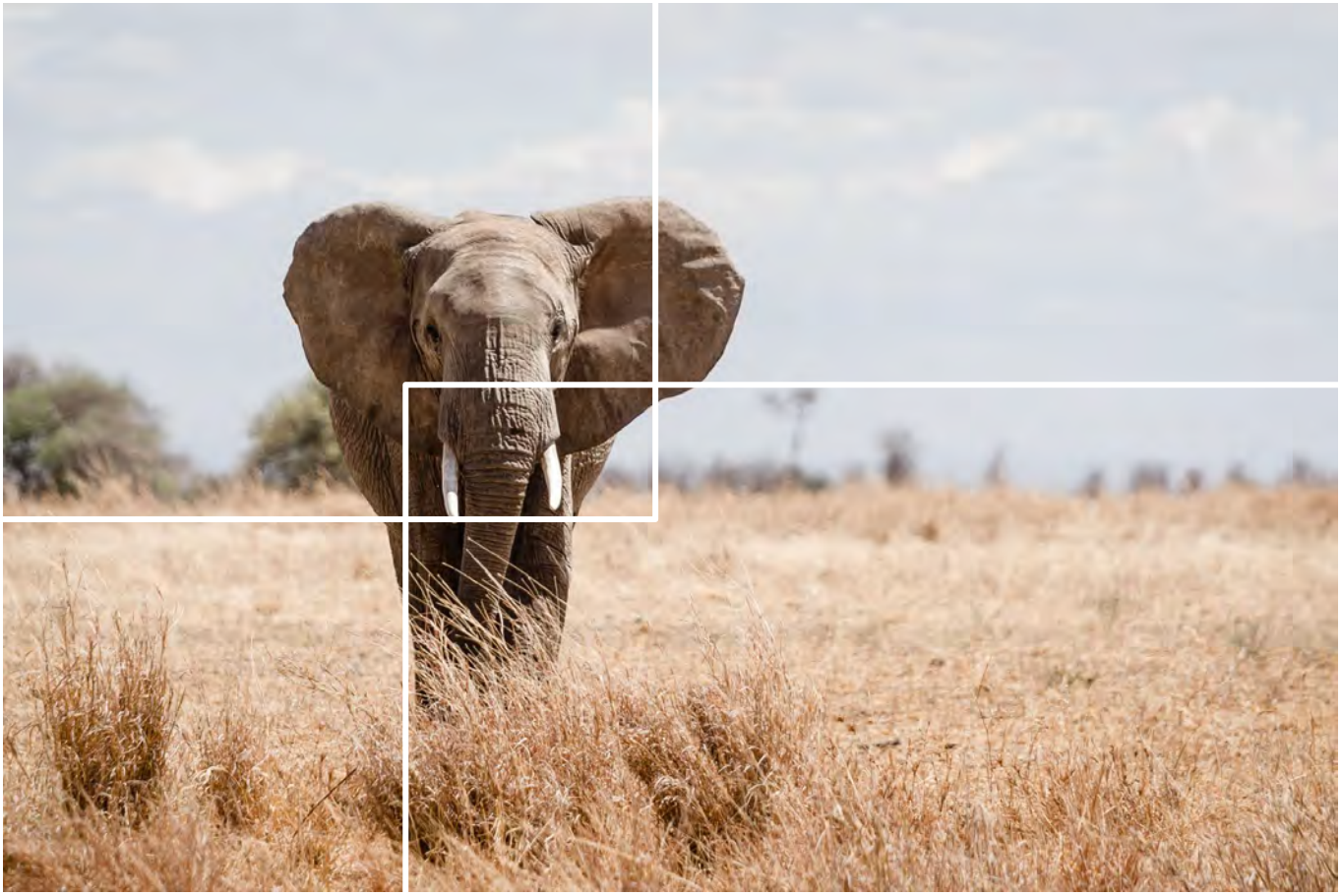

Submitted to: Burgland Zani Safaris (Pty) Ltd
Attention: Mr Marco Erasmus
P.O. Box 99292,
Windhoek

REPORT:

ENVIRONMENTAL MANAGEMENT PLAN FOR THE SUSUWE ISLAND LODGE

PROJECT NUMBER: ECC-153-539-REP-05-D

REPORT VERSION: REV 01

DATE: APRIL 2025

ECC
ENVIRONMENTAL
COMPLIANCE CONSULTANCY

TITLE AND APPROVAL PAGE

Project Name:	Environmental management plan for the Susuwe Island Lodge
Client Company Name:	Burgland Zani Safaris (Pty) Ltd
Client Name:	Mr Marco Erasmus
Client Address:	P.O. Box 99292, Windhoek, 10005
Client Email:	marco@naankuse.com
Client Phone Number:	+264812688997
Ministry Reference:	APP - 005520
Status of Report:	Final for submission
Project Number:	ECC-153-539-REP-05-D
Date of issue:	April 2025

ENVIRONMENTAL COMPLIANCE CONSULTANCY CONTACT DETAILS:

We welcome any enquiries regarding this document and its content. Please contact:

Environmental Compliance Consultancy
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

Quality Assurance

Authors:

Diaan Hoffman
Environmental Compliance Consultancy

Checked By:

Carlene Baufeldt
Environmental Compliance Consultancy

Approved By:

Jessica Bezuidenhout
Environmental Compliance Consultancy

DISCLAIMER

The report has been prepared by Environmental Compliance Consultancy (Pty) Ltd (ECC) (Reg. No. 2022/0593) on behalf of the Proponent. Authored by ECC employees with no material interest in the report's outcome, ECC maintains independence from the Proponent and has no financial interest in the Project apart from fair remuneration for professional fees. Payment of fees is not contingent on the report's results or any government decision. ECC members or employees are not, and do not intend to be, employed by the Proponent, nor do they hold any shareholding in the Project. Personal views expressed by the writer may not reflect ECC or its client's views. The environmental report's information is based on the best available data and professional judgment at the time of writing. However, please note that environmental conditions can change rapidly, and the accuracy, completeness, or currency of the information cannot be guaranteed.

TABLE OF CONTENTS

1 Introduction 7

1.1 Project background 7
1.2 Project description and site layout 7
1.3 Biophysical environment information 10
1.4 Environmental regulatory requirements 10
1.5 Purpose and scope of this report 12
1.6 Management of this EMP 12
1.7 Limitations, uncertainties, and assumptions related to this EMP 12
1.8 Environmental assessment practitioner 13

2 Environmental management framework 14

2.1 Objectives and targets 14
2.2 Organisational structure, roles and responsibilities 14
2.3 Employment 16

3 Communication and Training 17

3.1 Communications 17
3.2 Environmental emergency and response 17
3.3 Complaints handling and recording 18
3.4 Training and awareness 18
3.5 Site induction 18

4 Reporting, compliance and enforcement 20

4.1 Operations: environmental inspections and compliance monitoring 20
4.2 Reporting 20
4.3 Non-compliance 20
4.4 Incident reporting 20
4.5 Disciplinary action 21
4.6 Relevant Permits 21

5 Environmental and social management 22

5.1 Environmental management plan 22

6 Decommissioning phase 38
7 Implementation of the EMP 39
8 References 40

LIST OF TABLES

Table 1 - Applicable laws, regulations and best practice methods 11
Table 2 – Roles and responsibilities 14
Table 3 - Emergency contact details.....17
Table 4 – Permit requirements. 21
Table 5 - Environmental identified aspects, impacts, management/mitigation measures and monitoring requirements for *the* construction phase, operational phase, maintenance activities and decommissioning phase. 23

LIST OF FIGURES

Figure 1 - Location of Susuwe Island Lodge 9

LIST OF APPENDICES

APPENDIX A – Acknowledgement Letters.....41

ABBREVIATIONS

Abbreviation	Description
<	less than
>	greater than
˚C	degrees celsius
dB	decibels
ECC	Environmental Compliance Consultancy (Pty) Ltd
ECC	environmental clearance certificate
ESIA	environmental and social impact assessment
EMP	environmental management plan
GPS	global positioning system
ha	hectares
IFC	International Finance Corporation
km/h	kilometre per hour
m	metre
mm	millimetre
m^2	square metre
m^3	cubic metre
MAFWLR	Ministry of Agriculture, Fisheries, Water and Land Reform
MSDS	material safety data sheet
MEFT	Ministry of Environment, Forestry and Tourism
MIME	Ministry of Industries, Mines and Energy
Ltd.	limited
PPE	personnel protective equipment
Pty	proprietary
OSH	occupational safety health
RoD	record of decision
SHE	safety health and environment

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Environmental Compliance Consultancy (Pty) Ltd (ECC) has been contracted by N/a'an Ku Sê Wildlife Experience (Pty) Ltd, on behalf of Burgland Zani Safaris (Pty) Ltd, (herein referred to as 'the Proponent' or Naankuse) to develop a comprehensive environmental management plan (EMP) and apply for an environmental clearance certificate for the renovation and operation of the Susuwe Island Lodge, a high-end lodge development on Susuwe Island, Zambezi Region, Namibia.

Susuwe Island Lodge is situated along the banks of the Kwando River, within the Mayuni Conservancy. The lodge sustained significant damage from a fire in 2015 and now requires major renovations. It is located approximately 13 km from Kongola, to the west of the C49 main road, en route to Mudumu National Park in the Zambezi Region of Namibia. The lodge occupies a prime location next to the Kwando River, adjacent to the Kwando core area of Bwabwata National Park, as shown in Figure 1.

1.2 PROJECT DESCRIPTION AND SITE LAYOUT

Burgland Zani Safaris (Pty) Ltd will provide the capital to acquire the concession and invest in the infrastructure. The concession will be operated via a property management agreement through N/a'an Ku Sê Wildlife Experience in terms of the standard policies of the N/a'an Ku Sê Group.

The Susuwe Island Lodge will feature six luxurious tented units, elevated 2.5 meters (m) above the ground on walkways. There will be two dining areas: one at the current waterfront location of the main building and another raised on a wooden deck offering panoramic views of the Babwata National Park plains as depicted in Figure 1. Each spacious 75 m² tent will include a deck with a view of the park and a private hot tub. The waterfront area will have a rim-flow swimming pool positioned at the edge of the Kwando River. These tented units will be constructed from canvas, wood, and glass, and connected by elevated wooden walkways.

Additionally, the construction of an operations hub at Susuwe is planned, which will include:

- Five staff houses;
- Laundry;
- Workshop;
- Managers house;
- Solar installation;
- Garden of Eden (small garden for crops, fruits and vegetables); and
- Guide accommodation.

In terms of guest capacity, this lodge can comfortably accommodate around 12 guests daily, while employing around 13 staff members to operate efficiently.

The lodge will receive its power from a solar panel on-site and is equipped with backup diesel generators. It relies on a daily water supply ranging from 3 m^3 to 5 m^3, pumped from a borehole. The lodge also offers various recreational and leisure activities for guests.

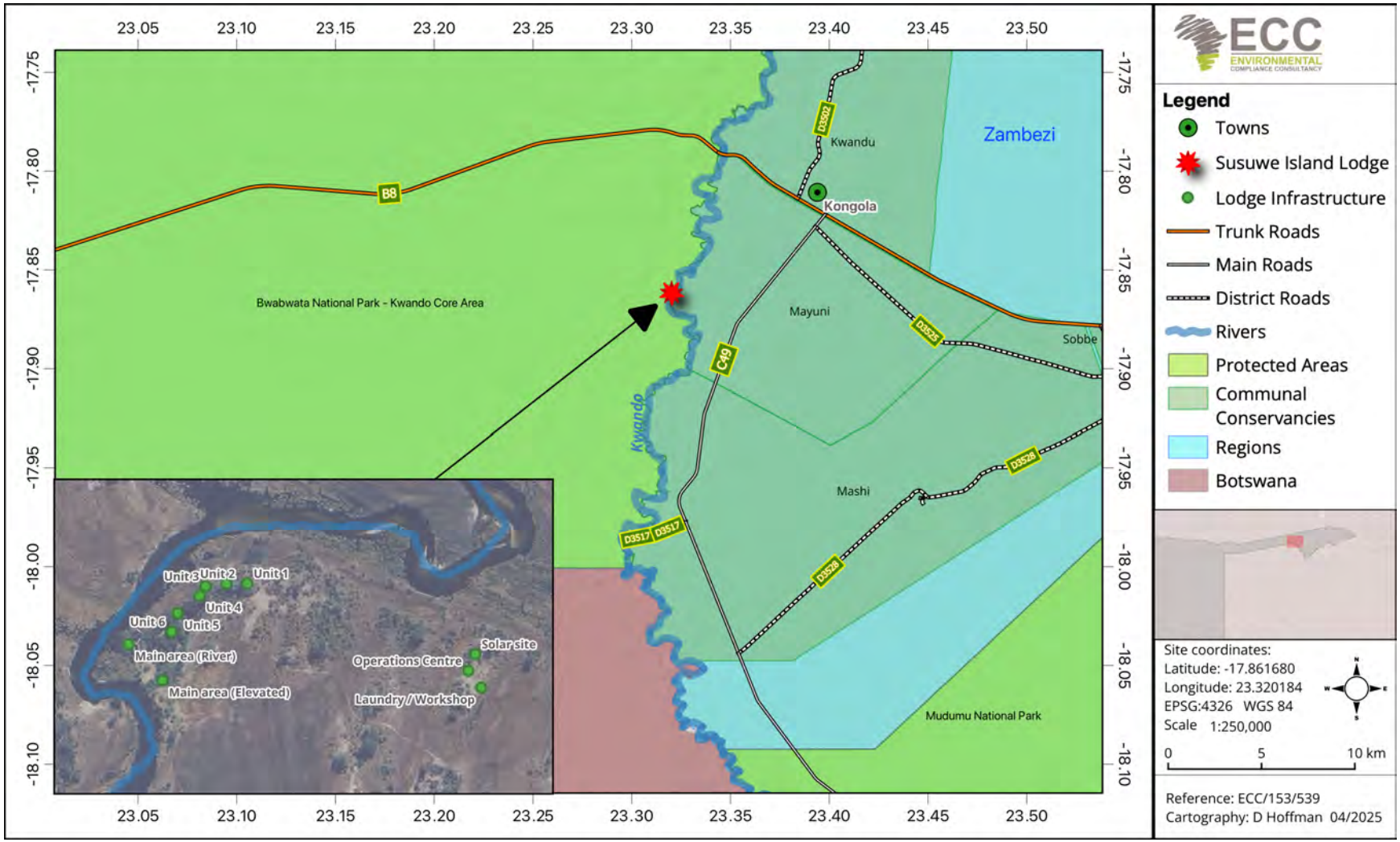

Figure 1 - Location of Susuwe Island Lodge

1.3 BIOPHYSICAL ENVIRONMENT INFORMATION

This section provides an overview of the existing biophysical environment through the analysis of the available baseline data regarding the receiving environment.

The Susuwe Island Lodge is situated in the Zambezi Region near Kongola as seen in Figure 1, nestled at an elevation of approximately 969 meters above sea level. This region experiences an average annual rainfall ranging from 550 to 600 mm, with distinct climatic conditions characterised by hot summers and cool winters, with a mean annual temperature of > 22˚C. The maximum temperatures generally range between 25˚C and 35˚C, while the minimum temperatures vary from 10˚C to 21˚C. Notably, the hottest months occur between September and November, while the coolest months fall in June and July (Bubenzer, 2002 & meteoblue, 2024).

The site lies within the Caprivi floodplains vegetation type and is characterized by a grassland structure, which is part of the broader Savanna biome. In terms of terrestrial diversity, this area exhibits some of the highest diversity within Namibia.

Geologically, this area is composed of the Kalahari Group and the dominant soils in the area are ferralic Arenosols and eutric Fluvisols (Buzenher, 2002).

The site's location places it within the Carprivi groundwater basin and the Cuando catchment area (Bubenzer, 2002 & Mendelsohn et al., 2002).

1.4 ENVIRONMENTAL REGULATORY REQUIREMENTS

The Project triggers listed activities as stipulated in the Environmental Management Act, No. 7 of 2007 and its Regulations, promulgated in 2012. An environmental scoping report, environmental and social impact assessment (ESIA) and environmental management plan (EMP) are required to be submitted as part of the application to support the decision-making process for issuing an environmental clearance certificate.

For this Project, ECC proposes to only develop a comprehensive environmental management plan (EMP) for the following reason: Susuwe Island Lodge was already constructed in 2003, thus predating the promulgation of the Environmental Management Act (EMA), No. 7 of 2007. A fire that occurred in 2015 severely damaged the facilities which now need extensive renovations. The Lodge will only cover an area of approximately 3.1 ha and small lodges by nature have limited environmental footprints and low potential for significant adverse impacts on their surroundings. Thus, subjecting them to a full environmental and social impact assessment (ESIA) could be excessively resource-intensive, furthermore, this is a pre-established lodge.

This report presents the EMP which has been undertaken in terms of the requirements of the Environmental Management Act, No. 7 of 2007 and its associated Regulations.

Legislation that should be adhered to or is relevant to the Project includes the following as mentioned in Table 1.

Table 1 - Applicable laws, regulations and best practice methods

National regulatory regime	Relevance to the Project
Constitution of the Republic of Namibia of 1990	Social protection
Atmospheric Pollution Prevention Ordinance 11 of 1976	Social and biophysical landscape protection
Environmental Management Act, No. 7 of 2007 and its regulations, including the Environmental Impact Assessment Regulations, No. 30 of 2012	Environmental management
Soil Conservation Act, No. 76 of 1969 and the Soil Conservation Amendment Act, No. 38 of 1971	Biophysical protection
Water Resources Management Regulations (No. 269 of 2023): Water Resources Management Act, No. 11 of 2013.	Water source protection Wastewater management
The Forestry Act, No. 12 of 2001 as amended by the Forest Amendment Act, No. 13 of 2005	Vegetation protection
Nature Conservation Ordinance Act No. 4 of 1975 and its regulations.	Biodiversity protection
Labour Act, No. 11 of 2007 and regulations relating to the Health and Safety of Employees at Work (No. 156 of 1997)	Social protection
National Heritage Act, No. 27 of 2004.	Heritage protection
Namibia Tourism Board Act (No. 21 of 2000) and Regulations relating to Levy Payable by Accommodation Establishments Government Notice 137 of 2004	Regulatory board
Draft Pollution Control; and Waste Management Bill (1999)	Biophysical landscape protection

National regulatory regime	Relevance to the Project
Hazardous Substances Ordinance Ordinance No. 14 of 1974	Biophysical landscape protection

1.5 PURPOSE AND SCOPE OF THIS REPORT

The environmental management plan (EMP) provides a logical framework, mitigation measures and management strategies for the activities associated with the proposed Project. In this way ensuring that the potential environmental impacts are curbed and minimised as far as practically possible and that statutory and other legal obligations are adhered to and fulfilled. Outlined in the EMP are the protocols, procedures and roles and responsibilities to ensure the management arrangements are effectively and appropriately implemented.

This EMP is a live document and shall be reviewed at predetermined intervals, and or updated when or if the scope of work alters, or when further data or information is added. All personnel working on the Project will be legally required to comply with the requirements set out in the final EMP that is approved by the competent authority, the Ministry of Environment, Forestry and Tourism (MEFT).

1.6 MANAGEMENT OF THIS EMP

The Proponent will hold the environmental clearance certificate for the proposed Project and will be responsible for the implementation and management of this EMP. The implementation and management of this EMP, and thus the monitoring of compliance, will be undertaken through daily duties and activities, as well as monthly inspections.

1.7 LIMITATIONS, UNCERTAINTIES, AND ASSUMPTIONS RELATED TO THIS EMP

This EMP does not include measures for compliance with statutory occupational health and safety requirements. This will be provided in the safety management plan to be developed by the Proponent.

Where there is any conflict between the provisions of this EMP and any contractor's obligations under their respective contracts, including statutory requirements (such as licences, Project approval conditions, permits, standards, guidelines, and relevant laws), the contract should be amended, and statutory requirements are to take precedence.

The information contained in this EMP is based on the Project description as provided in this document. Where the design or operation method is different, this EMP may require updating and potential further assessment may be undertaken.

1.8 ENVIRONMENTAL ASSESSMENT PRACTITIONER

The report has been prepared by Environmental Compliance Consultancy (Pty) Ltd (ECC) (Reg. No. 2022/0593) on behalf of the Proponent. Authored by ECC employees with no material interest in the report's outcome, ECC maintains independence from the Proponent and has no financial interest in the Project apart from fair remuneration for professional fees. Payment of fees is not contingent on the report's results or any government decision. ECC members or employees are not, and do not intend to be, employed by the Proponent, nor do they hold any shareholding in the Project. Personal views expressed by the writer may not reflect ECC or its client's views. The environmental report's information is based on the best available data and professional judgment at the time of writing. However, please note that environmental conditions can change rapidly, and the accuracy, completeness, or currency of the information cannot be guaranteed.

All compliance and regulatory requirements regarding this report should be forwarded by email or posted to the following address:

Environmental Compliance Consultancy
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

2.1 OBJECTIVES AND TARGETS

Environmental objectives and targets have been developed so that lodge operations can minimise potential impacts on the environment, as far as reasonably practicable.

Environmental objectives for the Project are as follows:

- Zero pollution incidents;
- Minimal impact on regional groundwater users;
- Protect local flora and fauna; and
- Use natural resources effectively and efficiently.

2.2 ORGANISATIONAL STRUCTURE, ROLES AND RESPONSIBILITIES

The Proponent shall be responsible for:

- Ensuring all members of the Project team, including contractors, comply with the procedures set out in this EMP;
- Ensuring that all persons are provided with sufficient training, supervision, and instruction to fulfil this requirement;
- Ensuring that any persons allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood; and
- Contractors shall be responsible for ensuring and demonstrating that all personnel employed by them are compliant with this EMP, and meet the responsibilities listed above.

Table 2 lists the roles and responsibilities allocated to different management levels in the company and specific personnel.

Table 2 – Roles and responsibilities

Role	Responsibilities and duties
Lodge manager (Proponent)	- Responsible for ensuring compliance with this EMP; - Ensuring employees understand and comply with the requirements of this EMP; - Ensuring that all personnel are provided with enough training, supervision and instructions to fulfil this requirement; - Ensuring compliance with this EMP including overseeing the day-to-day activities during operations, and routine and non-routine maintenance works during operations; - Ensure the environmental policy is communicated to all personnel; - Responsible for providing the required resources (including financial and technical) to complete any required tasks;

Role	Responsibilities and duties
	- Responsible for the management, maintenance and revisions of this EMP; - Maintain community issues and concerns register and keep records of complaints and responses provided; - Maintain an up-to-date register(s) of employees who have completed the onboarding site induction; - Ensure that best environmental practice is undertaken throughout the operations of the facility; - Notifying the relevant authorities of serious environmental incidents promptly; - Being responsible for all management plans and environmental monitoring; and - Receiving, recording, and responding to environment-related complaints received from the public and other stakeholders.
Foreman (appointed HSE responsible person)	The lodge foreman will be responsible for the implementation of the EMP for the lodge. The foreman will be available as required throughout the construction renovations and operation of the lodge and is tasked with the following roles: - Bearing authority and independence to demand reasonable steps as required to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant construction/maintenance activities be ceased immediately should an adverse impact on the environment be likely to occur; - Complete weekly checklists and submit findings to the lodge manager; - Complete monthly EMP checklists and submit findings to the lodge manager; - Provisioning of environmental awareness/management training, capacity building and inductions; - Ensuring that best environmental practices are undertaken throughout the operations of the lodge; - Timely distribution of any relevant environmental documentation, including revisions to this EMP to all staff; - Ensuring site inductions are conducted throughout the different phases of the Project; - Reporting of any operations and conditions that deviate from the EMP or any non-compliant issues or accidents to the Proponent; and

Role	Responsibilities and duties
	- Responsible for compliance with conditions as set out in this EMP.
Employees, contractors and visitors	Contractors hired for construction, operations or maintenance activities at the lodge should comply with this EMP and shall be responsible for the following: - Undertaking activities in accordance with this EMP, as well as relevant policies, procedures, management plans, statutory requirements and contract requirements; - Implementing appropriate environmental management measures; - Reporting environmental issues, including actual or potential environmental incidents and hazards to the Proponent or foreman; and - Ensuring appropriate corrective or remedial actions are taken to address all environmental hazards and incidents.

2.3 EMPLOYMENT

The Proponent and all contractors shall comply with the requirements of the Republic of Namibia's regulations for Labour, Health and Safety, and any amendments to these regulations. The following shall be complied with:

- In liaison with local government and community authorities, the Proponent shall ensure that local people have access to information about job opportunities and are considered first for construction/maintenance contract employment positions;
- The number of job opportunities shall be made known together with the associated skills and required qualifications;
- The maximum length of time the job is likely to last shall be indicated;
- Foreign workers with no proof of permanent legal residence shall not be hired;
- Every effort shall be made to recruit from the group of unemployed workers living in the surrounding area; and
- Every employee hired must be provided with a valid employment contract stating the position hired and the hourly remuneration offered.

3 COMMUNICATION AND TRAINING

To ensure potential risks and impacts are minimised, personnel must be appropriately informed and trained on how to properly implement the EMP. It is also important that regular communications are maintained with stakeholders (if applicable) and made aware of potential impacts and how to minimise or avoid them. This section sets out the framework for communication and training in relation to the EMP.

3.1 COMMUNICATIONS

During renovations, construction or maintenance, the project manager and lodge manager shall communicate site-wide environmental issues to the project team through the following means (as and when required):

- Site induction;
- Audits and site inspections;
- Toolbox talks, including instruction on incident response procedure, and
- Briefings on key Project-specific environmental issues, like feedback on complaints.

This EMP shall be distributed to the construction team, including any contractors, to ensure that the environmental requirements are adequately communicated. Key activities and environmentally sensitive operations will be highlighted to workers and contractors.

Communications between the management team shall include discussing any complaints received and actions to resolve them, any inspections, audits, or non-conformance with this EMP, and any objectives or target achievements.

3.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

An emergency is any abnormal event, which demands immediate attention. It is any unplanned event, which results in the temporary loss of management control at the site, but where functional resources can manage the response. An emergency response plan document will be put in place that manages the response in relation to emergencies including environmental emergencies. Table 3 contains a list of emergency contact numbers.

Table 3 - Emergency contact details

Town	Ambulance	Police	Hospital
Katima Mulilo	**+264 (66) 25-3012**	+264 (66) 1-0111	+264 (66) 25-3012

For large-scale spills (i.e., greater than 200 litres) and other significant environmental incidents, the fire service should be notified as required and MEFT office should be informed of the incidents (telephone +264 61 284 2111) as well as the Ministry of Industries, Mines and Energy (MIME) by completing form PP/11. All correspondence with MIME/MEFT should be undertaken by the lodge manager as guided by the foreman. Due to the proximity of the

Kwando River the Department of Water Affairs (DWA) within the Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR) should also be contacted.

3.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally by any personnel on the Project site shall be recorded by the receiver including:

- The name of the complainant;
- The contact details of the complainant;
- Date and time of the complaint; and
- The nature of the complaint.

The information shall be given to the Lodge manager who is overall responsible for the management of complaints. The Lodge manager shall do the following:

- Inform the project manager of issues, concerns, or complaints;
- Maintain a complaint register that required details of the complaint; and
- Provide a written response to the complainant of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken, the reasons why are to be recorded in the register.

The workforce shall be informed about the complaints register, its location and the person responsible, to refer residents or the public who wish to lodge a complaint. The complaints register shall be kept for the duration of the Project and will be available for government or public review upon request.

3.4 TRAINING AND AWARENESS

All personnel working on the Project shall be competent to perform tasks that have the potential to cause an environmental impact. Competence is defined in terms of appropriate education, training and experience.

3.5 SITE INDUCTION

All personnel involved in the Project shall be inducted to the site with specific environmental and social awareness training, and health and safety issues. The environmental and social awareness training shall ensure that personnel are familiar with the principles of this EMP, the environmental impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures. The project manager shall ensure a register of completed training is maintained.

The site induction should include, but is not limited to the following:

A general site-specific induction that outlines:

- What is meant by “environment” and “social”;

- What are the environmental risks and impacts associated with lodge construction, maintenance and operations;
- How can any additional construction/maintenance activities impact the environment; and
- What can be done to mitigate against impacts.

The inductee's role and responsibilities concerning implementing the EMP:

- The site’s environmental rules;
- Details of how to deal with, and who to contact should any environmental problems occur;
- The potential consequences of non-compliance with this EMP and relevant statutory requirements, and
- The role of responsible people working on the Project.

4 REPORTING, COMPLIANCE AND ENFORCEMENT

4.1 OPERATIONS: ENVIRONMENTAL INSPECTIONS AND COMPLIANCE MONITORING

Annual inspections of the lodge operational areas will be undertaken by the lodge manager to determine any non-conformances. Any non-conformance will be recorded, including the following details: a brief description of non-conformance; the reason for the non-conformance; the responsible party; the result (consequence); the corrective action taken and any necessary follow-up measures required.

4.2 REPORTING

There will be a requirement to ensure that any incident or non-compliance, including any environmental issue, failure of equipment or accident, is reported to the lodge manager.

4.3 NON-COMPLIANCE

Where it has been identified that works are not compliant with this EMP, the lodge manager will implement corrective actions to the extent that the works return to being compliant as soon as possible. In instances where the requirements of the EMP are not upheld, a non-conformance and corrective action notice will be produced. The notice will be generated during the inspections and the project manager will be responsible for ensuring a corrective action plan is established and implemented to address the identified shortcoming.

Activities shall be stopped in the event of a non-compliant event identified until corrective actions have been completed.

4.4 INCIDENT REPORTING

The lodge manager must ensure that an accident and incident (including minor or near-miss) reporting system is maintained by the foreman so that all applicable statutory requirements are covered. For any serious incident involving a fatality, or permanent disability, the incident scene must be left untouched until witnessed by a representative of the police. This requirement does not preclude immediate first aid being administered and the location being made safe.

The foreman must investigate the cause of all work accidents and significant incidents and must provide the results of the investigation and recommendations on how to prevent a recurrence of such incidents. A formal root-cause investigation process should be followed.

4.5 DISCIPLINARY ACTION

This EMP is a legally binding document and non-compliance with it shall result in disciplinary action being taken against the perpetrator(s). Such action may take the form of (but is not limited to):

- Fine/penalties;
- Legal action;
- Monetary penalties imposed by the Proponent on the contractor;
- Withdrawal of licence; and
- Suspension of work.

The disciplinary action shall be determined according to the nature and extent of the transgression / non-compliance, and penalties are to be weighed against the severity of the incident.

4.6 RELEVANT PERMITS

The Project should comply with the Water Resources Management Regulations (No. 269 of 2023): Water Resources Management Act, No. 11 of 2013.

Table 4 gives an overview of potential permit requirements for the Project.

Table 4 – Permit requirements.

Permit, licences or registration	Relevant authority	Project bearing
Water abstraction permits	Ministry of Agriculture, Water and Land Reform	An abstraction permit is required for the abstraction of water from a borehole for commercial purposes. Part 11 (sections 44 - 45) of the Water Resources Management Act, 2013 and Part 5 (sections 44 - 45) of the Water Resources Management Regulations (No. 269 0f 2023).
Effluent discharge or sewage permits	Ministry of Agriculture, Water and Land Reform	Permits related to the sewage systems or effluent discharge should be obtained. Part 13 (sections 68 - 72) of the Water Resources Management Act No.11 of 2013 and Part 8 (sections 66 - 68) of the Water Resources Management Regulations (No. 269 0f 2023) (Annexure 11).

5 ENVIRONMENTAL AND SOCIAL MANAGEMENT

5.1 ENVIRONMENTAL MANAGEMENT PLAN

This chapter provides a management plan for the environmental aspects and impacts associated with the Project, including management and mitigation measures, reporting or monitoring requirements, and responsible parties per commitment. It is subject to regular review by the Proponent and will be updated when necessary.

The Proponent will use the management plan to conduct monthly inspections to ensure compliance with the conditions outlined in the EMP. An environmental review of the Project has been completed and Table 5 provides the environmental management plan for the construction/renovation, operational, maintenance and decommissioning phases of the Project.

Table 5 - Environmental identified aspects, impacts, management/mitigation measures and monitoring requirements for *the* construction phase, operational phase, maintenance activities and decommissioning phase.

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
Job creation, skills development and business opportunities	Beneficial socio-economic impacts on a local and regional scale	– Maximise local employment and local business opportunities; – Enhance the use of local labour and local skills as far as reasonably possible; and – Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible.	Monthly, annually	Lodge manager Foreman
Air quality	Dust generation during construction and renovation activities	To minimise the potential for dust generation, the following management measures should be implemented, as required: – Restrict speed of vehicles (<40 km/h); – Vehicles and machinery should be maintained to limit exhaust fume emissions; – Dust-generating activities should be avoided during strong wind events; – Where an effect is profound, ensure dust suppression measures are in place; and – Employees should use and wear appropriate personal protective equipment (PPE) (e.g. dust masks).	Daily	Lodge manager Foreman Employees
Noise	Noise generation from construction/renovation/	The Labour Act No.11 of 2007 and Regulations relating to the Health and Safety of Employees at Work (GN 156/177)	Daily	Lodge manager Foreman

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	maintenance activities leading to noise nuisance and potential hearing loss towards site-based employees and disturbance to biodiversity	should be followed for occupational noise exposure (Chapter 6, section 197, sub-section 1-3). These sections state that no employee shall work in an environment where noise levels equal or exceed 85 decibels (dB). The following mitigation measures should be implemented, as required: – The Proponent should develop a healthy and safety management plan that considers noise generation; – Restrict noise-generating activities to day- time operations; – Appropriate PPE should be worn during noise-generating activities (i.e., earplugs, earmuffs, ear protective equipment); – Vehicles on site should be maintained regularly to exhaust noise levels; and – Ensure noise complaints are recorded and responded to timeously.		Employees
Occupational health and safety	Occupational health and safety concerns during the renovation, construction and operational phases	To promote a safe and conducive working environment, the following mitigation measures should be considered: – A health and safety management plan should be developed and implemented on-site by the Proponent;	Daily	Foreman

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– The Labour Act No. 11 of 2007 and Regulations relating to occupational health and safety should be adhered to; – Appropriate PPE should be worn by employees (e.g., safety boots, overalls, and gloves). – Conduct safety induction for employees and employees/security should be trained on weapon handling (if applicable); – Appropriate safety/warning signs should be erected in areas considered to cause a certain degree of harm; – Risk assessment in the workplace must be done to identify facility areas that could cause some degree of impact and suitable prevention measures should be identified; – Regular medical check-ups should be conducted on personnel to ascertain fitness for work levels (where required); – Frequent maintenance of all equipment and machinery; – Occupational incidents and accidents on-site should be reported to the authorities (i.e., Occupational Safety & Health (OSH) at the Ministry of Labour, Industrial Relation and Employment Creation, by using form F.5;		

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– Emergency contact details should be readily accessible or on display to contact relevant services in emergencies; – No un-authorised use of equipment should be allowed; – In the unlikely event of a death occurring within site boundaries from occupational negligence or otherwise from a "freak accident event", the area should be secured, and all personnel removed from the scene; – A root cause analysis of the event should be undertaken as soon as practicably possible; and – Counselling should be provided to the witnesses and other personnel members who may have been impacted by the event.		
Fire management	Potential risk of fire occurrences and veld fire leading to ecosystem interruption, health and safety concerns and lodge infrastructure damage. Fires that potentially result from lodge equipment (i.e., kitchen or "BBQ or Braai" areas), human	– Develop a fire management system and emergency procedures through the process of risk identification and assessment; – Identify and signpost dedicated assembly points at the lodge area; – Ensure that all lodge areas, including rooms and restaurants, are equipped with appropriate firefighting equipment (such as fire extinguishers) or fire suppression systems (such as sprinklers). – Developing site-specific work procedures as part of the fire management system;	Weekly, monthly and yearly	All staff

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	activities (construction, maintenance, arson or nearby communities) or natural (lighting).	– Induction on fire prevention and toolbox talks; – Control and reduce the potential risk of fire by segregating and safe storage of flammable materials; – Avoid potential sources of ignition for example, by prohibiting smoking in and around areas where chemicals/fuel is stored; – Ensure suitable fire-extinguishing equipment is accessed immediately and conveniently whenever necessary. This can include pails of water, buckets of sand, or portable extinguishers; – For veld fires, appropriate firefighting equipment should be available on-site; – Injuries from fire should also be included in the health and safety management plan; – Emergency contact details should be readily available on-site; and – Ensure key personnel are trained to manage an emergency fire situation and aware of the emergency procedures.		
Biodiversity conservation	The possibility of encountering and interacting with biodiversity on-site during	The Nature Conservation Ordinance Act No. 4 of 1975 and its Regulations, Controlled Wildlife Products and Trade Act 9 of 2008 and the Animals Protection Act 71 of 1962 should be closely followed with regard to any encounters with wildlife within site boundaries.	Daily, monthly and yearly	Lodge manager Foreman

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	construction/renovation, maintenance and operational activities.	– Wildlife encountered should be ethically treated; – No living organism should be removed from site boundaries by anyone other than by a professional/registered animal handler, pest control company, MEFT/MAFWLR or relevant rehabilitation or wildlife organisations (this includes the handling of snakes and any dangerous wildlife); – Prohibit illegal hunting, consumption and possession of game and game products (i.e., illicit trade of pangolins for scales); – Police and MEFT should be notified of any illegal hunting incident involving sensitive or protected species or if such an animal is found on someone within or surrounding site boundary; – All staff should be informed in writing about the consequences with regards to rules that are broken (i.e., possession of a firearm, illegal hunting, stock theft and removal of protected species etc.); – Nests discovered on infrastructure within site boundaries should not be removed or destroyed; – Pesticides and herbicides should not be used as far as reasonably possible; – If there is no other possibility, the relevant pesticides/herbicides/chemicals should be used by a professional/registered pest control company and the		

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		material safety data sheet (MSDS) of the substance used should be followed closely; – Invasive plant species should be removed, and their spread should be prevented; and – Waste on-site should be well managed and removed from the site to prevent rodents, snakes and scorpions from breeding/living on-site. – In the case of decommissioning dismantle and remove any structures or abandoned buildings that could serve as potential hideouts for poachers or other illegal activities. Implement measures to restore natural habitats and prevent the site from becoming a threat to local wildlife.		
	Potential removal of protected plant species during land clearing activities (i.e., during renovations and construction phases). The potential spread of invasive species.	To counteract the potential impacts of removing certain protected plant species, the following control management measures should be implemented (if applicable): – Prior to any new land clearing event, a site inspection should be conducted to determine the presence of any unique plant species; – Protected plant species should not be removed, without the relevant permission or permits; – Large trees or shrubs should not be removed (could be essential for breeding birds);	Daily, monthly	Lodge manager Foreman

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– Identify rare, endangered, threatened and protected species; – Conduct toolbox talks and inductions, highlighting the importance of protected plant species; – Where possible, rescue and relocate plants of significance; – Promote revegetation of cleared areas upon completion of construction activities; – All project equipment arriving on-site from elsewhere should have an internal weed and seed inspection completed before such equipment is used, this will prevent the introduction of invasive species; – Ensure contractors receive induction on preventing the spread of invasive vegetation/weeds; and – Ensure the correct removal of alien invasive vegetation and prevent the establishment and spread of alien invasive plants.		
Heritage	Potential damage to heritage or undiscovered archaeological finds during construction/renovation,	In case of discovering or unearthing undiscovered heritage sites, the following measures (chance-find procedure) shall be applied: – Works to cease and the area to be demarcated with appropriate tape by staff, and the lodge manager to be informed; and	Daily	All staff members

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	maintenance and operational activities	– Archaeological/heritage artefacts/graves are to remain undisturbed until an investigation is conducted.		
Soil pollution control	Emergency incidents/ accidental release of hazardous substances leading to soil contamination during construction/renovation, maintenance, operational and decommissioning phases.	The following measures should be taken into consideration regarding storage, handling and spill management of fuel, chemicals or hazardous substances: **Storage** – Hazardous chemicals should be stored separately from non-hazardous chemicals; – Chemical containers should be labelled correctly- clear guidance on the compatibility of different chemicals can be obtained from the MSDS which should be readily available; – Store chemicals in a dedicated, enclosed, and secure facility with a roof and a paved/concrete floor; – Diesel tanks should be completely contained within secondary containment such as bunding (if applicable); – Consider the feasibility of substituting hazardous chemicals with less hazardous alternatives; and – Fuels, lubricants, and chemicals are to be stored within appropriately sized, impermeable bunds or trays with a capacity not less than 110% of the total volume of products stored.	Daily, monthly and yearly	All staff members Lodge manager

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		Spills Spill kits with the following items as a minimum should be made available on-site: – Absorbent materials; – Shovels; – Heavy-duty plastic bags; o Protective clothing (e.g., gloves and overalls); – Major servicing of equipment shall be undertaken offsite or within appropriately equipped workshops; – For small repairs and required maintenance activities, all reasonable precautions to avoid oil and fuel spills must be taken (e.g., spill trays, impervious sheets); – Provision of adequate and frequent training on spill management, spill response and refuelling must be provided to all onsite staff; – No refuelling is to take place within 50 m (meters) of groundwater boreholes, surface water bodies or streams; – Vehicles and machinery are to be regularly serviced to minimise oil and fuel leaks; and – Should there be major petroleum product spills on site, (spill of more than 200 litres per spill) such incidences should be reported to the Ministry of Industries, Mines and Energy (MIME) on Form PP/11 titled “Reporting of		

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		major petroleum product spill'. The incidents should also be reported to MAFWLR and MEFT. **The following points apply to all areas on site:** – Assess the situation for potential hazards; – Do not come into contact with the spilt substance until it has been characterised and necessary personal protective equipment (PPE) is provided; and – Isolate the area as required. **Spill management procedures:** – Spills are to be stopped at the source as soon as possible (e.g., close valve or upright drum); – Spilt material is to be contained to the smallest area possible using a combination of absorbent material, earthen bunds or other containment methods; – Spilt material is to be recovered as soon as possible using appropriate equipment. In most cases, it will be necessary to excavate the underlying soils until clean soils are encountered; – All contaminated materials recovered after a spill, including soils, absorbent pads and sawdust, are to be disposed of at an appropriately licenced facility; and		

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– A written incident report must be submitted to the lodge manager. In the case of decommissioning, remove all fuel storage tanks, chemicals, containers, and associated infrastructure to prevent soil and water contamination. Any remaining fuel should be safely disposed (hazardous waste) of or transferred to an appropriate facility.		
Groundwater pollution control	– Possible nutrient enrichment of groundwater due to leakage of sewage into the groundwater or the Kwando River – Potential risk associated with the discharge of wastewater into the environment	– Ensure compliance with the Water Resources Management Regulations (No. 269 0f 2023): Water Resources Management Act, No. 11 of 2013; – Specifically, Part 13 (sections 68 - 72) of the Water Resources Management Act No. 11 of 2013 and Part 8 (Sections 66 - 68) of the Water Resources Management Regulations (No. 269 of 2023); – Effluent waste discharge licence should be in place and licence conditions should be adhered to (if required – for example routine sampling and water quality analysis); – The sewage treatment system needs to be well inspected for leakages at all times; – Effluent water should be tested yearly or as required, to ensure that it complies with relevant legislation and standards;	Daily and weekly	Lodge manager Foreman Employees

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– Effluent should not be discharged into a sensitive habitat/area (i.e., dam, river or stream); – If a major pipe burst or leak has been discovered in the sewage system groundwater needs to be monitored and tested to ensure that there is no contamination; and – The kitchen fat trap should be well maintained and cleaned monthly or more regularly as required (if applicable). This should also be disposed of as hazardous waste at a registered landfill site.		
Groundwater management	Potential decrease in water availability due to the abstraction of water	– Ensure compliance with the Water Resources Management Regulations (No. 269 0f 2023): Water Resources Management Act, No. 11 of 2013; – Specifically, part 11 (sections 44 - 45) of the Water Resources Management Act, No. 11 of 2013 and Part 5 (sections 44 - 45) of the Water Resources Management Regulations (No. 269 0f 2023). – Abstraction licence should be in place (for abstracting water from boreholes or the river) and reporting as required; – Turn off pumps when abstraction is not required; – Adopt a water-wise mindset on site; – Water should not be wasted, especially with high water use activities like swimming pools;	Daily and weekly	Lodge manager Foreman Employees

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– Effective and water saving methods should be used for the watering of the vegetable garden on-site. – Water leakages or pipe bursts should be reported and fixed as soon as possible; – Should there be a desire for ornamental plants on site, drought-resistant species should be considered; – Eco-friendly and low water use equipment should be considered i.e. eco-friendly showerheads and taps (where possible); and – Activities that require a lot of water should be monitored to ensure water is used efficiently.		
Waste management	Possible sewage discharge runs the risk of pathogen /disease transmissions and odours during construction/renovation, maintenance, operational and decommissioning phases.	– Ensure toilets are always clean and dry; – Provide adequate sanitary facilities, including clean water, soap, disposable paper towels; – Provide suitable personal protective equipment that may include waterproof/abrasion-resistant gloves, footwear, eye, and respiratory protection; and – The monitoring of wastewater discharges should be conducted regularly (if applicable). – During the decommissioning phase, if the lodge ownership is not transferred (private or community), ensure that all sewage tanks are fully emptied and removed from the site.	Daily	All staff members

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	Environmental pollution (littering and poor storage of solid waste) during construction/renovation, maintenance, operational and decommissioning phases.	Waste management should follow the International Finance Corporation (IFC) standards as follows: – Implement a waste management plan (from "cradle to grave" methodology) covering all aspects of waste generated on-site; – Training and toolbox talk about the importance of waste management; – Ensure a high standard of housekeeping across/within site boundaries; – Solid waste shall be stored in an appointed area in covered, tip-proof metal drums/skips for collection and disposal at an approved waste management site; – The waste storage areas shall always be kept clean and tidy; – Ensure solid wastes on site are removed timeously to ward off unwanted scavengers; and – Implement the waste management hierarchy across the site: avoid, reuse, recycle, and then dispose of. – Ensure that all temporary and permanent infrastructure that is not being repurposed or transferred is dismantled and safely removed from the site during decommissioning. Any remaining structures should be secured or rehabilitated to prevent environmental degradation.	Daily and weekly	All staff member

6 DECOMMISSIONING PHASE

In the event that the Proponent plans to cease with lodge operation (and/or if ownership is transferred), the Proponent and the new owner should mutually agree on the way ahead for the site and associated infrastructure. If the new owner intends not to use the infrastructure, the Proponent will be responsible for removing all equipment, machinery, chemicals, fuel and any other element from the site. If infrastructure is removed at the decommissioning stage, it is recommended that the Proponent implement a rehabilitation plan for the site to ensure that the site is returned to its natural state as feasibly possible and that no further degradation to the site is foreseen.

7 IMPLEMENTATION OF THE EMP

The operations of Susuwe Island Lodge will be carried out in compliance with the relevant regulations. Minor to moderately significant impacts are anticipated, hence management and mitigation measures are in place to eliminate or reduce the severity of potential impacts.

This environmental management plan:

A. Has been prepared according to a contract with the Proponent;
B. Has been prepared based on information provided to ECC up to March 2025;
C. Is for the sole use of the proponent, for the sole purpose of an EMP
D. Must not be used (1) by any person other than the proponent or (2) for any purpose other than an EMP;
E. Must not be copied without the prior written permission of ECC.

8 REFERENCES

Bubenzer, O. (2002). Project E1 - Atlas of Namibia. [online] Available at: http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/e1_download_physical_geography_e.htm.

meteoblue. (n.d.). Simulated historical climate & weather data. [online] Available at: https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/-17.862N23.322E [Accessed 1 Oct. 2024].

Mendelsohn, J., Jarvis, A., Roberts, C., & Robertson, T. (2002). Atlas of Namibia. A portrait of the land and its people. Cape Town: David Philip Publishers.

APPENDIX A – ACKNOWLEDGEMENT LETTERS