

ENVIRONMENTAL MANAGEMENT PLAN

SHIPWRECK LODGE

SKELETON COAST NATIONAL PARK



JULY 2023

PROJECT	Shipwreck Lodge: Renewal of Environmental Clearance
CLIENT	Shipwreck Lodge (Pty) Ltd
DOCUMENT NAME	Environmental Monitoring Report
DOCUMENT #	Draft 1
DATE	6 July 2023
AUTHOR	Henriette Potgieter
PROPONENT	Shipwreck Lodge (Pty) Ltd
CONTACT PERSON	Jacky Heath
POSITION	Shareholder and Director, Journeys Namibia
TEL	081 160-9900 or 081 128 6048
EMAIL	jackyh@journeysnamibia.com
ADDRESS	PO Box 6871 Ausspannplatz Windhoek
ENVIRONMENTAL ASSESSMENT PRACTITIONER	
NAME	Henriette Potgieter
TEL	+264 - 81 - 312-1606
EMAIL	hoenspotgieter@gmail.com
EAP QUALIFICATIONS	EAPAN member M.Sc (Environmental Sciences) B.Sc Honours, B.Sc, BA

DISCLAIMER

This document was prepared by Henriette Potgieter with all reasonable skill, care and diligence, utilising resources devoted to the project by agreement with the client. Information contained herein is based on the interpretation of data collected and data provided by the client, accepted in good faith as being accurate and valid.

No warranties or guarantees are expressed or should be inferred by any third parties.

This report may not be relied upon by other parties without written consent from Henriette Potgieter. Henriette Potgieter disclaims any responsibility to the client and others regarding any matters outside the agreed terms of reference.

ABBREVIATIONS

COC	Concession Operator Contract
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMR	Environmental Monitoring Report
JMC	Joint Management Committee
MEFT	Ministry of Environment, Forestry and Tourism
SOP	Standard Operating Procedure

TABLE OF CONTENTS

1	INTRODUCTION.....	2
1.1	BACKGROUND	2
1.2	METHODOLOGY	2
2	MANAGEMENT MEASURES.....	4
2.1	CONSTRUCTION PHASE	4
2.2	OPERATIONAL PHASE	7
2.3	DECOMMISSIONING PHASE	11
3	SUMMARY	14

1 INTRODUCTION

1.1 Background

The proponent, Shipwreck Lodge (Pty) Ltd, owns and operates Shipwreck Lodge in the Central Concession Area in the Skeleton Coast National Park. The proponent contracted Henriette Potgieter to apply for renewal of the existing Environmental Clearance Certificate (ECC) which expired on 28/05/2023.

1.2 Methodology

This document presents a new, updated Environmental Management Plan (EMP) and replaces the current EMP from 2016. It includes current procedures and technology used by the lodge that were either unavailable or not applicable in 2016.

The lodge was visited for two days, 5 – 6 June 2023. The general manager and maintenance manager of the lodge acted as guides during a thorough inspection of the site and provided information freely. Data collected during the site visit, combined with information from the HR manager and Operations manager of Journeys Namibia (Pty) Ltd (the reservations and management company), were used to draw up this EMP.

An Environmental Monitoring Report (EMR) that includes an audit of compliance with the current EMP is contained in a separate document and both documents will be submitted as requested by MEFT.

1.3 Table headings

Prevention, mitigation and management measures are given in table format in Section 2. The table headings are explained here.

1.3.1 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.

1.3.2 Mitigation

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

1.3.3 Responsibility

Roles and responsibilities for the people who are expected to implement the EMP were defined (Table 1)

Table 1. Individuals and teams in charge of carrying out the management actions, with a description of their responsibilities

Person/Team	Responsibilities
OPS: Operations Manager/Director	Overall responsibility for implementation of EMP. Support to the construction and other contractors. Support and direction to the lodge staff for implementation of the EMP.
Maint: Maintenance team	Maintenance and cleaning of buildings, vehicles, machinery, sewerage and waste systems at Game Lodge.
Mgt: Management team at the lodge	Overall management of the lodge. Supervision of all staff, including maintenance team and guides.
Guides: Employed by the lodge	Transport of guests. Ensuring appropriate human-wildlife interactions.
Contractor: Construction and other maintenance	Ensuring their staff and sub-contractors are informed of the measures in the EMP. Ensuring that their staff and sub-contractors adhere to all the EMP measures.

2 MANAGEMENT MEASURES

2.1 Construction phase

No construction is planned in the near future. This section is retained to inform possible future construction for purposes of maintenance or other, currently unknown reasons.

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
Soil		
Compaction of and damage to soils	Motorised access will be limited to existing tracks and defined development areas. As far as possible, no new roads or tracks should be developed within the camp area.	Ops & Contractor
Soil erosion	No construction or activities within areas containing highly erodible dispersed, fine-particle, sodic etc. soils	Ops & Contractor
	Prevent water runoff from concentrating unnaturally in any one area.	Contractor
	Any water pipes shall be installed in such a way as to minimise the chance of erosion.	Contractor
Soil contamination	The mixing and use of concrete and cement must takes placed in designated areas so as not to contaminate the sites in any way.	Contractor
	All hydrocarbons and chemicals must be stored, handled and dispensed so as not to contaminate sites in any way.	Contractor
	Any spillage must be contained and cleaned up with 24hrs of occurrence. The resulting waste must be properly disposed of.	Contractor
Soil resources and land capability	The boundaries of construction sites that extend beyond already impacted areas must be clearly demarcated. Where construction will take place within or close to sensitive features, these should be demarcated.	Ops & Contractor
	No construction activities are to take place outside the defined infrastructure footprint areas.	Contractor
	Quarries/borrow pits may not be dug without formal registration/permission.	Ops & Contractor
	The movement of construction crew must be within the demarcated site boundaries at all times.	Contractor
	A suitably positioned construction material stockpiling and mixing area must be chosen and demarcated. This must be located in an area that is already transformed or disturbed.	Ops & Contractor
	Access routes from the stockpiling areas to the building sites should be demarcated and use enforced. Existing roads should be used for these purposes.	Ops & Contractor
	Sand and rocks utilised for construction must be from defined and already impacted areas. These sites must be identified and approved by the Director of Operations.	Contractor
	Once construction work is completed, all excess material must be removed and the site suitably rehabilitated.	Contractor
	The use of graders should be avoided because they gouge roads below the level of the surrounding surface.	Contractor
Topography		

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
Significant alterations to the shape of the landscape	Site levelling and landscaping only where required by the designs. No earthmoving equipment may be used without the express permission of MEFT.	Ops & Contractor
	Construction site office and facilities to be dismantled and removed once construction is completed	Ops & Contractor
Biodiversity		
Death of amphibians, reptiles, birds	Avoid any sites with nests, burrows, dens etc. of protected species.	Ops & Contractor
Habitat destruction	See under SOIL	Ops & Contractor
Poaching, especially tortoises and small mammals	The greater area around building sites should be searched for snares during the construction phase and after construction is complete.	Ops
	Restriction of contractor staff movement	Ops
	Inspection of contractor staff housing	Ops
Damage to/removal of protected species	Continuous monitoring to ensure that no protected species are impacted.	Ops & Contractor
Damage to vegetation	Motorised access should be limited to existing tracks and defined development areas. As far as possible, no new roads or tracks should be developed within this area.	All
	The clearance of or damage to trees and shrubs beyond the development footprint must be prevented.	All
	As many trees and shrubs as possible should be retained within the development area.	All
	All mature trees and shrubs remain.	All
	Ensure that only permitted access roads and paths are used by construction workers and vehicles at all times.	All
	No firewood may be collected.	All
Spread of invasive vegetation	No alien invasive or plants that do not occur locally will be planted.	All
	Introduced construction materials must be free from seedlings and seeds of alien invasive vegetation.	Ops & Contractor
Landscape disturbance from construction activities	Upon closure of construction, site must be rehabilitated using only indigenous vegetation.	Ops & Contractor
Hydrology		
Groundwater contamination	No construction activities may take place within 1:100 year floodline of any watercourse or within 50m of a spring.	All
Erosion of river banks	Rivers to be entered and exited using only existing approaches and entrance/exit points.	All
Surface water contamination	The mixing and use of concrete and cement must be only take place in designated areas so as not to contaminate the sites in any way.	Ops & Contractor
	All hydrocarbons and chemicals must be stored, handled and dispensed so as not to contaminate sites in any way.	Ops & Contractor
Visual impact		

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
Vehicle tracks	As far as possible, no new roads or tracks should be developed. Building materials should be transported on either existing tracks or tracks that will be used during operations. Contractors and their staff are made aware of driving protocols and heavy fines are levied for any form of off-road driving.	All
Construction structures and temporary facilities	Construction site office and other temporary facilities are put on sites that will definitely be used during the operational phase. Everything is dismantled and removed after construction.	Ops & Contractor
Support infrastructure is ugly	Towers, raised tanks, communication infrastructure, solar panels and other prominent maintenance structures and equipment should be sited out of sight of the public. High structures should be sited below the skyline of ridges/koppies/dunes.	Ops.
	Road signs should be made from materials and in colours that contribute to the sense of place.	
	Pipes and cables are buried or otherwise hidden from view.	
Buildings intrude on a pristine landscape and detract from a sense of place	The lodge, back of house and support buildings should be designed to blend into the natural environment. Shapes should not contrast with the surrounding area (e.g. no high rise buildings) and colours should be chosen to be in harmony with the environment.	
Solid waste, sewage and waste water discharge		
Ecological damage from solid waste	Littering is not permitted and all waste must be placed in appropriate receptacles.	All
	The contractor will provide a suitable, animal proof receptacle to contain all daily refuse. A waste holding cage that is bird and animal proof will be used to store the solid waste before it is transported to a municipal dump site.	Contractor
	All building rubble is consolidated in a suitable location, removed from the area and disposed of in a suitable and legal location in an environmentally acceptable manner.	Contractor
	Used oils and other workshop waste to be stored in suitable receptacles and dispatched to appropriate waste facility.	Contractor
Ecological damage from sewage and waste water discharge	Fat/grease traps will be installed at kitchen outlets.	Ops & Contractor
	Adequate temporary ablutions to be provided for workers.	Contractor
	Ablutions are regularly serviced and the sewage disposed of at a suitable designated location and in an environmentally appropriate manner.	Contractor
Unpleasant odours	Regular maintenance of sewerage system as per company policies & procedures	Contractor
	Should unpleasant odours be identified, the source of the odours must be identified and remedied within one day.	Contractor
Machinery & vehicles		
Noise pollution	Efficient, modern, silenced generator only.	Contractor
Contamination of soil and water by hydrocarbons	The contractor will ensure that all equipment is in good working order and will not contaminate soil or water resources with diesel, petrol, oil or any other foreign substances.	Contractor

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
	Drip trays to be placed under any leak that is identified.	Contractor
	Vehicles and machinery with fuel, oil or hydraulic fluid leaks must be removed from service for repair.	Contractor
	No servicing or major repair of vehicles and machinery may take place on-site.	Contractor
Damage to roads and tracks	The contractor shall ensure that all vehicles remain on designated roads at all times. No off road driving under any circumstances.	All
	All vehicles used in the area must be operated with low tyre-pressure to minimise negative impacts on tracks and roads.	All
Construction staff damage local environment		
Disruption of ecological processes through physical acts and/or pollution	The contractor and his employees shall adhere to all rules and regulations prescribed by the relevant authority at all times, as well as to the management measures presented in this document.	Contractor
	The contractor will ensure the proper supervision of employees at all times and their compliance with rules and regulations.	Contractor
	All employees will be educated to the need to refrain from the destruction of plants and animals, as well as from indiscriminate defecation, waste disposal and pollution of soil and water resources.	Ops & Contractor
	Access to the site is restricted to contractor's employees only.	Ops & Contractor
Bush fires: destruction of habitat and death of animals		
Outbreak of fire	Take all precautions to prevent the outbreak and spreading of fires and ensure all employees are aware of the necessary precautions.	Ops & Contractor
	Gas canisters to be housed in Bureau of Standards approved structures.	Ops & Contractor
Fire in construction area spreads to bush	Fire extinguishers strategically located throughout construction area.	Ops & Contractor
	Bush firefighting equipment placed with easy access	Ops & Contractor
Health and Safety of staff		
Injury to persons	Compliance with Health & Safety regulations: all persons on the construction site should adhere to industry Health & Safety regulations at all times	Contractor
	Equipment and tools handled only by persons qualified in their use.	Contractor
Burn injuries	Fire extinguishers strategically located on construction site and staff trained in usage.	Contractor

2.2 Operational phase

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
BIODIVERSITY		
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

NATURE OF IMPACT	MITIGATION	RESPON SIBILITY
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.
SOLID WASTE		
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 in the Park.	All
	Appropriate waste bins are provided at the point of source. All waste bins are covered and secured to be animal proof.	Mgt Maint
	Temporary storage of waste is in a shipping container that is sealed when closed so that it is bird, animal and wind proof. The floor is impermeable - no ground seepage can take place.	Maint
	Recyclable waste (glass, cans, plastics, paper) is stored on site and then 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
Hydrocarbons cause soil and groundwater contamination	Used hydrocarbons are collected at point of use and stored in sealed containers.	Maint
	Used hydrocarbons are despatched to an appropriate waste facility.	Mgt
ENERGY		
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
	A solar system provides at least 80% of energy for the entire operation, including staff and maintenance areas.	
	Generator is used as back-up only.	Mgt
	Geysers are solar powered.	Ops

NATURE OF IMPACT	MITIGATION	RESPON SIBILITY
	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 in the Park.	All
WATER RETICULATION AND CONSUMPTION		
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
	A water meter is installed and water usage is measured and recorded on at least a monthly basis.	
	Usage should be less than 100 litres per bednight (including guests, staff, contractors and non-paying visitors). Vehicles and floors are washed with a bucket and not hosepipe.	Mgt
SEWERAGE AND WASTE WATER		
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
	All toilets are flush-type toilets and drain into septic tanks. Liquid overflow from the septic tanks must drain into an evaporation pond. The pond must be fenced to prevent animal access and it must have anti- contamination measures such as a reed bed.	
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
VEHICLE USAGE		
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
	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

NATURE OF IMPACT	MITIGATION	RESPON SIBILITY
	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
Noise pollution disturbs the natural quiet	Graders, tractors and power tools are used during daylight only.	Mgt
	Radio, tv, staff voices, revving cars, drones are some sources of noise that should not be allowed or at least strictly controlled.	All
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		
Light pollution at night	Only subdued or directional lighting is used.	Ops
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
	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 and clean. Staff have access to running water, adequate sanitation and safe, clean energy.	Ops

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
	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
	An awareness and prevention programme is in place for HIV/Aids and infectious diseases.	Ops
	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
	Firefighting 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
CULTURAL RESOURCES		
Heritage objects and sites of conservation significance	The sites are demarcated in an appropriate way. Staff and guests are informed of their value.	
	The sites are no-go areas.	
	Information/warning signs will be erected at the site where self-drive tourists camp.	
	The chance finds protocol (Section 2.6) is followed.	
IMPLEMENTATION OF EMP		
Eco Awards certification	Apply for an assessment. Keep up to date according to the programme regulations. Submit self-assessments before expiry date.	
Ensure effective implementation of the EMP	Biannual environmental report is sent to MEFT.	
	Annual compliance audit is conducted, preferably by an independent expert, and submitted to MEFT with the biannual report.	

2.3 Decommissioning phase

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
Soil		
Compaction of and damage to soils, contamination	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Animals: habitat disturbance; death of animals		
Poaching, habitat or behaviour disturbance	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Vegetation: destruction of & damage to plants; disturbance of soil		
Soil erosion	The site will be suitably re-vegetated. If this is not appropriate, then it will be covered with scrub to prevent	Ops & Contractor

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
	soil erosion and to provide protection for colonising vegetation.	
Alien plant invasion	Follow-ups will be done to ensure that alien or invasive plants and weeds have not flourished.	Ops & Contractor
Damage to vegetation	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Infrastructure		
Buildings and support infrastructure	All structures will be completely removed to the satisfaction of MEFT.	Ops & Contractor
Roads and tracks	As required by MEFT, roads and tracks will be rehabilitated to a state as close as possible to the original condition of the area.	Ops & Contractor
Pathways	All pathways will be rehabilitated to a state as close as possible to the pre-construction condition.	Ops & Contractor
Hydrology		
Contamination of ground and surface water, erosion of river banks	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Negative visual impact		
Sewerage system	Septic tanks will be drained and removed. The area (including soak-away) will be filled with rubble or with fill from an environmentally acceptable source.	Ops & Contractor
Water pipes	All pipe lines will be removed from the concession.	Ops & Contractor
Electricity lines	All electricity infrastructure will be removed from the concession.	Ops & Contractor
Foundations, concrete slabs, holes in ground	All structures in or on the ground will be removed. All holes, pits and depressions will be filled.	Ops & Contractor
Ground surface retains signs of development	Ground surface will be raked, swept and levelled as appropriate. Rocks, stones and vegetable matter will be scattered as appropriate to return the ground to a state as close as possible to its original condition.	Ops & Contractor
Construction structures and facilities	Construction site office, facilities and structures to be dismantled and removed once decommissioning is completed	Ops & Contractor
Solid waste, sewage and waste water discharge		
Large volumes of rubble, materials and equipment	Everything will be removed from the concession and taken to a registered landfill.	Ops & Contractor
	Nothing will be burnt or buried on the concession.	Ops & Contractor
Ecological damage	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Machinery & vehicles: noise, contamination of soil and water by liquids, erosion of roads		
Noise, contamination of soil and water, erosion	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Construction staff damage local environment		
Disruption of ecological processes through	Construction guidelines will apply to ensure limited impact.	Ops & Contractor

NATURE OF IMPACT	MITIGATION	RESPONSIBILITY
physical acts and/or pollution		
Bush fires: destruction of habitat and death of animals		
Outbreak of fire	Construction guidelines will apply to ensure limited impact.	Ops & Contractor
Health and Safety of staff		
Injury to persons	Construction guidelines will apply to ensure limited impact.	Ops & Contractor

3 SUMMARY

This Environmental Management Plan describes the management measures that are implemented with the aim of preventing or mitigating negative environmental impacts that may result from the activities of the lodge activities. It is a legal document that binds Shipwreck Lodge (Pty) Ltd to comply with the management measures, monitoring programmes and other plans presented in this document. The EMP will be implemented throughout the lifecycle of the lodge, including operations, decommissioning, and any additional construction that may be required for maintenance or other reasons in the future.

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.