large enough, secure, clean, and provided with water, sanitation and energy.	Ops
	Employees and guests are made aware of procedures to follow in the event of an emergency, e.g. which person to contact, how to contact him/her during the night; evacuation routes.	Mgt
	Employees responsible for guest transport have valid licences and public driving permits.	Mgt
Fire	All precautions are taken to prevent the outbreak and spread of fires. Employees are aware of the necessary precautions.	Mgt
	Fire fighting equipment is available, regularly maintained, and employees are trained in fire safety.	Mgt
	Gas canisters are stored in Bureau of Standards approved structures.	Mgt
	Fire extinguishers are strategically located throughout the developed area.	Mgt

## 4.2 Closure & decommissioning phase

There is no intention to cease operations or decommission Hoanib Valley Camp in the foreseeable future. Since tourism has an indefinite projected lifespan, and the conservancy has a vested interest in the success of the operation, there is currently no decommissioning plan.

Should closure and decommissioning of any of the lodge assets be required, an extensive decommissioning plan will be drawn up and meticulously followed according to the highest standards of environmental management best practices. The priority for closure will be to return the land as closely as possible to the pre-construction condition. Measures will be taken to prevent soil erosion and provide protection so that plants can re-colonise. A site assessment will be carried out after closure to ensure that no structures remain and that site rehabilitation has been fully achieved.

### Rehabilitation and Closure Objectives

There are three primary closure objectives.

- Protect public health and safety, as well as the health and safety of fauna and flora.
- Alleviate or eliminate environmental damage.
- Return the site to its original, pre-development condition, including soil, flora, fauna and visual aspects.

## 5 CONCLUSION

This Environmental Management Plan describes management measures that aim to prevent or mitigate negative environmental impacts that the lodge activities may have. It is a legal document and Natural Selection Safaris (Pty) Ltd commits to implementing all the management measures, monitoring programmes and other plans as presented.

The EMP is intended as a practical, working protocol to be used in accordance with the principles of adaptive management. As new information, technologies and methods become available, the management measures set out in this document may be adjusted to conform with current best practice guidelines, while staying within the economic means of the business.



## **APPENDIX I. WASTE MANAGEMENT POLICY**



### **Hoanib Valley Camp Waste Management Policy**

#### **Table of Contents**

1. Introduction
2. Purpose
3. Waste Management Options - Waste Hierarchy
4. Waste categories generated by the IAIP and RTC site
5. Existing and proposed Waste Management Infrastructure
6. Performance Monitoring
7. Review Process

#### **1 INTRODUCTION**

The Waste Management policy addresses management of all solid refuse, including hazardous and non-hazardous waste.

#### **2 PURPOSE**

The Waste Management policy aims to provide guidelines on waste reduction, segregation, collection and disposal practices in accordance with best practices, to avoid deterioration of the natural environment and negative impacts on the health and safety of communities in the lodge operation area. The Project is committed to apply the waste hierarchy and will seek to be a zero waste discharge facility. This plan is the primary tool to guide employees towards waste management.

#### **3 WASTE MANAGEMENT OPTIONS - WASTE HIERARCHY**

The waste hierarchy presents waste management stages commencing with the most preferable option to the least preferable option. Waste prevention is the most preferred option, followed by reuse, recycling, recovery including energy recovery and as the last option is safe disposal.

**Prevention**  
**Re-use**  
**Recycling**  
**Disposal**

#### **PREVENTION**

Purchasing of raw materials is strictly managed in order to ensure there is minimal wastage. The focus is to prevent raw materials, ingredients and products from becoming waste in the first place. This is managed with a bulk buying policy to minimize the amount of waste brought into camp in the form packaging.

Hoanib Valley Camp is committed to avoiding the generation of waste and not using hazardous materials. Where the use of hazardous materials is unavoidable, efforts are made to identify replacement materials that are non-hazardous through continued research and development.

As a prevention measure, Hoanib Valley Camp has undertaken to reduce the purchase and usage of plastic water bottles by providing guests with refillable glass water bottles and using refillable glass water bottles during meal services.

### **RE-USE**

Hoanib Valley Camp maintains a management plan which seeks to ensure that all equipment is regularly checked and maintained and refurbished or repaired.

### **RECYCLING**

Turning of waste into a new substance or product, such as organic/food waste being given to the pig farmers outside the boundary of the camp to facilitate supplementary feeding schemes and hence increase their production levels.

Recyclable waste is collected at the camp using a waste segregation policy. Waste is separated at the lodge using the below segregation:

- Wet (Biodegradable) Food waste – Taken to the pig farmers in Sesfontein.
- Plastic – Taken to Sesfontein to an approved dumping site but Hoanib Valley Camp is working with the local authorities to introduce a sustainable sorting and waste management plan for the dumbsite.
- Cans and Metal - Taken to Sesfontein to an approved dumping site but Hoanib Valley Camp is working with the local authorities to introduce a sustainable sorting and waste management plan for the dumbsite.
- Paper and Boxes – Burned at the lodge in a controlled environment.

Segregation bins are placed at the lodge and staff quarter. These are then collected by the lodge maintenance team and further separated at the lodge waste segregation site.

### **DISPOSAL**

Disposal is deemed the last resort and must occur in an environmentally responsible manner. Disposal results in waste going to landfill or to incineration without energy recovery and is the least preferred environmental option. However, when wastes must go for disposal this must occur at a suitably designed sanitary waste disposal site.

### **5 EXISTING AND PROPOSED WASTE MANAGEMENT INFRASTRUCTURES**

Hoanib Valley Camp has 3 rubbish cages on site and the personnel to carry out the sorting and management of the waste but relies a lot on the services and infrastructure available in Sesfontein for the successful implementation and execution of the Waste Management Policy. Hence, the below challenges are identified:

- There are no organised and advanced waste management systems in Sesfontein such as collection, transport and disposal. The current municipal waste management practices in Sesfontein are not formally organised.
- Although there is a recognized dumping site, solid waste disposed is dumped on open ground.
- No fences around the dumb site and no personnel to sort waste and manage the site.

## **6 PERFORMANCE MONITORING**

- **INSPECTIONS**

Site inspections are to be performed by the Lodge Management and Directors from the Head Office during their visits to Hoanib Valley Camp. Inspections will ensure that all commitments in this WMP are being enforced and that specific waste management elements are verified.

- **DATA COLLECTION**

Implementation of the waste hierarchy principles requires that destinations and quantities of residual matter are monitored. A register of waste material should be maintained to ensure the measurement of eliminated waste and of residual matter sent for reuse, recycling and reclamation.

- **WASTE AUDIT**

After a year of operation, a waste audit should be performed, on all waste data collected, to identify waste streams and fate and develop ways to reduce waste production.

## **7 REVIEW PROCESS**

The WMP is to be reviewed and updated on an annual basis. Date of next review: June 2022

## APPENDIX II. SUSTAINABILITY BEST PRACTICE

# Natural Selection Safaris

## Sustainability Best Practice Guideline

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This document is a guideline to the sustainability expectations of the Natural Selection portfolio (build and operational) and takes into consideration sustainability best practices identified during site visits as well as suggestions and challenges highlighted by operation managers. It is also informed by an industry benchmarking forum and aligns as much as possible with global and local sustainable goals & principles, including Global Sustainable Tourism Criteria, Green Star eco-rating system, Triple bottom line (socio-economic-environmental) principles, SDGS (Sustainable development goals) and ISO 14001:2015 amongst others.

### Objective

To align with the ever-evolving sustainability technologies and practices so that sustainability considerations are core to our ethos. Previous audits at all camps / lodges have provided a baseline of sustainability alignment to date. Future audits will allow a means against which to track and report on our compliance with agreed and evolving Natural Selection standards /guidelines. Following an audit, areas for alignment will be communicated and a site-specific implementation strategy - taking into account that each lodge has its own unique history and challenges – will be developed in discussion with each manager (or relevant person).

For specific guidance around latest technologies or sustainability practices and expectations, please feel free to contact me at any time.

### Categories for alignment

For the categories of alignment there is overlap between pre-build and operational protocols. Also, there is an assumption that there are purchasing policies, standard operating procedures and environmental management systems in place which have been disseminated to the relevant personnel in the form of training and inductions:

1. Visibility and general aesthetic
2. Noise
3. Water monitoring, treating and testing
4. Water Efficiencies and savings measures
5. Wastewater Management (blackwater, greywater and pool water)
6. Solid Waste Management
7. Cleaning Products and Toxic / hazardous substances (excluding fuel)
8. Fuel and maintenance areas
9. Energy Supply, Efficiencies & Savings
10. Food and drink
11. Material (lodge build and operational) procurement
12. Sustainability and conservation communication
13. Social and Economic Factors (including social responsibility)

Sub-points in categories of alignment include prioritization around these expectations:

**Minimum Standard** - all camps and lodges should meet these standards by June 2021 and account for any costs of implementation in the upcoming budgets.

**Best Practice** - all camps and lodges can consider these as ways of further developing their operations to meet international sustainability guidelines and expectations.

### Data gathering

Data is important in order to assess / track usage against Minimum Standards and Best Practice.

Data will ultimately be linked to a dashboard in order to track progress against agreed KPIs and best practice.

Below is a summary of the Minimum Standards data and sampling required, mentioned in above categories.

Each camp will be required to provide the following data (in format to be agreed, to be calculated on a pp in camp average – front and back of house).

#	Category	Sustainability alignment	Expectation
1	Visibility and general aesthetic	All new build and retrofits need to be subject to a sustainability vetting / inspection which will inform the alignment expectations below.	Minimum Standard for new build and retrofit.
2	Visibility and general aesthetic	Design and build should have low visual impact in architectural design and aesthetics - it should preserve the natural integrity of the place and introduce nature to the guest's experience (decks, wide-open views, sky beds, salas etc) and not bring in inappropriate furnishings or trappings of the city to the bush.	Minimum Standard for new build and retrofit.
3	Visibility and general aesthetic	Our camps should be designed to be able to be completely removed at the end of its life or lease, in order to allow the bush to revert to its natural state.	Minimum Standard for new build.
4	Visibility and general aesthetic	No "real" animal products (zebra skins, horns etc with the exception of porcupine quills and feathers or if for educational purposes ie Jacks Museum) should be used for decorative purposes. If it is obviously "fake" e.g. zebra patterned material then it can be incorporated into the design, if appropriate.	Minimum Standard.
5	Visibility and general aesthetic	There should be minimum use of cement except as floors in workshops and fuel depots to prevent spillages from polluting the soil.	Minimum Standard for new build and retrofit
6	Visibility and general aesthetic	Reduce any unnecessary light pollution (light should be reduced to a minimum - necessary for safe walking to and from units at night).	Minimum Standard.
7	Visibility and general aesthetic	Lights go off once guests and staff have retired to reduce light pollution	Minimum Standard.
8	Visibility and general aesthetic	Roof lines must not break tree canopy or highest point on site.	Best practice for new build and retrofit.
9	Noise	Ensure generators have sound proofing and do not detract from the sense of place.	Minimum Standard.
10	Noise	Mitigate and phase out any other noises that may detract from the sense of place.	Minimum Standard.
11	Water monitoring, testing and quality	Water meters (manual or automated) to be installed in strategic positions across the camp so that total water consumption can be recorded (per person in camp). At a minimum a water meter at the intake point, which will enable one to benchmark against best practice (and drill down into inefficiencies and where improvements can be made).	Minimum Standard
12	Water monitoring, testing and quality	Water consumption to be recorded a minimum of once a month.	Minimum Standard
13	Water monitoring, testing and quality	Sampling of potable water to occur at a minimum yearly.	Minimum Standard

14	Water monitoring, testing and quality	Potable water to be treated using RO system and UV light if required -if not within acceptable limits prior to treating - to reduce plastic bottle procurement.	Minimum Standard
15	Water monitoring, testing and quality	Useful life replacement guide (i.e. on filters and UV light) to be followed	Best practice.
16	Water Efficiencies and savings measures	Water efficiencies to be installed at the camp (front and back of house). Monitoring of water consumption in conjunction with implemented water saving efficiencies should show year on year improvements in water consumption. Not all water saving recommendations made below may be practical nor necessary if the camp is within industry best practice consumption values (<400 litres pppd).	Minimum Standard
17	Water Efficiencies and savings measures	Toilets (guest and staff) dual flushing (or bricks in cistern) and or less than 6 litres per flush - cisterns to be new smaller capacity varieties. Option to include hand washing excess water to fill up cisterns in staff area <a href="http://www.sinktwise.com">www.sinktwise.com</a> .	Minimum Standard
18	Water Efficiencies and savings measures	Water saving shower heads (<9/10 litres) per minute.	Minimum Standard
19	Water Efficiencies and savings measures	Water saving devices on all taps (guest rooms, staff, kitchen) must not exceed 8 litres per minute	Minimum Standard
20	Water Efficiencies and savings measures	Buckets in showers to be used to save water for cleaning rooms - also an opportunity to convey water saving ethos.	Minimum Standard
21	Water Efficiencies and savings measures	Swimming pool water saving – Swimming pool to be covered at night and if practicable also during the day when guests are out to reduce evaporation. Examples include canvass, wood or bubble etc, preferably something durable/ long lasting.	Minimum Standard
22	Water Efficiencies and savings measures	Swimming pool backwash settling tanks so that water can be reused in the pool.	Minimum Standard– if not using cartridge filters
23	Water Efficiencies and savings measures	No watering of outdoor plants unless replacing invasive species and trying to establish indigenous plants, in which case grey water to be used.	Minimum Standard
24	Water Efficiencies and savings measures	Water tanks to be on a float switch so that they turn off automatically when full therefore limiting water wastage.	Minimum Standard
25	Water Efficiencies and savings measures	Composting toilets can be used (in arid areas where water is limited in particular). At a minimum for staff toilets.	Best practice
26	Water Efficiencies and savings measures	Swimming Pool - Revert to cartridge filtration system if possible, requiring less water with fewer backwashing events and electricity.	Best practice – depending on what our per person water usage is.
27	Water Efficiencies and savings measures	Swimming Pool - Other water saving options include backwashing protocol (time and frequency, therefore saving water and electricity) - to be guided by operational manual.	Best practice – depending on what our per person water usage is.
28	Water Efficiencies and savings measures	Use of grey water to be explored at the site, uses include car washing or staff toilets etc	Best practice – depending on what our per person water usage is.

29	Water Efficiencies and savings measures	Solar geysers to be installed as close to the rooms as possible to save water (no waiting for hot water)	Best practice for new build and retrofit.
30	Water Efficiencies and savings measures	If a camp or lodge is situated in a humid climate, EcoloBlue ( <a href="http://www.ecoloblu.com">www.ecoloblu.com</a> ) manufactures a range of efficient products that create potable water from the atmosphere.	Best Practice
31	Water Efficiencies and savings measures	Rainwater harvesting if feasible to reduce borehole water consumption (uses include washing cars, cleaning, water plants if required).	Best Practice
32	Water Efficiencies and savings measures	Products such as Th2owel <a href="http://www.th2owel.com">www.th2owel.com</a> can be used at dinner tables to ensure messaging around water saving is a part of our ethos	Best Practice
33	Waste Water Management (black water, grey water and pool water)	All NS Lodges new build & retrofit to install <u>above ground</u> Sewerage treatment plants (STPs) where feasible or required by law (Botswana). Existing underground sewerage treatment systems where not required by law need to be retrofitted with a final above ground processor or way of testing effluent (before entering the environment. Sewerage Treatment Plants (STPs) ensure that all wastewater and sewage is processed efficiently, resulting in clean water flowing back into the environment. Good, low electricity consumption, options include Bio-Box and the Clarus Fusion systems.	Minimum Standard for new builds and retrofit.
34	Waste Water Management (black water, grey water and pool water)	Ensure items going into STP are suitable! Any cleaning products (kitchen, tents, back of house etc) connecting to the STP to be organic and eco-friendly (i.e. no bleaches and harsh chemicals BUT NOT ANTIBACTERIAL) so as not to undermine the microbial biodegradation activity of the STPs.	Minimum Standard
35	Waste Water Management (black water, grey water and pool water)	Eco-tabs can be used (in fat trap and where required) to reduce odours and help break down waste ( <a href="http://www.ecotabs.co.za">www.ecotabs.co.za</a> ).	Minimum Standard if odours apparent or outflow sampling results below acceptable limit
36	Waste Water Management (black water, grey water and pool water)	Outflow sampling protocol of STPs to be implemented. Outflow of STP a BTO requirement. If water quality not tested, it has the potential to contaminate via pathogens.	Minimum Standard
37	Waste Water Management (black water, grey water and pool water)	All kitchens (camp and staff quarters) to have fat/grease traps which are cleaned regularly, including the use of grease trap tablets (eg <a href="http://www.ecotabs.co.za">www.ecotabs.co.za</a> ).	Minimum Standard
38	Waste Water Management (black water, grey water and pool water)	Sewerage treatment information & protocol (framed and on the toilet of guest rooms) and clearly marked throughout the site where required (kitchens, toilets, showers at front and back of house including staff quarters).	Minimum Standard
39	Waste Water Management (black water, grey water and pool water)	Swimming pool – if backwashing required from pools / settling tanks not to flow into a water source. Backwash water can contain chlorine, bromine, algaecides, biocides, water conditioners, stabilizers, and other chemicals and pathogens that can persist in the environment for a long time.	Minimum Standard
40	Waste Water Management (black water, grey water and pool water)	Swimming pool - settling tanks for backwash water is a good alternative as water can be reused to top up the pool.	Minimum Standard if not using cartridge system

41	Waste Water Management (black water, grey water and pool water)	Treated wastewater, greywater and STP (if outflow is within acceptable threshold) can be used to wash cars and any other applicable uses (toilets for staff, irrigation).	Best Practice
42	Waste Water Management (black water, grey water and pool water)	Swimming pool – alternatives that require no back washing include the cartridge filter system. Existing sand filters can be retrofitted with cartridge systems if required.	Best Practice
43	Waste Water Management (black water, grey water and pool water)	Swimming pool - Ideally we should be moving away from chlorine pools especially alternatives to B52 chlorine (BTO have requested alternative treatment of pools), ozone pools or UV treatment like Blue Lagoon ECO range / eco-pools.	Best Practice
44	Solid Waste (management and reduction)	All lodges must have a clearly defined waste management policy with clear instructions on how to separate and handle waste easily available to the staff in an understandable and simple format.	Minimum Standard
45	Solid Waste (management and reduction)	Waste management policy must be easily available to the staff in an understandable and simple format, that all staff sign-off on and that is rigidly adhered to.	Minimum Standard
46	Solid Waste (management and reduction)	An integrated waste management system (IWMS) is required which looks at handling waste from cradle to the grave. Incorporating the 3 R's (reduce, re-use, recycle) and ultimately diverting waste from landfill (especially local community landfills). Target <10% of waste to landfill.	Minimum Standard
47	Solid Waste (management and reduction)	IWMS - waste needs to be reduced at source (point of purchase or collection) therefore limiting the amount of waste / plastic being brought into camp (and therefore potentially to local dumpsites).	Minimum Standard
48	Solid Waste (management and reduction)	IWMS - Waste should be diverted away from landfill – especially local community landfills.	Minimum Standard
49	Solid Waste (management and reduction)	Purchasing policy - Lodges need carefully considered purchasing policy – includes putting pressure on suppliers to align. And then reducing, re-using and re-cycling as much as possible. Target 90% of materials to be recycled or year on year improvements.	Minimum Standard
50	Solid Waste (management and reduction)	Zero individual plastic bottles - If individual bottles of potable water need to be imported for any reason, only glass should be imported or alternatively use Water bottling plants at site with reusable sterilised glass bottles. No plastic bottles even if bottled on site.	Minimum Standard
51	Solid Waste (management and reduction)	Waste reduction - Water should be provided to guests in personalised water bottles so the lodge no longer needs to purchase, transport and supply potable water in plastic bottles. Bottles that can be reused are preferable ie glass or tin bottles as opposed to aluminium bottles.	Minimum Standard
52	Solid Waste (management and reduction)	Waste reduction - Lodge should buy in bulk and avoid products with excess packaging i.e. if potable water needs to be imported for any reason, it should be transported in large containers (min 5 litres) and not in individual drinking bottles.	Minimum Standard
53	Solid Waste (management and reduction)	Waste reduction – Elimination of single use plastic in front of house / guest interface. At a minimum the following should not be evident: (i.e. plastic cling wrap in kitchen and cotton earbuds with plastic stems in bathrooms, plastic straws including those on juice boxes). Camp must be free of single use plastics starting with front of house and guest interface	Minimum Standard



		(this includes game drive activities and sundowners, lunch packs, tea stations, bins etc).	
54	Solid Waste (management and reduction)	Waste reduction - Phase in alternatives to single use plastics include bio-degradable cling wrap - bonnie bio <a href="https://bonniebio.co.za">https://bonniebio.co.za</a> , and Terbodore compostable coffee pods <a href="http://www.terbodorecoffee.co.za">www.terbodorecoffee.co.za</a> instead of Nespresso coffee pods etc. Also look at Importers Coffee range.	Minimum Standard
55	Solid Waste (management and reduction)	Waste reduction - Needs to be an agreed action plan and on-going reduction of single use plastics in all procurement, and a timeframe.	Minimum Standard
56	Solid Waste (management and reduction)	The lodge must separate waste into a minimum of the following categories: organic waste (food and paper), glass, tin and plastic.	Minimum Standard
57	Solid Waste (management and reduction)	There must be designated and secure mesh caging storage area for organics (especially baboon, rat and hyena).	Minimum Standard
58	Solid Waste (management and reduction)	We need an active recycling programme that links into end point processing i.e. are our recycled goods being recycled?	Minimum Standard
59	Solid Waste (management and reduction)	All recyclable waste is to be sorted, compacted and then safely stored in an animal proof (especially baboon, rat and hyena) metal cage before being trucked out of the area for safe disposal.	Minimum Standard
60	Solid Waste (management and reduction)	Crushers (glass and tin) at all sites - reduce waste volume, less trips required, reduced carbon footprint.	Minimum Standard
61	Solid Waste (management and reduction)	Back of house to be clean, orderly and systematic.	Minimum Standard
62	Solid Waste (management and reduction)	Need to explore collaborative opportunities for recycling and waste management with other industry players i.e. shared vehicles, shared recycling initiatives.	Best Practice
63	Solid Waste (management and reduction)	Bailers for cardboard and plastic at all sites - reduce waste volume, less trips required, reduced carbon footprint.	Best Practice
64	Solid Waste (management and reduction)	We need to engage recycling initiatives in closest towns, or to local communities for SMME? i.e. for crafts and industry that developments income.	Best Practice
65	Solid Waste (management and reduction)	Recording of waste - Volume of waste (kgs) should be recorded so that we can determine what opportunities for recycling, as well as a for a gauge on our role in cradle to grave principles (and how we can reduce our impact).	Best Practice
66	Solid Waste (management and reduction)	Chain of Custody documentation if possible (receipts from depot ideally showing weights and composition of what was received).	Best Practice
67	Solid Waste (management and reduction)	Organic Waste -Composting programme / collaboration required which can provide nutrients for villagers to grow vegetables which can be sold back to the camp, and in the process reduce organic waste. Food composters should be considered as well to reduce / manage waste.	Best Practice
68	Solid Waste (management and reduction)	Organic Waste - Can tie into at least 1 community growing initiative, even collaborating with other industry players to divert organic waste to their projects if feasible.	Best Practice
69	Solid Waste (management and reduction)	Organic waste that is not compostable, can be incinerated – if carefully managed. Efficient incinerators are needed to efficiently dispose of any other combustible waste; they can	Best Practice

		double as boilers to heat water. Also consider as source for biogas (for cooking), particularly for staff.	
71	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Roll out of eco-friendly, organic and biodegradable cleaning and washing products – includes kitchen washing detergents, dishwashers, room amenities. Ideally with a nationally or internationally recognized eco label / certification.	Minimum Standard
72	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Any cleaning products (kitchen, tents, back of house etc) connecting to the STP to be organic and eco-friendly (i.e. no bleaches and harsh chemicals BUT NOT ANTIBACTERIAL) so as not to undermine the biodegradation process of the STP. For example, baking soda and vinegar are a great alternative to handy andy and for water stain removal! For disinfecting surfaces, bleach can be used in moderation but not to be rinsed down drains.	Minimum Standard
73	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Roll out of eco-friendly products wherever possible for pest control, doom to be phased out. Chemical pesticides not to be used. Natural / organic equivalents should be used.	Minimum Standard
74	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Maintenance - to be guided by an operational manual that speaks to environmentally friendly maintenance.	Minimum Standard
75	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Agreed protocols for products to use and disposal thereof i.e. paints and varnishes. Old paints and by products of cleaned paint brushes need to be disposed of accordingly. No pouring into earth or down the drain: operational manual needs to speak to this.	Minimum Standard
76	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Potentially hazardous solid and liquid chemicals must be stored safely and in separate suitable containers to prevent leaking and contamination of the environment.	Minimum Standard
77	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Used lights to be disposed of accordingly – not to landfill but appropriate disposal facility. <i>Only the compact fluorescent lamps and the fluorescent tubes contain mercury and require separate disposal.</i>	Minimum Standard
78	Cleaning Products and Toxic / hazardous substances (with	Used car batteries to be disposed of accordingly – not to landfill but appropriate disposal facility.	Minimum Standard

	the exception of diesel, petrol and paraffin)		
79	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Used batteries (other than car) to be disposed of accordingly – not to landfill but appropriate disposal facility	Minimum Standard
80	Cleaning Products and Toxic / hazardous substances (with the exception of diesel, petrol and paraffin)	Roll out of eco-friendly products for wood treatment and maintenance. Wood in general is untreated or alternatively they are using linseed oil for the wood. Varied approaches to wood treatment and maintenance, however no clear protocol around organic eco-friendly – e.g. accoya wood.	Best Practice
81	Fuel and maintenance areas	All fuel and maintenance areas need to be guided by a protocol / operational manual – prebuild and operational - to align with the below	Minimum Standard
82	Fuel and maintenance areas	All fuel consumption to be recorded.	Minimum Standard
83	Fuel and maintenance areas	All above ground storage tanks (ASTs) and fuel storage areas to be bunded at 110% of capacity of ASTs and the integrity of the bund to be intact (no cracking and holes in the bund)	Minimum Standard
84	Fuel and maintenance areas	Drainage holes of bund to be closed with stop valve and outflow connected to oil/water separator – no outflow to open ground. This is only in the case of bunds that have holes. If the bund is completely sealed it is not necessary to have it connected to a separator.	Minimum Standard
85	Fuel and maintenance areas	Separator needs to be spec'd correctly as per std requirements – so that LNAPL separates as required	Minimum Standard
86	Fuel and maintenance areas	Separators need to be cleaned regularly (as per an agreed protocol) and oil disposed of in designated drums.	Minimum Standard
87	Fuel and maintenance areas	All potential sources of contamination (wash bays, maintenance areas and bunds) to be designed in accordance with acceptable standards, including concrete slab. If there is an outflow or egress to open ground it needs to be connected to an oil water separator (no runoff into surrounds).	Minimum Standard
88	Fuel and maintenance areas	Used oil / hazardous waste must be stored safely and securely so that contamination is not possible.	Minimum Standard
89	Fuel and maintenance areas	Used oil / hazardous waste must be disposed of properly (i.e. with coc process and by certified company).	Minimum Standard
90	Fuel and maintenance areas	Emergency spill kit (sand bucket will suffice) to be on hand at all filling and maintenance areas.	Minimum Standard
91	Fuel and maintenance areas	Each site requires an emergency spill kit response plan.	Minimum Standard
92	Fuel and maintenance areas	Should not be leaking nor any staining to open ground as a result of operational activities	Minimum Standard
93	Fuel and maintenance areas	Hazardous substances should be labelled and stored appropriately	Minimum Standard
94	Fuel and maintenance areas	ASTs should be covered with a roof so that rainwater does not enter the bund and thus potentially contaminated, thereby reducing the need for draining and disposal thereof.	Minimum Standard

95	Energy Efficiencies & Savings	Energy efficiencies and savings need to be considered in the pre-build / pre-renovation phase so that low embodied energy materials, sourced as locally as possible can be in used. In addition, energy savings can be affected using passive design, appropriate materials, skylights, double glazing, natural ventilation, thermal analyses in design stage.	Minimum Standard for new builds and retrofit.
96	Energy Efficiencies & Savings	Energy generation - objective is to use renewable energy at camps. Solar (or green energy) should provide a minimum of 75% of energy (for old builds) required in lodge using a bank of deep cycle batteries for 220V electricity creation. New builds should be aiming for 90% green energy ration target. Bio-gas option should be explored for staff quarters.	Minimum Standard
97	Energy Efficiencies & Savings	Energy generation - existing fossil fuel generators should only be used in emergencies / back up only.	Minimum Standard
98	Energy Efficiencies & Savings	Metering devices (or automated portal dashboard) recording electricity to be installed in strategic positions across the camp. Enable one to benchmark against best practice and drill down into inefficiencies and where improvements can be made.	Minimum Standard
99	Energy Efficiencies & Savings	Green energy generation kWh (including backup generator hours/ generation) to be recorded monthly – if not automated	Minimum Standard
100	Energy Efficiencies & Savings	Green energy generation kWh (including backup generator hours/ generation) ideally to be linked to an automated dashboard.	Minimum Standard for new builds and retrofit.
101	Energy Efficiencies & Savings	Water to be heated using energy efficient technologies i.e. heat pumps, solar geysers - preferably those using evacuated tubes. If a lodge is upmarket and has baths (and you are in an area with lots of water), two solar geysers can be plumbed in series to ensure a constant supply of hot water for even the mega-user guest (or install a backup gas geyser).	Minimum Standard
102	Energy Efficiencies & Savings	Other water heating electrical savings include all pipes to be insulated	Minimum Standard
103	Energy Efficiencies & Savings	Units to be installed as close as possible to units as possible (has the added benefit of water saving as well).	Minimum Standard
104	Energy Efficiencies & Savings	If HVAC system is in place we must use alternative energies - efficiencies have improved to the point where solar can now even run air-conditioners ( <a href="http://sinkoilassociates.yolasite.com">http://sinkoilassociates.yolasite.com</a> and Evening Breeze <a href="http://www.evening-breeze.com">www.evening-breeze.com</a> ).	Minimum Standard for new builds and retrofit.
105	Energy Efficiencies & Savings	Energy efficient lighting (LED) to be installed throughout camp, front of house to back.	Minimum Standard
106	Energy Efficiencies & Savings	We need to consider load and run time optimization -Are high demand electrical appliances (borehole – if not solar, tumble driers, ice machines, freezers etc) run times optimal for the solar pV system. To be informed by an operational manual.	Minimum Standard
107	Energy Efficiencies & Savings	All electrical appliances to be energy efficient (A+++ ideally) in particular high demand items such as fridges, freezers, ice makers, dishwashers, washing machines, tumble driers, irons. Alternatively use gas appliances if energy efficient alternatives can't be sourced. Camps should consider hand washing of dishes and laundry.	Best Practice
108	Energy Efficiencies & Savings	There are efficient gas generated geysers available that do not have pilot lights for cases where solar power is inconsistent (eg Skeleton Coast) and a backup if required.	Best Practice
109	Energy Efficiencies & Savings	Solar pumps to be used for water tanks (supply). Although pv system may be spec'd correctly, having a direct charge means that pump will run when the sun is shining and not draw on battery on overcast days.	Best Practice

110	Energy Efficiencies & Savings	Revert to cartridge filtration system for swimming pool, requiring less electricity. Also backwashing into settling tank and pump timing protocol (time and frequency, therefore saving water and electricity) - to be guided by operational manual.	Best Practice for new builds and retrofit.
111	Energy Efficiencies & Savings	Outside lighting must be minimized and should either have an automatic turn off sensor installed or be manually switched off once guests retire in the evening.	Best Practice
112	Energy Efficiencies & Savings	Energy efficient technologies use for game viewing i.e. electric motors for boats or 4 stroke engines. Explore the use of electric vehicles at one camp per concession.	Best Practice
113	Food and Drink	Food and drink procurement list to be subject to a sustainability vetting / inspection and informed by a purchasing policy.	Minimum Standard
114	Food and Drink	Product stewardship /circular economy - the lodge needs to take ownership of the life cycle of the product – considerations around procurement must include food that is sourced organic, eco-labelled, fair-trade labelled, WWF -SASSI certified, certified palm oil products.	Minimum Standard
115	Food and Drink	Product stewardship /circular economy - All unsustainable practices and endangered products must be eliminated from the supply-and-value chain.	Minimum Standard
116	Food and Drink	Food/drink products should be locally and seasonally sourced where possible. Are we sourcing vegetables from local communities (or growing them ourselves), local meat products? Need to look at incorporating seasonal meals supplied from local surrounds - maximizing our local shared value opportunities.	Minimum Standard
117	Food and Drink	Lodge should support wildlife friendly product sourcing i.e. elephant-bee project honey, wildlife friendly beef, elephant chilli wherever possible.	Minimum Standard
118	Food and Drink	Vegetarian and vegan alternative options should be catered for at the lodge	Minimum Standard
119	Material (lodge build and operational maintenance) procurement	Procurement lists should be subject to a sustainability vetting / inspection checklist ideally in the pre-build and operational phase.	Minimum Standard
120	Material (lodge build and operational maintenance) procurement	Lodge must actively be procuring with sustainability / fair trade principles in mind <a href="http://www.wfto.com/fair-trade/10-principles-fair-trade">www.wfto.com/fair-trade/10-principles-fair-trade</a> taking consideration of local, seasonal and sustainable items.	Minimum Standard
121	Material (lodge build and operational maintenance) procurement	Product stewardship /circular economy - lodge / concession needs to take ownership of the life cycle of the product.	Minimum Standard
122	Material (lodge build and operational maintenance) procurement	Does the lodge procure sustainable / recycled goods? I.e. what is the type of wood in the camp and is it FSC approved /sustainably harvested/ Fair trade (alternatives include Accoya / rhino wood bamboo, artificial wood or invader alien species).	Minimum Standard
123	Material (lodge build and operational	Materials need to be procured locally wherever possible.	Minimum Standard

	maintenance) procurement		
124	Material (lodge build and operational maintenance) procurement	No hardwood should be used anywhere in the construction or furnishing unless the wood is old and recycled such as railway sleepers, old boats etc. In which case there needs to be clear messaging justifying why we are using hard woods.	Minimum Standard
125	Material (lodge build and operational maintenance) procurement	There should be minimum use of cement except as floors in workshops /maintenance areas and fuel depots to prevent spillages from polluting the soil.	Minimum Standard for new builds and retrofit.
126	Material (lodge build and operational maintenance) procurement	Need an action plan around procurement protocol to reduce waste – see IWM recommendations in “solid waste management”.	Minimum Standard
127	Material (lodge build and operational maintenance) procurement	Lodge needs to buy in bulk and avoid products with excess packaging.	Minimum Standard
128	Material (lodge build and operational maintenance) procurement	Toiletries / bathroom amenities such as shampoo, soap, cotton wool, etc. in rooms should not be in single dose containers. If this is unavoidable, they must be packaged in material that can be recycled or is biodegradable.	Minimum Standard
129	Material (lodge build and operational maintenance) procurement	Firewood - no charcoal or hardwoods to be used for heating water or cooking; only a small amount of wood should be used for the evening’s social fire. Ideally wood for fires should be alien vegetation i.e. Namibia – Prosopis, Botswana - Tecoma stans (to research options), South Africa - Rooikrans, Black wattle etc.	Minimum Standard
130	Material (lodge build and operational maintenance) procurement	Game viewing activities - Mokoros to use fibreglass as alternatives to traditional non sustainable materials	Minimum Standard
131	Material (lodge build and operational maintenance) procurement	Paint should be low VOC.	Best Practice
132	Sustainability and conservation communication	Staff in camp need to be aware of the NS portfolio and the community and conservation initiatives we are involved in. This can be achieved through information sharing in the form of yearly training as well as brochures / leaflets in the camp.	Minimum Standard
133	Sustainability and conservation communication	Relevant staff to be inducted / trained annually on sustainability expectations - camp operational expectations. This includes recycling, maintenance, toxic substances & housekeeping (front and back of house).	Minimum Standard
134	Sustainability and conservation communication	Housekeeping service providers must be aware of and aligned with the procedures regarding towels and/or sheets use – no daily washing during guest stays.	Minimum Standard

135	Sustainability and conservation communication	Signs must be evident in the rooms about water conservation, where the water is sourced, how we try to save water (sheets and/or towels cleaning policy, buckets in showers, low flow showers etc).	Minimum Standard
136	Sustainability and conservation communication	Information /booklet on bed regarding sustainability (NS goals and commitments to reducing our footprint, reducing plastic bottles, water and electricity and septic tank etc).	Minimum Standard
137	Sustainability and conservation communication	Sustainability message must carry through to camp activities and farewell packs ie no plastic wrapping, clingwrap, water bottles with straws.	Minimum Standard
138	Sustainability and conservation communication	Persons in charge of welcoming guests must be in a position to inform guests about the current environmental activities, standards and undertakings of the lodge – water saving, locally sourced produce, elimination of non-indigenous flora, conservation initiatives.	Minimum Standard
139	Sustainability and conservation communication	The lodge must keep the guests informed about and involved in its environmental work and encourage guests to participate in environmental initiatives.	Minimum Standard
140	Sustainability and conservation communication	Guests - NS conservation and community projects need to be evident in camps / rooms so that guests have an opportunity to engage with these initiatives and potentially become future benefactors.	Minimum Standard
141	Sustainability and conservation communication	Camp must be actively trying to achieve top green accreditation i.e. BTO green +	Minimum Standard
142	Sustainability and conservation communication	There must be a designated person driving the sustainability alignment	Best Practice
143	Social and Economic Factors	Lodge must offer means for local small entrepreneurs to develop and sell sustainable products that are based on the area's nature, history, and culture i.e. curio shops at camps should be incorporating local crafts thereby supporting / creating local enterprise, and cultural village excursions should be encouraged.	Minimum Standard
144	Social and Economic Factors	Need an agreed training programme that includes: Health (HIV) Skills development plan 1st Aid Safety Sustainability Fire Fighting (where needed) Educational programmes (where possible)	Minimum Standard
145	Social and Economic Factors	Risk to worker needs to be detailed and addressed: Health: Consider high prevalence of STD / HIV. Safety: are the key risks to workers being mitigated/controlled? I.e. how do they get to work and back - are we electrifying access to staff quarters and back.  Do we ensure that staff get to and from work safely at the end of the work cycle	Minimum Standard
146	Social and Economic Factors	If gender and local employment benchmarks have not already been met, the lodge needs to have a strategy for achieving an even balance of male and female staff and local and non-local staff in all positions including management. Lodge must be equitable in hiring women and local residents for all new positions. Need to agree internally on the gender benchmark	Minimum Standard

		ratio of male to female employees NS are aiming for. <b>50% gender ratio</b> as a reasonable target.	
147	Social and Economic Factors	Lodge should actively support activities or initiatives for social community development such as education, health, sanitation and infrastructure. Any such initiatives should be communicated to NS offices.	Best Practice
148	Social and Economic Factors	Need a code of conduct for activities in indigenous and local communities, with the consent of and in collaboration with the community.	Best Practice
149	Social and Economic Factors	Considering the lengthy leave cycle i.e. 6 weeks on and 2 weeks off and time away from family, camps should consider the following amenities / services, <b>wi-fi for all staff to communicate with family, recreational facilities, sufficient plug in points in staff village and sufficient lighting in rooms.</b>	Best Practice
150	Social and Economic Factors	Staff turnover and reasons for leaving should be tracked.	Best Practice
151	Social and Economic Factors	Local shared value opportunities should be maximized through economic benefit, through local procurement (e.g. >50% of lodge operational expenses are sourced from small local business and employment goals (>80% local). Procurement needs to incorporate diversified purchasing approach.	Best Practice
152	Social and Economic Factors	Local shared value opportunities should be maximized through <b>capacity building</b> . Besides on job training there should be: A skills development plan should be developed for the company, providing a roadmap for upliftment and empowerment - at least 5 training opportunities provided per year. Commitment to local skills development i.e. 3 skills development interventions per year (which is kept up to date and compliant). Facilitate formal education programme participation	Best Practice, however reporting of any capacity building to NS offices is a <b>minimum standard</b>



Matrix	Recording requirement	Equipment	Comments	Target
Water consumption	Once a month data to be sent to me	Metering required (Manual or automated)	Links into water efficiency expectations <ul style="list-style-type: none"> <li>• Water saving</li> <li>• Float switches</li> <li>• Cartridge filters etc</li> </ul>	<400 litres per person per day in camp
Drinking water	Annual sampling of treated water	Bottles submitted to relevant laboratory	Reduce waste year on year.	Ensure potable water within acceptable limits
STP outflow	Annual sampling of outflow water	Bottles submitted to relevant laboratory		Ensure outflow water within acceptable limits
Electricity	Monthly, alternatively an automated system (Sunny Portal / Eldo)	Reading kilowatt hours off pv system interface, or	Links into carbon offset calcs including energy efficiency expectations <ul style="list-style-type: none"> <li>• LED</li> </ul>	90% of energy to be sourced from alternative energy sources
		automated system	<ul style="list-style-type: none"> <li>• A+++</li> </ul>	
Fuel (petrol, diesel, lpg and Avgas if applicable)	Yearly (with month on month data)	Manual recording in format to be agreed	Carbon footprint sequestration and offsets calcs / carbon credits	Carbon footprint sequestration and offsets calcs / carbon credits
*Recycling	Yearly (with month on month data)	Manual recording with scale	Means to reach targets of reduced waste to landfill	Reduced waste year on year to landfill (90% of waste to be recycled).
Social	Monthly tracking of staff compliment and mgt position (gender, local vs non local etc)	In format to be agreed	Allows drill down into staff compliment against benchmarks	80% local employment Remaining benchmarks to be agreed (gender, Mgt positions)
Social	Tracking of staff training	In format to be agreed	Helps to determine progress	To be agreed – see target goal
Social	Tracking of staff turnover	In format to be agreed	Reduced staff turnover year on year	
Social	Tracking of local shared value opportunities	In format to be agreed	<ul style="list-style-type: none"> <li>• Economic opportunities</li> <li>• Active capacity building</li> <li>• Social service infrastructure</li> </ul>	To be agreed – see target goal

\*Best practice

## APPENDIX III. SUSTAINABILITY QUESTIONNAIRE

The Natural Selection Safaris group of companies monitors the sustainability performance of their subsidiaries and associates with this questionnaire.

<b>Sustainable Management</b>	<b>Camp</b>	<b>Comment</b>
Is your business in compliance with local health, safety, labour, and environmental legislation?		
Does your business have a sustainability management plan?		
Does your business ensure compliance with all relevant health and safety measures to ensure the well-being of its customers, staff and local community?		
Please could you provide links to your sustainability plan, or any documents that detail your sustainability efforts.		
Do you have a sustainability manager who is in charge of the programme?		
Has your business received any awards for sustainability and/or responsible tourism efforts, or been certified by an external evaluator?		
If you answered yes to the previous question, please could you give the details and/or links to any awards or certifications your business has received.		
<b>Social Responsibility</b>		
Does your business have policies against employing children and adolescents?		
Does your business support community development programmes (e.g. education, health, and sanitation)?		
Does your business ensure that its operations do not threaten water, energy, or sanitation access in neighbouring communities?		
Does your business offer guests excursions to and activities in local communities?		
If you answered yes to the previous question, does your business have a code of conduct for these activities that were developed with the local community?		
<b>Economic Impact</b>		
Are at least 70% of your employees locals?		
Does your business have locals in management positions?		
Are at least 50% of your employees women?		
Do you pay your employees a living wage?		
Does your business offer skills training to employees?		
Does your business promote local small businesses by selling their sustainable products?		
<b>Cultural Heritage</b>		
Does your business use elements of local art, architecture, or cultural heritage in its design, decoration, food, and/or shops; while respecting the intellectual property rights of local communities?		

<b>Sustainable Management</b>	<b>Camp</b>	<b>Comment</b>
Does your business offer visits to culturally or historically sensitive sites?		
Does your business follow established guidelines or a code of conduct for visiting culturally and/or historically sensitive sites?		
<b>Environmental: Conserving Resources</b>		
Are at least 50% of your food/beverage products used/offered to guests organic, eco-labelled, fair-trade labelled and/or locally produced?		
Are at least 50% of your shower and bath amenities used/offered to guests organic, eco-labelled, fair-trade labelled and/or locally produced?		
Are at least 50% of the building materials you have used organic, eco-labelled, fair-trade labelled and/or locally produced?		
Are at least 50% of your souvenirs/crafts/products that are sold or offered to guests organic, eco-labelled, fair-trade labelled and/or locally produced?		
Do you buy seasonal food products, less meat products and no products from endangered fish, seafood or other species?		
Do you offer guests vegetarian and/or vegan food options?		
Does more than 50% of your energy come from renewable sources? (i.e. solar, wind, biomass, hydropower and/or geothermal)		
Do you measure your monthly energy consumption/usage?		
Have you put measures in place to decrease overall consumption, including the use of renewable energy?		
Do you know where your water comes from?		
These questions all relate to water [Do you measure your monthly water consumption/usage?]		
Have you put measures in place to decrease overall water consumption/usage?		
Do you educate your guests on how they can conserve limited resources, such as water and electricity?		
<b>Environmental: Reducing Pollution</b>		
Does your business effectively treat wastewater, including greywater, and reuse where possible?		
Do you have a solid waste management plan that includes goals to minimise waste?		
Reuse: Do you reuse any of your waste?		
Recycle: Do you recycle your waste?		
Does your business try to reduce the use of harmful chemicals? (eg. pesticides, paints, swimming pool disinfectants, and cleaning materials)		
<b>Environmental: Conserving Biodiversity, Ecosystems and Landscapes</b>		



Sustainable Management	Camp	Comment
Does your business contribute to or support biodiversity conservation (indirectly through donations/awareness or directly through on-site operations)?		
When planting new green areas, do you only plant indigenous/native plant species, and remove invasive species?		
Does your business offer/facilitate one or more of the following: Canned hunting, illegal trade in animal body parts, breeding of big cats (lions, tigers, cheetahs), tactile interactions with infant wild animals, walking with predators or elephants, tactile interactions with predators or marine mammals and/or wild animal rides.		
Does your business hold captive wildlife?		
Are you authorised to keep living specimens of these wildlife species?		
Do you offer and/or facilitate recreational trophy hunting?		

## APPENDIX IV. ENVIRONMENTAL CLEARANCE CERTIFICATE



REPUBLIC OF NAMIBIA

### MINISTRY OF ENVIRONMENT AND TOURISM

Tel: (00 26461) 294 2111  
Fax: (00 26461) 229 936

E-mail: [mlushetile@met.na](mailto:mlushetile@met.na)

Enquiries: Ms. Mvuka Lushetile

Cnr Robert Mugabe &  
Dr Kenneth Kaunda Street  
Private Bag 13306  
Windhoek  
Namibia

17 December 2015

#### OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Managing Director  
Namibia Tracks and Trails  
P. O Box 339  
Swakopmund  
Namibia

Dear Sir /Madam

**SUBJECT: ENVIRONMENTAL CLEARANCE FOR THE PROPOSED CONSTRUCTION OF  
CAMP OBIAS IN SESFONTEIN CONSERVANCY, KUNENE REGION**

The Environmental Management Plan submitted is sufficient as it made provisions of the environmental management concerning the project's activities. From this perspective regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project. From this perspective, I issue this clearance with the following condition: (a) night game drives should be guided to avoid wildlife disturbance; and (b) drilling permit must be obtained from the Ministry of Agriculture, Water and Forestry.

On the basis of the above, this letter serves as an environmental clearance for the project to commence. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Namibia Tracks and Trails and their consultants.

This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

Yours sincerely,

  
Teofilus Nghitila  
ENVIRONMENTAL COMMISSIONER



**"Stop the poaching of our rhinos"**

All official correspondence must be addressed to the Permanent Secretary