Environmental Management Plan 2025

ONGAVA LODGE

and

LITTLE ONGAVA

Prepared for the application for Environmental Clearance by Ongava Reserve (Pty) Ltd

Application APP-5966

PROJECT	**Application for Environmental Clearance: Ongava Lodge and Little Ongava Lodge**
PROPONENT	**Ongava Game Reserve (Pty) Ltd**
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Abbreviations

ECC	Environmental Clearance Certificate
EMP	Environmental Management Plan
Etosha	Etosha National Park
MEFT	Ministry of Environment and Tourism

Table of contents

1 INTRODUCTION 1

1.1 THIS DOCUMENT 1
1.2 METHODOLOGY 1
1.3 OBJECTIVES OF THE EMP 1
1.4 INFRASTRUCTURE UPDATE 2

2 PROJECT OVERVIEW 3

2.1 MOTIVATION FOR MERGING ECCS 3
2.2 LOCATION 3
2.3 TOURIST ACTIVITIES 4
2.4 INFRASTRUCTURE 4
2.4.1 Social area 4
2.4.2 Back of house 4
2.4.3 Guest rooms 4
2.4.4 Staff accommodation 4
2.4.5 Social area 5
2.4.6 Back of house 5
2.4.7 Guest rooms 5
2.4.8 Staff accommodation 5
2.5 SERVICES 5
2.5.1 Water supply and reticulation 5
2.5.2 Wastewater and sewage 5
2.5.3 Solid waste 5
2.5.4 Energy 6
2.5.5 Workshop and fuel 6
2.5.6 Roads and tracks 6
2.6 DESIGN AND LANDSCAPING 6

3 IMPLEMENTATION 7

3.1 TRAINING 7
3.2 COMPLIANCE 7
3.3 CONSEQUENCES OF NON-COMPLIANCE 7
3.4 PERMITS AND LICENCES 7

4 MANAGEMENT ACTIONS 9

4.1 PLANNING AND CONSTRUCTION PHASE 10
4.2 OPERATIONAL PHASE 16
4.3 CLOSURE & DECOMMISSIONING PHASE 24
4.4 HERITAGE CHANCE FIND PROCEDURE 26

5 MONITORING 27

5.1 WATER MONITORING 28
5.2 ENERGY MONITORING 28
5.3 ENVIRONMENTAL PERFORMANCE ASSESSMENT 28

6 EMERGENCY PROCEDURES 29

6.1 SEWAGE OR WASTE WATER SPILLS 29
6.2 HYDROCARBON OR CHEMICAL SPILLS 29

7 CONCLUSION 30

APPENDIX I. ECC 2021 ONGAVA LODGE 31

APPENDIX II. ECC 2021 LITTLE ONGAVA 32

List of tables

Table 1. Permits required for this project 8
Table 2. Individuals and teams in charge of carrying out the management actions 9
Table 3. Management actions for the construction phase 10
Table 4. Management actions for the operational phase 16
Table 5. Decommissioning outline 24
Table 6. Heritage chance find procedure 26
Table 7. Mitigation components to be monitored 27

1 INTRODUCTION

The proponent, Ongava Game Reserve (Pty) Ltd, wishes to renew the Environmental Clearance Certificates (ECC) for Ongava Lodge and Little Ongava Lodge. Their current ECC's are presented in APPENDIX I. and APPENDIX II.

This application for renewal is also an application to merge the two ECC's because in terms of environmental management Little Ongava is a satellite of Ongava Lodge rather than a separate lodge. A detailed motivation for the merger is given in Section 2.1.

Ongava Game Reserve (Pty) Ltd owns the land, movable and immovable assets, tourism operations and infrastructure of four lodges on the private reserve: Ongava Lodge & Little Ongava, Ongava Tented Camp and Anderssons at Ongava.

The reserve is dedicated to conservation, and tourism is the only commercial activity on the property.

1.1 This document

This document contains a description of the infrastructure and activities offered by the lodge, followed by tables with management actions. The tables list factors that could potentially have a negative impact on the environment, as well as management actions that aim to prevent or mitigate each potential impact.

Management measures are given for the operational phase and although no construction is currently planned, this Environmental Management Plan (EMP) provides a table with construction phase management measures that must be implemented during upgrade or maintenance events. Decommissioning has not been addressed in detail, but the risks and management actions would be similar to those of the construction phase.

1.2 Methodology

Data collected during a 3-day site visit, combined with information provided by the General Manager Operations, Mr Stuart Crawford, were used to update the EMP. Following the principles of adaptive management, new procedures and technology that were either unavailable or not applicable in 2021, as well as changes based on the outcomes of monitoring, may be included in this EMP.

1.3 Objectives of the EMP

The management actions given in Section 4 aim to minimise negative impacts and enhance positive impacts that may result from the Project. The EMP is a living document that is updated as new information, policies, authority guidelines and technologies are developed and become available.

This EMP has three main objectives:

- identify possible impacts associated with the project
- propose measures to prevent or mitigate negative impacts, and enhance positive impacts
- detail the actions required to carry out the proposed mitigation measures

The EMP demonstrates the commitment of Ongava Game Reserve (Pty) Ltd to follow current best practices for sustainable tourism, and it forms an environmental contract between the proponent and the Government of the Republic of Namibia represented by the Ministry of Environment and Tourism (MET) in its capacity as guardian of the country's natural resources.

1.4 Infrastructure update

The staff village was expanded by building 16 single, en suite rooms of 40m² each. The new units are inside the staff village footprint shown as an orange polygon in Figure 2.

Figure 1. New en suite staff houses.

Inside the Ongava Lodge footprint, a new 2-bedroom house comprising 100m² was built for the General Manager Hospitality.

2 PROJECT OVERVIEW

2.1 Motivation for merging ECCs

Physical proximity

The footprints of Little Ongava and Ongava Lodge on a dolomite ridge are contiguous (Figure 2), meaning that the potential negative impacts caused by Little Ongava would be the same as those resulting from Ongava Lodge.

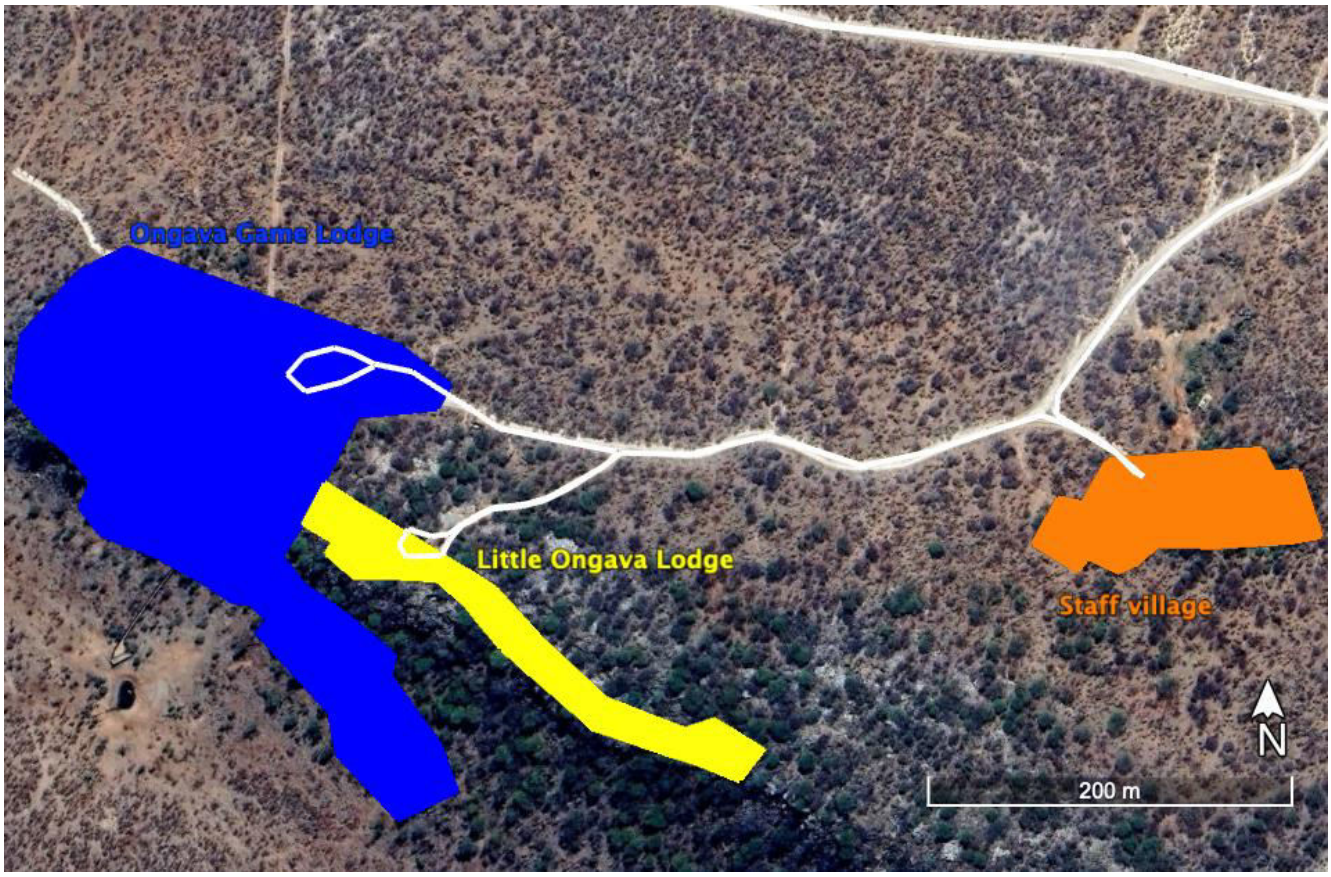

Figure 2. Dolomite ridge with Ongava Lodge, Little Ongava and staff village

Operational dependence on Ongava Lodge

Administration and support services for Little Ongava are handled by Ongava Lodge, including solid waste, bulk storage, electricity, water supply and sewerage systems are managed and maintained from Ongava Lodge.

Game viewing and other activities offered by Little Ongava are identical to those of Ongava Lodge and the same guiding protocol is followed. The prevention and management actions for the two lodges are identical; the environmental management tools and protocols are identical; the responsible persons and teams who implement the EMP management measures are identical, and they are based either at Ongava Lodge or the Reserve Head Office.

2.2 Location

Ongava Game Reserve comprises 30,000 hectares and is located 90 km north of Outjo on the C38, with the Etosha National Park its northern boundary and its main entrance 50 m from the Andersson Gate.

2.3 Tourist activities

Game drives on the reserve and into Etosha are conducted in open game viewing vehicles, driven by qualified guides. Guided walks are led by qualified, firearm-proficient guides.

A visitors' centre is located at Anderssons lodge and offers permanent natural history exhibitions integrating research, conservation and tourism, and providing an educational activity for all the guests on the reserve.

2.4 Infrastructure

The combined footprint of Ongava Lodge and Little Ongava covers 54,500 m² (Figure 2). The infrastructure of Ongava Lodge is described first, followed by that of Little Ongava. Thereafter the combined services and support infrastructure and methods for both lodges are described in Section 2.5.

Ongava Lodge

2.4.1 Social area

The social area consists of a bar, dining and lounge areas under thatch, partially enclosed by stone walls and with gumpole supports. The floor is paved stone and wooden deck. There is a wooden deck with braai, swimming pool, and a fenced walkway to an underground game viewing hide at a waterhole in front of the lodge.

2.4.2 Back of house

The kitchen is in a separate building from the main area: brick and cement with corrugated iron roof and concrete floors, consisting of a walk-in fridge/freezer and two store rooms, and is connected to the main area by a concrete walkway. Adjacent to the kitchen is an eating area for staff with cement floor and thatched roof supported by gumpoles, 5 store rooms in a brick and cement building with concrete floors, and offices.

Also located on this side of the ridge are three single rooms, en suite, for paying pilots/guides.

2.4.3 Guest rooms

The 15 guest units are freestanding rock and thatch, connected to the main area by either concrete or wooden walkways. All the units have a bedroom, bathroom and veranda.

After dark, guests are accompanied by armed guide to and from their rooms, as the camp is not fenced and wildlife roam freely between the units.

2.4.4 Staff accommodation

A combined total of 58 employees, 42 at Ongava Lodge and 16 at Little Ongava, are accommodated in the staff village, located 500 m from the lodge (Figure 2). The staff village is surrounded by 2.3m high game-proof fencing, and a vehicle is allocated for staff transport to and from the lodges. PV electricity is provided to all rooms and facilities.

Staff are accommodated in 51 single rooms, all en suite with solar heated water. An old staff block with 12 double rooms sharing ablution facilities (4 showers and 4 toilets) will be converted into single, en suite rooms in the near future. Other facilities include a kitchen, lounge and soccer field.

In addition to one 3-room, brick and mortar management house in the staff village, there are 7 management units behind the kitchen, west of the main area: 3 units with 2 bedrooms, and 4 units

with one bedroom. All units are en suite and have a veranda, thatched roofs and walls of canvas wrapped around gumpoles.

Little Ongava

2.4.5 Social area

The stone and thatch social area consists of an open-plan dining, lounge and bar area with guest toilet and a small kitchen.

2.4.6 Back of house

The back of house facilities consist of a kitchen, food storage, walk-in fridge, housekeeping storage, and office.

2.4.7 Guest rooms

Guests are accommodated in three luxurious suites, each containing a lounge, bedroom, bathroom, swimming pool and outside lounge. The units are connected to the main area by a raised wooden walkway. After dark, guests are accompanied by armed guide to and from their rooms, as the camp is not fenced and wildlife roam freely between the units.

2.4.8 Staff accommodation

One en suite guide room is located in the Little Ongava lodge footprint, and the remainder of the staff stay in the staff village shared with Ongava Lodge (Section 2.4.4).

2.5 Services

2.5.1 Water supply and reticulation

Water supply is from two boreholes, 17 m and 19 m deep, fitted with submersible low-volume pumps to ensure a stable water level, and pumping is alternated between the two.

2.5.2 Wastewater and sewage

Wastewater from showers, basins and taps goes into the sewerage system.

Sewage is managed with a variety of systems. Sewage from the Ongava Lodge guest units is routed into a 3-chamber French drain. Sewage from the kitchen, laundry, pilot/guide and management units is routed to a trickling processing plant. The resulting grey water is pumped to holding tanks from where it is used for road maintenance, and the surplus goes to a vegetated evaporation pond 1 km north of the lodge (green polygon in Figure 2) that is surrounded by a 2.3 m high game-fence. The grey water in the holding tanks is tested annually for fitness for animal consumption.

At Little Ongava, the social area and back of house sewage goes to the trickling plant at Ongava Lodge. Sewage from the guest units is treated by a Clarus Fusion water purification plant, from where the grey water is pumped to the evaporation pond mentioned above. Staff village effluent also goes into this evaporation pond after being treated in a separate Clarus Fusion plant.

2.5.3 Solid waste

Recyclable waste is separated on site and taken to Windhoek. The remaining solid waste is collected weekly and taken to an official landfill in Outjo.

2.5.4 Energy

Electricity supply is main grid with a back-up generator, used only in case of grid outage. The generator is a six-cylinder engine in a self-contained metal unit, mounted on a cement floor. Geysers are a solar hybrid system, with a PV unit at each guest room plus a unit for the main area.

Staff village and management accommodation get electricity via main grid, including their geysers.

2.5.5 Workshop and fuel

There is no workshop because all maintenance is done at the Reserve Headquarters.

2.5.6 Roads and tracks

Ongava Reserve has a well-established road network, consisting of constructed gravel roads with camber and drainage ditches. The roads are maintained and repaired by the Reserve maintenance team with graders and diggers.

2.6 Design and landscaping

A sense of place is maintained by paint in muted colours, and the use of natural materials such as thatch and rocks. Rocks are sourced from disturbed road verges on the Reserve.

Staff are trained to actively preserve naturally occurring vegetation and clearly demarcated walkways encourage guests and staff to walk in designated areas only.

3 IMPLEMENTATION

Ongava Lodge, Little Ongava and reserve staff are responsible for the day-to-day implementation of this EMP. All contractors, subcontractors, visitors and staff must be made aware of the contents of the EMP and their roles in following it.

3.1 Training

Appropriate training, education and experience for the tasks that are expected of employees will result in competence of the workforce. All contractors, subcontractors, their staff, and lodge employees will receive induction training upon arrival on site, and the lodge manager will keep a register of completed training.

A site induction should contain at least the following components:

- Definitions of “environment”, “social”, “impact”, etc. in language that is understandable by the trainees
- The risks and potential impacts associated with the project
- How can risks and impacts be minimised
- Environmental rules of the project
- The roles and responsibilities of the trainee in relation to the environment and this EMP
- Procedures to follow in the event of an environmental issue
- The consequences of non-compliance, including the possibility that the ECC may be withdrawn, and the project forced to close.

3.2 Compliance

- Ongava Lodge and Little Ongava will avoid or minimise potential impacts on the environment by complying with the guidelines in this EMP.
- Immediate action will be taken if EMP measures are not followed.
- All required environmental authorisations, permits and licences have been obtained; their stipulations are implemented; and renewal will be done before expiry.
- Contractors and new employees will be informed of the high value placed on the environment and will be aware of the measures in the EMP and their responsibility in carrying out those measures.

3.3 Consequences of non-compliance

This EMP is a legally binding document. The consequences of non-compliance will be stipulated in every employment contract as well as in contracts with contractors and subcontractors and will include but are not limited to:

- Fines and penalties to the individual
- Termination of employment (staff)
- Penalties to the contractor
- Legal action
- Withdrawal of licence
- Suspension of work

3.4 Permits and licences

The proponent is responsible for obtaining and updating all permits, licences and registrations that are required for the project.

Table 1 lists some of the applicable permits for an eco lodge.

Table 1. Permits required for this project

Permit/Licence	Authority	Relevance
Licence to abstract and use water, Form WA03-GW	MAWLR	Except for personal, domestic use, all abstraction and use of water requires a permit. Section 44-45 of the Water Resources Management Act (2013) and Sections 44-45 of the Water Resources Management Regulations (2023).
Effluent discharge, Form WA07	MAWLR	Sewerage systems and effluent discharge are regulated by a permit in accordance with Sections 66-68 of the Water Resources Management Regulations (2023).
Clearing of land	MET	The Forest Act 12 of 2001 stipulates a permit for the removal of any protected plant species.
Consumer Installation Certificate, Form PP/5	MME	The storage of more than 600 litres of fuel in a rural area, for personal use only. The Petroleum Products Regulations (2000).
Permission for shifts and leave schedules	Ministry of Labour, Industrial Relations and Employment Creation	The Labour Act 11 of 2007 limits shift length and number of consecutive workdays. E.g. 12-hour shifts and leave schedules of 3 weeks on, 1 week off require written permission.

4 MANAGEMENT ACTIONS

Management measures to mitigate each potential negative impact are given in 3 tables in this chapter. The headings of the tables (Table 3, Table 4 and Table 5) are discussed here.

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.

Responsible person

Successful implementation of an EMP relies on defined roles and responsibilities. Ongava has allocated duties to individuals and teams, and they are responsible for carrying out the required management actions. Table 2 lists the responsible persons and a summary of their responsibilities.

Table 2. Individuals and teams in charge of carrying out the management actions

Person/Team	Responsibilities
General Manager Operations (GMO)	Overall responsibility for implementation of EMP. Support to the construction team and Ongava staff for implementation of environmental management measures.
Maintenance & Asset Manager (MM)	Day to day supervision of other role players. Maintenance of buildings, vehicles, machinery, sewage and waste systems at Ongava Lodge and Little Ongava.
Lodge Management (LM)	Overall management of Ongava Lodge and Little Ongava.
Human Resource Manager (HR)	Employment of staff
Farm Manager (FM)	Maintenance of reserve infrastructure and living assets
Guides	Transport of guests. Ensuring appropriate human-wildlife interactions.
Contractor	Construction

Tools

This column refers to actions, equipment, protocols and guidelines that enable the application of the management actions. Ongava has the following guidelines and procedures that govern the implementation of management actions:

- Guiding Protocol
- Ongava Management Plan
- HR guidelines
- Standard Operating Procedures (SOP)
- Health & Safety annual audit

4.1 Planning and construction phase

No major construction is planned in the foreseeable future, but Table 3 makes provision for maintenance contractors furing the operational phase, as well as potential future upgrades and additions.

Table 3. Management actions for the construction phase

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
1. Soil resources and land capability			
Erosion, compaction of and damage to soils. Off-road driving damages the structure of the soil surface and causes soil compaction, which results in less water infiltration and availability, limited root penetration and less vegetation cover. Damaged soil crust makes the fine underlayer of soil vulnerable to wind erosion, the resulting dust settles on plants, interferes with photosynthesis, and causes a decline in habitat quality.	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 lodge or staff village areas.	GMO. Contractor	Ongava Mgt Plan. Visual inspections
	No construction or activities within areas containing highly erodible, dispersed, fine-particle, sodic soils	GMO. Contractor	Identify highly erodible soils and areas before construction starts. Avoid these areas.
	Prevent water runoff from concentrating unnaturally in any one area.	Contractor	Road building and maintenance plan
	No off-road driving should be allowed. Where it is unavoidable, the resulting tracks must be obliterated by sweeping them. Regular road maintenance, erosion control and good drainage will prevent the need for off-road driving.	GMO. Contractor	Ongava Mgt Plan. Visual inspections
	Water pipes shall be installed and trenches dug in such a way as to minimise the chance of erosion.	Contractor	Site inspections
	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.	GMO. Contractor	Demarcation of construction areas. Demarcation of sites of particular sensitivity with “Do not Disturb” signs.
	No construction activities may take place outside the defined infrastructure footprint areas.	Contractor	Site plans to clearly define construction areas.
	Quarries/borrow pits may not be dug without formal permission.	GMO. Contractor	Approval. Demarcate permitted area.
	The movement of construction crew must be within the demarcated site boundaries at all times.	GMO. Contractor	Site boundary demarcation.

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
	An area for mixing and stockpiling construction material must be demarcated. It must be located in an area that is already disturbed, or where development will take place.	GMO. Contractor	Selection of laydown area. Demarcate area.
	Access routes between the stockpiling areas and the building sites should be demarcated and their use enforced. Existing roads must be used.	GMO. Contractor	Clearly demarcated routes.
	Sand and rocks utilised for construction must be from defined and already impacted areas. These sites must be identified and approved by the GMO.	GMO. Contractor	Approval. Demarcate sources.
	Once construction work is completed, all building material and rubbish must be removed from the farm and the construction sites must be rehabilitated to a state as close as possible to its pre-construction condition.	Contractor	Ongava Mgt Plan. SOP. Visual inspections
	The use of graders should be avoided because they gouge roads below the level of the surrounding surface.	GMO. Contractor	Visual inspections
Soil is contaminated by cement, paint, thinners, hydrocarbons and other chemicals used in the construction process	The mixing and use of concrete and cement must takes placed in defined, designated areas only.	Contractor	Designated mixing areas.
	All hydrocarbons and chemicals must be stored, handled and dispensed on and over an impermeable surface.	Contractor	Lined and bunded storage areas.
	Any spillage must be contained and cleaned up with 24hrs of occurrence. The resulting waste must be sealed in an appropriate container and taken off site for disposal.	Contractor	Spill kits. Drums with sealable lids.
2. Topography			
Significant alterations to the shape of the landscape	Site levelling and landscaping only where required by the designs.	GMO Contractor	Approval from GMO
	Construction site office and facilities to be dismantled and removed once construction is completed	Contractor	Site inspection
3. Biodiversity			
Mortality of amphibians, reptiles, birds, mammals. Snakes are particularly vulnerable because they are usually killed on sight	Avoid any nests, burrows, dens and roosting sites.	GMO. Contractor	Identify sites with nests, burrows, dens. Demarcation of sensitive sites.
	Educate contractor and staff to avoid sensitive sites.		Induction
	Venomous snakes should be removed by a specialist, and other snakes should be avoided.		Induction

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
	Educate staff in the ecological value of snakes and how to avoid them.		Induction
Poaching of wildlife. Tortoises and small mammals are particularly vulnerable.	The greater area around building sites should be searched for snares during the construction phase and after construction is complete.	GMO. Contractor	Site inspections
	Restriction of contractor staff movement	Contractor	Site inspections
	Inspection of contractor staff housing to check for animal parts and/or products	Contractor	Site inspections
Damage to or removal of protected species of fauna and flora	Identify and demarcate sensitive sites. Declare them no-go zones.	GMO. Contractor	Identify and demarcate
	Education of contractor and staff.		Environmental management contract. Induction
	Continuous monitoring to ensure that no protected species are affected.		Site inspections
Damage to vegetation, leading to a loss of habitat integrity and disruption of ecosystem functions	Motorised access should be limited to existing tracks and defined development areas. Road construction takes place within a corridor of less than 16 metres wide.	GMO Contractor	Ongava Mgt Plan. SOP. Site inspections
	No off-road driving is allowed under any circumstances.		
	Ensure that only permitted access roads and paths are used by construction workers and vehicles at all times.		
	No firewood may be collected.		
	Remove and relocate protected species with a good relocation/survival potential – e.g., *Aloe* spp., *Adenium boehmianum*, etc. – and include as part of the indigenous landscaping		
	Avoid damage to and destruction of mature, protected trees		
	Prevent damage to hills, ridges and rocky outcrops		
	Prevent damage to ephemeral pan habitats		
	Prevent poaching of sensitive flora		
	Carry out regular inspections of the staff village and staff transport, looking for poached plants, animals or animal parts.		
	Rehabilitate laydown areas, temporary construction facilities and construction tracks		

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
	Use only indigenous flora species for landscaping		
	Areas dominated by *Dichrostachys cinerea* (sicklebush) should not be disturbed mechanically to avoid the area becoming even more dense		
	Do not use chemicals to clear fence lines and airstrip area of vegetation as these could affect adjacent areas		
Invasive vegetation causes a decline in habitat quality	Construction materials must be free from seedlings and seeds of alien and invasive vegetation.	Contractor	Site inspections
Landscape disturbance from construction activities	Upon closure of construction, site must be rehabilitated using only indigenous vegetation.	Contractor	Inspection and sign-off by GMO
4. Hydrology			
Erosion of river banks, washes and drainages	Rivers to be entered and exited using only existing approaches and entrance/exit points.	All	Mark entry and exit points.
Surface and groundwater 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.	Contractor	Identify and prepare mixing sites.
	No construction activities may take place within 1:100 year floodline of any watercourse or within 50m of a spring.	All	Site inspections.
	Hydrocarbons and chemicals must be stored, handled and dispensed in a manner that prevents spillage and contamination.	Contractor	Designated bunded area. Use of drip trays.
5. Negative visual impact			
Vehicle tracks	No new roads or tracks will be developed. No off-road driving or driving alongside tracks is allowed.	All	Visual inspections
Construction structures and facilities	All structures including offices, ablution, accommodation, lay-down areas, parking sites, etc. are dismantled and removed from the reserve after this phase.	GMO Contractor	Site inspection after completion of construction
6. Solid waste, sewage and waste water discharge			
Large volumes of waste are generated, causing ecological damage including visual pollution, contamination of soil and groundwater, decline in health of	Littering is not permitted and all waste must be placed in appropriate receptacles.	All	Site inspections
	The contractor will provide animal proof receptacles to contain daily refuse.	Contractor	Animal-proof containers and cage.

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
wildlife, mortality of animals that ingest waste, habitat deterioration, etc.	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 waste facility.		
	Building rubble is consolidated in one, suitable location, removed from the area, and disposed of at an official waste facility.	Contractor	Mgr to identify suitable manner.
	Used oils and other workshop waste must be stored in airtight containers, sealed, and dispatched to an appropriate waste facility.	Contractor	Mgr to identify suitable facility.
	Fat/grease traps will be installed at kitchen and all cooking outlets.	Contractor	Site inspections
	Hygienic temporary ablutions of sufficient quantity will be provided for workers.	Contractor	Site inspections
	Ablutions are regularly serviced and the sewage disposed of at a designated location and in an environmentally appropriate manner.	Contractor	Mgr to identify suitable manner.
Unpleasant odours	Continuous monitoring and maintenance of sewerage system.	Contractor	Site inspections
	Should unpleasant odours be identified, the source of the odours must be identified and remedied within 48 hours.	Contractor	
7. Machinery & vehicles			
Noise pollution	Efficient, modern, silenced generator will be used. Power tools and motorised equipment will be used during daylight hours only.	Contractor	Site inspections
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	Site inspections
	Drip trays to be place under any leak.	Contractor	Drip trays
	Vehicles and machinery with fuel, oil or hydraulic fluid leaks must be removed from service for repair.	Contractor	Site inspections
	No servicing or major repair of vehicles or machinery may take place on-site.	Contractor	

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
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 contractors are made aware of this requirement.
	All vehicles used in the area must be operated with low tyre-pressure to minimise negative impacts on tracks and roads.	All	
8. Construction staff damage local environment			
Disruption of ecological processes through physical acts and/or pollution of the local habitat.	The contractor and his employees shall adhere to all regulations prescribed by the relevant authority at all times, as well as to the management measures given in this EMP.	Contractor	Site inspections
	The contractor will ensure the proper supervision of employees at all times and their compliance with rules and regulations.	Contractor	Site inspections
	All employees will be educated as 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.	Contractor	Induction
	Access to the site is restricted to the contractor's employees only.	Contractor	Site inspections
9. Bush fires			
Bush fires destroy habitats and animals, and present a risk to life and health of humans.	Take precautions to prevent the outbreak and spreading of fires and ensure all employees are aware of the precautions.	Contractor	Induction. Site inspections.
	Adequate firebreaks must be made around all infrastructure	GMO, Contractor	Grader
	Gas canisters to be housed in Bureau of Standards approved structures.	Contractor	Gas enclosures
	Fire extinguishers and other firefighting equipment are strategically located throughout construction area. Staff are trained in their usage.	Contractor	Firefighting equipment
10. Social protection			
Construction workers on site visit local shops, leading to a potential increase in sex work, domestic violence, general violence, alcohol abuse.	Awareness campaign in the community to make them aware of the dangers.	GMO, social workers, community leaders	

NATURE OF IMPACT	MANAGEMENT	RESPONSI-BILITY	TOOLS/MONITORING
	Construction staff village is fenced and staff are confined there when not being transported or working on the building site. Workers are not allowed to leave the site after dark. No vehicles are available to construction staff after dark.		
11. Health and Safety of staff			
Injury to persons	Health and Safety aspects are not addressed in this EMP because they are regulated by another ministry. It is assumed that all contractors, their employees and other persons on the construction site will adhere to the relevant regulations.	Contractor	Protective clothing as prescribed by construction regulations and best practice.
	Equipment and tools handled only by persons qualified in their use.	Contractor	Specialised training.
	First aid kit is readily available on site and staff are trained the usage. Enough people on site are trained in medical protocols to deal with an emergency.	Contractor	First aid kit. Emergency and med-evac protocol. First aid certificates.
12. Heritage			
Construction activities damage and/or destroy sites of cultural significance.	Report any find that may be of cultural or archaeological value to the National Heritage Council.	GMO, Contractor	Chance find procedure

4.2 Operational phase

Table 4. Management actions for the operational phase

NATURE OF IMPACT	MANAGEMENT	RESPONSI BILITY	TOOLS/MONITO RING
1. Biodiversity			
Game drives and operational vehicles disturb animals in their daily movements, hunting and/or foraging, potentially leading to stress and mortality. Damage to and destruction of vegetation and animal habitats, leading to a loss of habitat integrity and disruption of ecosystem	Guests and employees are made aware that they are in a sensitive environment, and are shown the appropriate way to interact with wildlife.	GMO. Guides.	Guiding Protocol, SOP
	Trained guides escort guests at all times, no self-drive or walking other than in designated areas.	Guides	
	No plants or animals may be disturbed, violated, destroyed or removed.	All	

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
functions. Decline in habitat quality, leading to mortality and a decline in local animal population integrity.	Employees are educated to refrain from the destruction of plants and animals, indiscriminate defecation, waste disposal and pollution of soil and water.	GMO	
	Avoid areas containing nests, burrows, dens or roosting sites.	GMO. Guides.	
	No protected, rare or endangered plants may be disturbed, damaged or removed.	GMO. Guides.	
	Only permitted access roads and paths are used by employees, guest and vehicles at all times.	All	
	No off-road driving is allowed.	All	
Mortality of amphibians, reptiles, birds, mammals. Snakes are particularly vulnerable because they are killed on sight.	Venomous snakes should be removed by a specialist, and other snakes should be avoided.	LM. Guides.	Training. Guiding protocol
	Educate staff in the ecological value of snakes and how to avoid them rather than kill them.	LM	Training
Poaching of wildlife. Tortoises and small mammals are particularly vulnerable.	The lodge, back of house and surrounding areas should be searched regularly for snares.	All	Visual inspections
	Inspection of staff housing to check for plants, animals or animal parts	LM	Visual inspections
Birds collide with glass windows and PV panels, causing mortality.	Use as little glass as possible. Tilt glass to reflect the ground and not the air. Install bird-friendly glass. Apply visual bird deterrents to glass.	LM	Records of bird injury and mortality
Damage to/removal of protected species of fauna and flora	Identify protected species and demarcate sensitive sites.	LM. Guides.	Guiding Protocol. SOP. Ongava Mgt Plan.
	Educate staff to avoid sensitive sites.	LM	
	Continuous monitoring to ensure that no protected species are impacted by the lodge activities.	GMO. LM	
Damage to vegetation, leading to a loss of habitat integrity and disruption of ecosystem functions	Motorised access should be limited to existing tracks and defined development areas. Road construction takes place within a corridor of less than 16 metres wide.	All	Guiding Protocol. SOP. Ongava Mgt Plan.
	No off-road driving is allowed under any circumstances.	All	
	Ensure that only permitted access roads and paths are used by construction workers and vehicles at all times.	All	
	Avoid damage to and destruction of mature, protected trees e.g. *Colophospermum mopane* and *Combretum imberbe*	All	
	Prevent destruction of karst hills/ridges/outcrops	Guides	

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
	Prevent destruction of ephemeral pan habitats	Guides	
	Carry out regular inspections of the staff village and staff transport, looking for poached plants or animal parts.	LM	
	Use only indigenous flora species as part of the landscaping at the various development sites	GMO. LM	
	Areas dominated by *Dichrostachys cinerea* (sicklebush) should not be disturbed mechanically to avoid the area becoming even more dense	GMO	
	If chemicals are used to clear fence lines and airstrip or to control invasives, care should be taken not to affect adjacent areas by, inter alia, spraying on wind-still days and directing the spray to target species.	GMO	
Dead trees and plant material play an ecological role and their removal causes a decline in habitat quality	Firewood for ambience and braai evenings is collected by reserve staff under direction of the GMO, and no harvesting of plants or collection of firewood by individuals for any other purpose is permitted.	All	SOP. Visual inspections
Invasive vegetation causes a decline in habitat quality	Regular monitoring and removal of invasive plants.	LM	SOP. Visual inspections
2. Solid waste			
Large volumes of waste are generated, causing ecological damage including visual pollution, contamination of soil and groundwater, decline in health of wildlife, animals ingest waste causing mortality, habitat deterioration, etc.	Minimise waste by buying supplies in bulk and using re-usable packaging and transport options.	LM	SOP
	Minimise plastic bottle waste by promoting local tap water and providing re-usable water bottles to guests.	LM. Guides.	
	All solid waste is either recycled or appropriately disposed.	LM. MM.	
	Appropriate waste bins are provided at the point of source. All waste bins are covered and secured to be animal proof.	LM. MM.	
	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 maintenance and to prevent ground seepage.	MM	
	Recyclable waste (glass, cans, plastics, paper) is stored on site until there is sufficient volume to be transported for recycling.	MM	

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
	All waste that cannot be recycled, re-used or donated is stored on site in suitable containers, then disposed of at a registered waste facility.	MM	
Hydrocarbons contaminate the soil and groundwater, leading to deterioration of ecosystem processes and a decline in habitat quality.	Used hydrocarbons are collected at point of use and stored in airtight, sealed containers.	MM	SOP. Containers
	Used hydrocarbons are despatched to an appropriate waste facility.	GMO	SOP. Visual inspections
3. Energy			
Excessive use of fossil fuels. Carbon emissions.	Energy use (diesel, petrol, paraffin, gas) is metered and monitored. Readings are compared with target usage to ensure optimum efficiency.	LM. MM.	SOP. Logbooks, usage records, monthly reports.
	Generator is used as back-up only.	LM	SOP
	Geysers are solar powered.	GMO	
	All cooking for the lodge operation is done with gas. The staff village is provided with electric stoves.	GMO. LM	
	All electrical appliances are energy-efficient models. Fridge and freezer doors seal tightly and are kept closed.	GMO. LM	
Generator noise disrupts the sense of place and causes noise pollution.	Generator is housed in noise-limiting container; use generator only during daylight or for limited hours.	LM. MM.	SOP
4. 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.	MM	Maintenance schedule
Overuse of groundwater	Water conservation is actively promoted among guests and staff. Guests are informed of water scarcity and encouraged to participate in water conservation.	LM	SOP. Water saving devices and measures are communicated to staff and guests
	Water usage is measured and recorded, then compared with targets to ensure optimum efficiency.	LM. MM.	Usage data, monthly reports
5. Sewage and wastewater			
Contamination of soil, as well as surface and groundwater, due to sewage and waste water discharge	Continuous monitoring and maintenance of the sewerage systems.	MM	Visual inspections
	Bio-degradable toilet cleaners are used to preserve bacteria in the septic system	LM	Bio-degradable cleaning materials
Ecological impacts	Fat/grease traps are installed at kitchen outlets and maintained.	LM. MM	Maintenance schedule

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
	Septic tanks and soak-aways are maintained.	MM	
Unpleasant odours	Qualitative monitoring of odours.	LM. MM	Inspections
	The source of unpleasant odours are identified and remedied within 48 hours of identification.	MM	Repairs are carried out
6. Vehicle use			
Erosion of roads and tracks	Regular maintenance of roads and tracks.	MM	Maintenance schedule
	Implement measures to disperse concentrated water flow and repair erosion at such locations.	MM	Ongava Mgt Plan
Damage to roads and tracks	Low tyre pressure on all operational vehicles.	LM. Guides.	SOP. Guiding Protocol
	Operational vehicles are 4-wheel drive and of standard width.	GMO	SOP
Off-road driving damages the structure of the soil surface and causes soil compaction, which results in less water infiltration and availability, limited root penetration and less vegetation cover. Damaged soil crust makes the fine underlayer of soil vulnerable to wind erosion, the resulting dust settles on plants, interferes with photosynthesis, and causes a decline in habitat quality.	No off-road driving is allowed, except in specific circumstances according to the Guiding Protocol. Only permitted access roads and paths are used by employees, guests and vehicles at all times. Avoid sensitive soils and areas where water collects.	All	SOP. Guiding Protocol
	Making tracks next to a road is not allowed. Taking shortcuts is not allowed.	All	
	New roads and tracks have to be authorised by the GMO and developed according to the road plan.	GMO	
	Vehicles are parked only in designated parking areas.	All	
Exhaust emissions cause air pollution	Vehicles are serviced regularly and monitored for excessive exhaust emissions.	MM	SOP. Guiding Protocol
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	SOP. Guiding Protocol
Driving over flooded or moist areas disrupts surface water hydrology	No driving in seasonally inundated areas when flooded or moist.	Guides	SOP. Guiding Protocol
7. Operational activities			
Toiletries and cleaning chemicals cause contamination of the soil, as well as surface and ground water.	Every reasonable attempt is made to use only biodegradable soaps, detergents and other cleaning chemicals.	GMO. LM	SOP. Bio-degradable cleaning materials
Chemicals disrupts the optimal functioning of the septic system.	Biodegradable and eco-friendly guest amenities are provided.	GMO. LM	SOP. Bio-degradable cleaning materials

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
Vehicle parking, servicing and other workshop activities cause soil and groundwater contamination	Vehicle servicing is done on impervious, bunded surface or over oil pans.	MM	SOP. Bunded surface, oil pans
Fuel storage and refuelling procedures cause soil and groundwater contamination	Fuel is stored in appropriate receptacles and kept on an impermeable, bunded surface.	MM	Bunded surface
	Fuel is dispensed over impervious, bunded surface or drip trays.	MM	Bunded surface, drip trays
Machinery use disturbs the natural quiet	Graders, tractors and power tools are used during daylight hours only.	GMO. MM.	Visual inspections
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.	MM	Drums with lids. Drip trays.
8. Light at night			
Upward directed lights disturb the sense of place and has significant impacts on animals.	Outdoor lights are directed to shine down.	GMO. LM	Outdoor lights
Invertebrates that are attracted to the light provide an unnatural food source for taxa such as bats and geckos. These insectivores are attracted to the food and then face conditions where they are more likely to die from causes such as collisions and predation.	No spotlights or upward facing lights are used.	GMO. LM	SOP
Nightly invertebrate fatalities may result from exhaustion or predation, potentially disrupting their population numbers and causing disturbances in ecological processes.	Amber or yellow lightbulbs with the lowest possible brightness are used.	GMO. LM	SOP. Amber or yellow lightbulbs
Night-flying birds may be disoriented by lights, increasing the risk of predation and mortality. Adult bird mortality leads to mortality of dependent chicks.	All lights are turned off after guests have gone to their rooms.	LM	SOP
	Low intensity, downward facing pathway lights that contribute to health and safety may be kept on at night.		Pathway lights

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
9. Socio-economic impacts			
A cycle of dependence and debt: Lodge staff spend their salary at bars, become dependent on alcohol and other substances, go into debt to fund their addiction, lose their jobs, and finally descend into criminality, causing more poverty. This cycle may become a long-term, intergenerational problem that the elders in the community have to deal with.	Awareness campaign in the community to make everybody aware of the dangers so that impacts can be addressed by the entire community.	GMO, social workers, community leaders	
	Awareness of domestic violence and how to handle it. Help for women and children vulnerable to domestic violence.		
	Educate employees in basic financial management. Regular financial advice to staff.		
	Employment contracts have a clause for random alcohol and drug testing at any time while on duty and when on the premises.		
10. Health and safety			
Labour policies	The company is in compliance with all national legislation and regulations governing workplace equity and diversity.	GMO. HR. LM	HR guidelines. Health & Safety annual audits. Labour matters, health and safety are not addressed in this EMP because they are regulated by other ministries and specific legislation. It is assumed that the proponent adheres to those.
Staff and guest health and safety	The company is in compliance with all national legislation and regulations governing health and safety.		
	Protective clothing, as appropriate to operations, is provided to employees.		
	Adequate first aid kits are available and regularly maintained. A suitable number of employees is trained in first aid.		
	On-site staff housing is secure, clean, and provided with sufficient running water, sanitation and energy for the number of personnel accommodated. Staff housing is maintained.		
	Employees and guests are made aware of procedures to follow in the event of an emergency, e.g. whom to contact, how to contact him/her during the night; evacuation routes.		
	Employees responsible for guest transport have valid licences and public driving permits.		
Fires destroy animals and habitats, and pose a risk to life and health of humans.	All precautions are taken to prevent the outbreak and spread of fires. Employees are trained in the necessary precautions and firefighting procedures.	GMO. HR. LM	Fire fighting equipment. Gas storage facilities.
	Firefighting equipment is available, regularly maintained, and employees are trained in fire safety.		

NATURE OF IMPACT	MANAGEMENT	RESPONSIBILITY	TOOLS/MONITORING
	Gas canisters are stored in Bureau of Standards approved structures.		
	Fire extinguishers are strategically located throughout the developed area.		
11. Monitoring compliance with this EMP			
Eco Awards Namibia is an internationally recognised certification programme with independent, objective assessors who evaluate sustainability practices.	Keep certification up to date according to the programme regulations.	GMO. LM	Assessments every 3 years

4.3 Closure & decommissioning phase

There is no intention to cease operations or decommission Ongava Lodge or Little Ongava in the foreseeable future. Since tourism has an indefinite projected lifespan, and since the land, immovable assets and business are privately owned and the owners have a vested interest in the success of the operation, there is currently no decommissioning plan except at concept level (Table 5).

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.

1. Protect public health and safety, as well as health and safety of fauna and flora.
2. Alleviate or eliminate environmental damage.
3. Return the site to its original, pre-development condition.

Table 5. Decommissioning outline

NATURE OF IMPACT	MITIGATION
Infrastructure	
Buildings and support infrastructure	All structures will be completely removed
Roads and tracks	Roads and tracks will be rehabilitated to a state as close as possible to the original condition of the area.
Pathways	All pathways will be rehabilitated to a state as close as possible to the pre-construction condition.
Destruction of & damage to plants; disturbance of soil	
Soil erosion	The site will be re-vegetated. If this is not appropriate or possible, then it will be covered with scrub to prevent 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.
Damage to vegetation	Construction guidelines will apply to ensure limited impact.
Soil	
Compaction of and damage to soils, contamination	Construction guidelines will apply to ensure limited impact.
Hydrology	
Contamination of ground and surface water, erosion of river banks	Construction guidelines will apply to ensure limited impact.
Animals: habitat disturbance; death of animals	
Death of animals, poaching, habitat or behaviour disturbance	Construction guidelines will apply to ensure limited impact.
Negative visual impact	

NATURE OF IMPACT	MITIGATION
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.
Water pipes	All pipes will be removed and trenches will be filled in.
Electricity lines	All electrical infrastructure will be removed from the property.
Foundations, concrete slabs, holes in ground	All structures in or on the ground will be removed. All holes, pits and depressions will be filled.
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.
Temporary structures and facilities	Contractor site office, facilities and structures to be dismantled and removed once decommissioning is completed.
Solid waste, sewage and waste water discharge	
Large volumes of rubble, materials and equipment cause ecological damage	Construction guidelines will apply to ensure limited impact.
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.
Construction staff damage local environment	
Disruption of ecological processes through physical acts and/or pollution	Construction guidelines will apply to ensure limited impact.
Bush fires: destruction of habitat and death of animals	
Outbreak of fire	Construction guidelines will apply to ensure limited impact.
Health and Safety of staff	
Injury to persons	Construction guidelines will apply to ensure limited impact.

4.4 Heritage chance find procedure

When a heritage site or item of cultural significance is discovered during any phase of the development, it has to be reported to the National Heritage Council to ensure compliance with the National Heritage Act (27 of 2004), section 55: "a person who discovers any archaeological object must as soon as practicable report the discovery to the Council".

The procedure to follow when a potential heritage item is discovered by chance, whether by a contractor, guest or staff member, is given in Table 6.

Table 6. Heritage chance find procedure

1. Responsibilities	
Finder	The person who discovers archaeological or heritage items
Supervisor	Secure site and advise management
Senior manager	Report finding to NHC. Determine safe working boundaries
Archaeologist	Inspect, identify, advise management, and recover the items
2. Actions	
Person	**Actions**
Finder	If operating machinery or equipment, stop work
	Demarcate the site
	Take GPS coordinates if possible
	Report findings to supervisor
Supervisor	Report findings, site location and actions taken to superintendent.
	Cease any works in immediate vicinity
Senior manager	Visit site and determine whether work can proceed without damage to findings
	Determine and mark exclusion boundary
	Site location and details to be added to Archaeological Heritage Geographical Information System (GIS) for field confirmation by archaeologist
Archaeologist	Inspect site and confirm addition to GIS
	Advise NHC and request written permission to remove findings from work area
	Recovery, packaging, and labelling of findings for transfer to National Museum
3. Discovery of human remains	
Actions as above	
Advise and liaise with NHC and Police	
Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed by the police and NHC	

5 MONITORING

This EMP can only provide value in preventing and managing potential impacts if the proponent implements it. Compliance with the EMP must be monitored regularly, and adaptive management applied based on the results of monitoring.

Compliance with the management measures (Section 4, Table 3 and Table 4) is monitored regularly. Key aspects to monitor are given in Table 7 but the general manager and lodge manager may add to these and may delegate specific tasks as required by the lodge operations.

Table 7. Mitigation components to be monitored

Component	Measurable	Frequency	Person
Water consumption	Usage in litres per total bednight *	Monthly	LM
Groundwater quality	Fitness for human consumption	Annually	MM
Groundwater availability	Levels and pumping volumes at all production boreholes	Annually	MM
Sewerage system	Septic tanks	Monthly	MM
Sewerage pipes	Leaks	Monthly	MM
Grey water pipes	Leaks	Monthly	MM
Fat traps	Functioning equipment, clean filter	Weekly	LM, MM
Water installations	Functioning of purification equipment	Weekly	LM, MM
Trickle filter plant	Functioning equipment	Weekly	LM, MM
Solid waste	Secure storage of solid waste	Daily	LM
Solid waste	Removal of waste from site and secure storage of waste	Daily, weekly	LM, MM
Soak-aways	Drainage	Weekly	MM
Tracks & roads	Erosion	Weekly	FM
Wildlife	Record species of special interest	On-going	LM, guides
Bird mortality/injury	Collision impact of birds with glass and PV panels	Weekly & as it occurs	LM
Grid electricity	Nampower records: usage per total bednight *	Monthly	LM
Diesel	Records at source tanks and generator	Daily. Monthly summary	LM
Gas	Usage	Monthly	LM
Vehicles	Oil leaks, emissions, tyres	Daily	Guides, MM

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

5.1 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 Maintenance and Asset Manager carries out the monitoring programme.

1. Visual inspection of borrow pits for any waste or groundwater seepage and immediate removal of contaminants.
2. Inspection of wastewater treatment facility, sampling and analysis of effluent.
3. Ensure minimal leakage from evaporation ponds.
4. Ensuring landscape irrigation is not carried out in areas of human activity.
5. Monitor abstraction rates and groundwater level at all production boreholes.
6. Assessment of abstraction rate yearly and adjustment as required for sustainable utilisation.
7. Rainfall monitoring (daily)
8. Considering the shallow water table, it is essential to prevent groundwater contamination by ensuring that septic tanks are sealed and all pipes leak-free.
9. Groundwater samples are taken from production boreholes to monitor contamination from all lodge discharges, both point source and non-point source. The guidelines for effluent monitoring in the Effluent Discharge permit must be followed.
10. Groundwater quality is tested for mineral and bacterial content to ensure that it is fit for human consumption. Samples must be taken from a point of use (e.g. a tap in the kitchen) and from production boreholes.

5.2 Energy monitoring

Electricity: grid source is monitored monthly
PV energy is used for hot water in a geyser hybrid system
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.

5.3 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 Ongava. The annual report contains details of all changes and new projects. Monthly summaries of data are used to assess the level of compliance with environmental legislative requirements and the commitments made in the EMP.

6 EMERGENCY PROCEDURES

The project may cause impacts of low to medium-high significance, but they can all be mitigated to very low significance. Sources of risk include sewage and chemical spills.

6.1 Sewage or waste water spills

Should leaks in the sewerage or waste water system be detected, the following actions will be taken:

- The spillage will be contained and the source turned off if possible. Depending on the amount of spillage, it will be remediated in situ or in the case of a large spillage that is contained, it will be removed.
- The reason for the spillage will be rectified.

6.2 Hydrocarbon or chemical spills

The objective is to contain and remediate spillages of hydrocarbons (petrol, diesel, oil, lubricants) or chemicals (pool cleaners, housekeeping chemicals).

- Contact management in the event of a spill.
- The spillage is contained and the source turned off if possible.
- Management organises a team to assist with cleaning.
- Demarcate the spilled area where practicable.
- Move the spill kits to the area.
- Scoop up the spilled substance along with contaminated soil or any absorbent material using the spill kit shovel. Place the scooped up substance into plastic bags.
- The waste bags must be marked as hazardous waste and disposed of as hazardous waste.
- The leakage must be stopped and reason for spill must be rectified.
- Diesel tanks are mounted on bunded concrete floors to contain spills.

7 CONCLUSION

No further studies are recommended for the following reasons:

1. Merging two ECCs involves no change to the infrastructure or operational activities of the lodges.
2. Both lodges have had valid ECC's since 2017 and renewal is currently due.
3. Potential environmental impacts and management measures are identified and addressed in an MEFT-approved EMP that is regularly updated.

This Environmental Management Plan describes the management measures that are implemented with the aim of preventing or mitigating negative environmental impacts and enhancing positive impacts that the lodge activities may have. It is a legal document that commits Ongava Game Reserve (Pty) Ltd to comply with all the management measures, monitoring programmes and other plans as presented in this document.

A high level of compliance with the 2021 EMP was observed at both Ongava Lodge and Little Ongava, and it is recommended that the merged ECC be issued for a period of 3 years.

APPENDIX I. ECC 2021 Ongava Lodge

ECC – 01681

Serial: H4PHN41681

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental Management Act (Act No. 7 of 2007)

TO

ONGAVA GAME RESERVE (PTY) LTD
Private Bag 12041, Windhoek.

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

Proposed Operations and management of Ongava Game Lodge, in Kunene Region

11 OCT 2021

ENVIRONMENTAL COMMISSIONER

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Expires on this date: 2024-10-08

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APPENDIX II. ECC 2021 Little Ongava

ECC – 01645

Serial: 3keAZk1645

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental Management Act (Act No. 7 of 2007)

TO

ONGAVA GAME RESERVE (PTY) LTD
Private Bag 12041, Windhoek.

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

Proposed Operation and Management of Little Ongava Lodge, Kunene Region.

30 SEP 2021

ENVIRONMENTAL COMMISSIONER

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