ENVIRONMENTAL MONITORING REPORT SHIPWRECK LODGE

SKELETON COAST NATIONAL PARK





MARCH 2020

PROJECT	Shipwreck Lodge: Renewal of Environmental Clearance
CLIENT	Journeys Namibia (Pty) Ltd for Trip Travel
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INFORMATION SHEET

PROJECT

Shipwreck Lodge: Renewal of Environmental Clearance

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ABBREVIATIONS

COC Concession Operator Contract
EA Environmental Assessment

ECC Environmental Clearance Certificate
EIA Environmental Impact Assessment
EMP Environmental Management Plan
EMR Environmental Monitoring Report
JMC Joint Management Committee

MET Ministry of Environment and Tourism

SOP Standard Operating Procedure

TABLE OF CONTENTS 1.1 1.2 1.3 1.4 1.5 MONITORING......4 2 2.1 LAYOUT......6 2.2 3 3.1 3.2 33 APPENDIX I. AWARDS AND MEDIA RECOGNITION46 APPENDIX II. APPENDIX III. **TABLE OF FIGURES** Figure 1. Location of the concession area and nearest settlements/infrastructure. (Source: Figure 2. Planned layout of main area and guest rooms as submitted in 2016. (Source: EIA Figure 3. Current layout of the infrastructure of Shipwreck Lodge......8 Figure 4. Current layout of the staff village and workshop area......9 Figure 5. Four pictures showing how the lodge fits into the landscape. The topography and vegetation were incorporated in the design and not disturbed.14 Figure 6. The staff village and workshop area is located and constructed so as to cause no Figure 7. Photographic evidence of rehabilitated laydown area31 Figure 8. Photographic evidence of rehabilitated rubbish area......32 Figure 9. The staff village and workshop complex is built entirely from shipping containers.39

1 INTRODUCTION

1.1 Background

MET, with Puros and Sesfontein conservancies the concessionaires, granted Trip Travel (Pty) Ltd a concession to build and operate a tourism lodge in the Central Concession Area in the Skeleton Coast National Park (Figure 1).



Figure 1. Location of the concession area and nearest settlements/infrastructure. (Source: EIA 2016)

Environmental clearance was obtained in 2017 and Shipwreck Lodge opened on 1 June 2018 to wide media acclaim for its sustainability ethics, both in design and operations. Links to international awards for design, architecture and hospitality, as well as to media recognition, are provided in APPENDIX II.

1.2 This document

Journeys Namibia, as the reservations and management company of Shipwreck Lodge, asked Henriette Potgieter to apply for renewal of the existing Environmental Clearance Certificate (ECC) which will expire on 26th April 2020.

An EIA was conducted and an EMP compiled by Green Earth Environmental Consultants in 2016. The two documents were submitted to MET as supporting documents in the application for EC and they were approved in 2017. This EMP has been in effect since the planning phase of Shipwreck Lodge and is part of the standard operating procedures in the daily running of the establishment. The documents are referred to in this report as "EIA 2016" and "EMP 2016".

1.3 Methodology

This document serves as an Environmental Monitoring Report (EMR) and was drawn up from information gathered during meetings with the Journeys Namibia Operations Manager and HR Manager. It consists of two parts: an account of changes made to the infrastructure in the past 18 months (Section 2), followed by an Environmental Audit Report (Section 3). The environmental audit assessed compliance with the EMP 2016 by reviewing the implementation and efficacy of mitigation measures.

Eco Awards Namibia, of which MET is a member, assessed the lodge in January 2020. The independence and status of the programme result in audits that provide reliable information on the sustainability practices of a lodge, therefore a site visit by this practitioner was deemed unnecessary.

Another reason for omitting a site visit is that MET is part of the Joint Management Committee (JMC) of the concession and jointly responsible for monitoring compliance with the Concession Operator Contract (COC). The JMC meets every three months and MET is thus informed of developments before and as they occur.

1.4 Terms and Conditions

The terms and conditions that regulate the development and management of the concession are contained in the COC in a section named "Concession Rights" and this section is copied verbatim:

"Tourism Development and Operating rights

- The Concessionaire shall have the right to Build, Operate, Manage and Maintain a new lodge and campsite in the Concession Area, including their associated support infrastructure such as staff housing and other back-of-house facilities:
- Thirty (30) luxury wooden chalet accommodation facilities at Huarusib River Mouth;
- One (1) camping area consisting of Ten (10) individual campsites;
- Satellite Camp at Westies Camp.

Activity rights:

- The Concessionaire shall have the non-exclusive right to conduct day excursion by vehicle to Oasis followed by a drive through the sand dunes to Ausis spring and the flood plains.
- Day excursion by vehicle to Möwe Bay seal colony, the remnants of the Suiderkus shipwreck, along the beach past the leftovers of the Karimona shipwreck, abandoned Westies diamond mine, remains of the Ventura Bomber to the wind shelter of the reeds at Flamingo pools.
- Half day excursion by vehicle to Oasis, culminating with the smoothly sculptured roaring dunes in the Concession Area;
- Environmentally friendly quad bi pedal excursion through the Hoanib River Delta past remnants of the campsites of previous occupants of the area, the San People referred to the 'Strandlopers' of 'Beach Comers' provided such activities conform to the Environmental and

Development Guideline, Concession Area Rules and the Management Plan, and provided such activities do not compromise the obligations to allow use of the agreed areas and routes by members of the public and tourism operators.

- The Concessionaire shall have the non-exclusive right to conduct guided, vehicle-based tourism activities with guests inside the Skeleton Coast Park along existing tracks in and adjacent to the Hoanib River between Huarusib River and Möwe Bay, provided such activities conform with the Environmental and Development Guidelines and the Traversing Conditions and Protocols outlined in this agreement. Notwithstanding the right granted in this paragraph, the Concessor reserves the right to award similar rights over the same tracks to the Orupembe, Sanitatas, Etanga and Okondjombo Conservancies via a separate concession agreement. The Concessor will award such rights after due consultation with the Concessionaire, and will ensure that the general public is not permitted access to this area for tourism purposes;
- The Concessionaire may request permission from the Concessor to conduct other activities in the Concession Area. Such permission shall not be unreasonably withheld by the Concessor.

Tourism access rights

The Concessionaire and its guests and staff shall have the right to enter and leave the Concession Area and Park via points other than the official Park entry gates.

Activity Guidelines

- All activities shall be guided by staff of the Concessionaire and/or Operator;
- The Concessionaire's activity guides shall be qualified and trained in line with Best Industry Practice in their respective fields (e.g. walking guides, etc.); and
- All tourism activities must conform to the Environmental and Development Guidelines and will be subjected to the EIA and EMP procedures outlined in this agreement.

Capacity Limits

The operating capacity limits shall be as follows. Any change to these limits shall require the prior written approval of the Concessionaire:

- Thirty (30) luxury wooden chalets accommodation facilities at Huarusib River mouth;
- One (1) camping area consisting of Ten (10) individual campsites between Terrace Bay and Möwe Bay;
- Satellite camp at Westies Camp.
- The Concessionaire may operate a maximum of three (3) vehicles at any one time within the Concession Area"

1.5 Monitoring

A JMC is responsible for monitoring the implementation of the terms and conditions of the COC, including environmental compliance. The JMC meets every three months and consists of representatives of MET, Sesfontein conservancy, Purros conservancy, Trip Travel and Journeys Namibia. As a member of the JMC, MET is informed of events at the lodge on at least a quarterly basis and is in a position to do regular on-site monitoring.

As part of ongoing monitoring, Shipwreck Lodge was audited by an independent assessor from Eco Awards Namibia, a process that follows international best practice guidelines for certifying sustainability and environmental sensitivity. Eco Awards Namibia is recognised by international eco-certification schemes and most importantly, MET is a member of the Eco Awards alliance.

At the time of writing this report, the Eco Awards assessment was being processed and a **preliminary score** was made available for this report (APPENDIX I). The assessor awarded Shipwreck Lodge five flowers, the highest category for sustainable tourism practices.

2 INFRASTRUCTURE UPDATE

Changes that were made to the infrastructure after the current ECC was granted are detailed in this section of the report.

The back-of house, including staff village and workshop, was built entirely from re-purposed shipping containers. This conforms to the MET requirement that no permanent structures be erected.

2.1 Layout

The layout of the lodge as submitted in the 2016 EIA is shown in Figure 2, and the current infrastructure layout is given in Figure 3 and Figure 4.

In May 2018, when the lodge was completed, the total infrastructure footprint comprised 874 m². Subsequent changes added 554 m² to bring the total surface coverage to 1,429 m².

The infrastructure footprint consists of:

Main area: 245.20 m²

Guests rooms: 49.10 m² x 10 = 491 m² total

Bottom staff area: 216 m²
 Top staff area: 180 m²
 Workshop: 297 m²

2.2 New structures

- 1. Two guest rooms, bringing the total to ten.
- 2. The main area of the lodge was built larger than originally planned.
- 3. Workshop. It is a non-permanent structure consisting of shipping containers on an interlock stone floor.
- 4. Six additional guide rooms were added to the staff quarters. As does the rest of the staff accommodation, re-purposed shipping containers form the rooms and ablution facilities.
- 5. An additional bubbler system was installed at the staff quarters to reduce sewage accumulation in the staff village.
- 6. A second additional bubbler system was installed near the main building, this one to reduce the grey water breakdown from the lodge kitchen.



Figure 2. Planned layout of main area and guest rooms as submitted in 2016. (Source: EIA 2016)

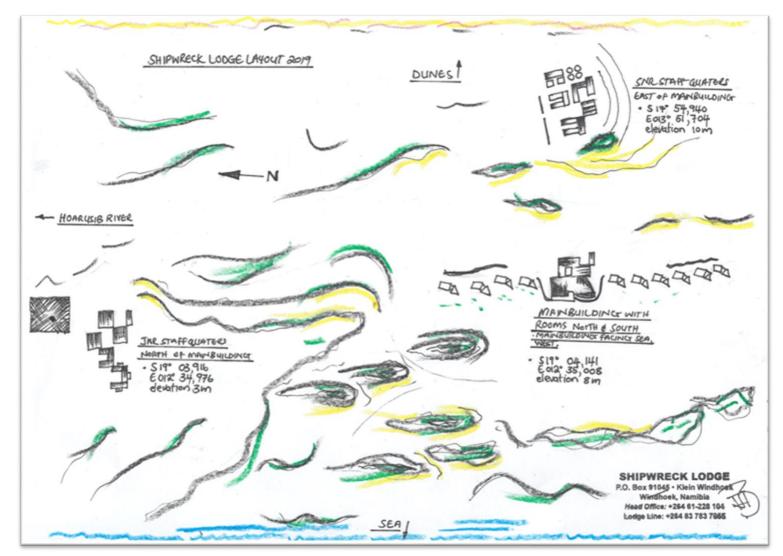


Figure 3. Current layout of the infrastructure of Shipwreck Lodge.

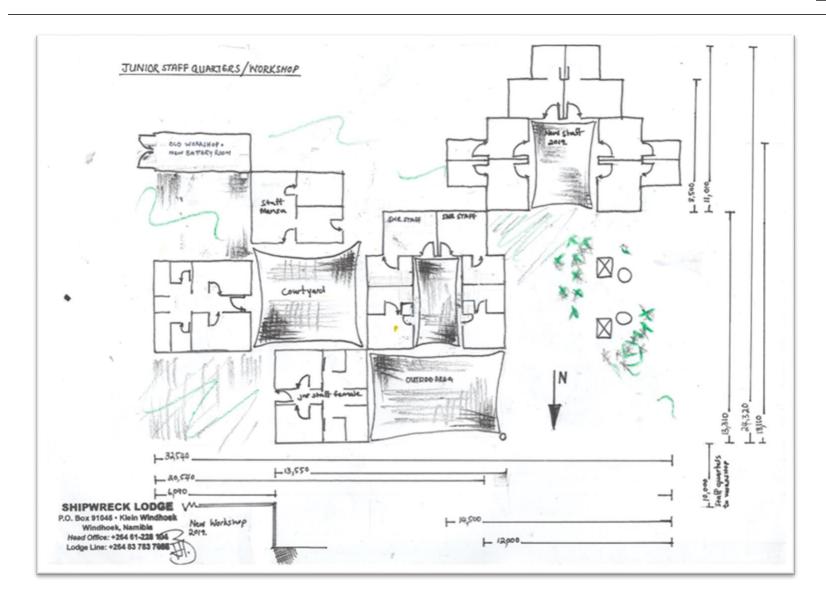


Figure 4. Current layout of the staff village and workshop area.

3 ENVIRONMENTAL AUDIT REPORT

An internal audit of the implementation and efficacy of mitigation measures suggested in the EMP (EMP 2016) was done in February 2020 by Mr D. du Raan, Operations Manager of Journeys Namibia, and Mr Herbert Burmeister, Chief Operations Officer of Trip Travel.

The results of this audit are presented in an Environmental Audit Report consisting of three tables, each dealing with a different phase of the project: planning, construction and operations. Closure/decommissioning was not audited because the provisions in that section are not relevant during operations.

Table headings

The first two columns of the report, headed "Responsible Person" and "Measures", are given here verbatim from the EMP.

- 1. "Responsible Person" indicates the person or group responsible for implementing the mitigation measures in the second column.
- 2. "Measures" indicates management actions that should be taken to prevent or mitigate any potential negative impact on the receiving environment.
- 3. The third column, "Audit 2020", gives the results of the recent environmental audit.

The abbreviation SOP stands for Standard Operating Procedure and refers to the combined actions, strategies and procedures that are carried out in the daily business of running a lodge. Most are contained in the Journeys Namibia Policies & Procedures Manual (Error! Reference source not found.). Other management actions and processes are contained in the training courses and on-the-job training that all staff members receive.

3.1 Planning phase

Responsible Person	Measures	Audit 2020
Addressing of Aest	hetic and Visual Issues	
The proponent, developer or builder	a. Buildings on the site must be visually pleasing namely it must be in concordance with a certain natural style since the site is in natural surroundings.	Shipwreck Lodge received several international awards for its design aesthetic in the 18 months since opening (Appendix II). All the measures in this section are adhered to. See Figure 5 and Figure 6.
	b. The building shapes must not contrast too much of the area namely high rising concrete buildings in future should rather be avoided.	
	c. The use of certain African or earthy colours (paint) on the buildings/structures, which are in harmony with the environment, are strongly recommended.	
	d. If construction on the site is carried out, it must make use to a large extent of the natural materials namely rocks from the area, wooden poles either from already non-living trees or commercially produced poles and thatch in order not to destroy the environment.	
	e. Should there be any further development regarding communication masts, solar panels, water tanks and other prominent features, it must be placed or constructed at spots that prohibits visual destruction or minimize visual impact.	
	f. Tourists, residents or any persons driving past the site or operations should not be able to notice visually unpleasing objects.	

Responsible Person	Measures	Audit 2020
	g. Avoid any neon or non-earthy signs that will reduce the sense of place, rather use rustic metal or wood to construct signs.	
	h. All additional or new pipes and cables must be buried underground and not be visible to the public.	
Ensuring water cons	sumption efficiency	
The Developer, Builder and Residents residing on the Site	a. Any addition of lawns or cultivated gardens on the site must be limited since it makes use of clean water that should rather be reserved for human consumption. The cultivation or enhancements of locally adapted natural grasses which can survive the natural conditions are preferred.	No garden or landscaping, only naturally occurring vegetation.
	b. Grey water from any newly created showers and basins must be drained into a soak away area and this could be developed as a reed-bed.	Grey water goes into sewerage system.
	c. It must be communicated to staff members residing on the site to make use of showers rather than baths since showers uses less water than baths do. This should save water to a large extent.	No baths in the staff village, only showers.
	d. The river and drainage systems bordering the site/passing through the site must be maintained and channels must be kept open to conserve the environment and flow of water.	Done.
	e. Water efficient systems/equipment which limit the use of water or make recycling of water possible should be introduced.	Low-flow showerheads and toilet cisterns.
Ensuring energy cor	nsumption efficiency	

Responsible Person	Measures	Audit 2020
The Developer or Builder	a. Preference must be given to the implementation of energy conserving and efficient systems. Renewable energy sources like gas produced from household waste or solar should be considered to replace the current commercially supplied electricity where possible.	All solar. Generator is used as back-up, e.g. after multiple sunless days.
	b. Devices or equipment which conserve energy must be introduced and used in the operations of the resort.	Low energy bulbs are used.
Limiting creation of	solid waste	
The Manager	a. Consumables and containers which can be recycled or which are biodegradable must be introduced in order to limit the creation of solid waste which has to be taken out of the area to be managed and handled at another site.	Supplies are bought in bulk, incl. cleaning materials and bathroom amenities. Reverse osmosis system for drinking water - minimal plastic bottles.
	b. Concepts like pollution control, material substitution and maximization	Done

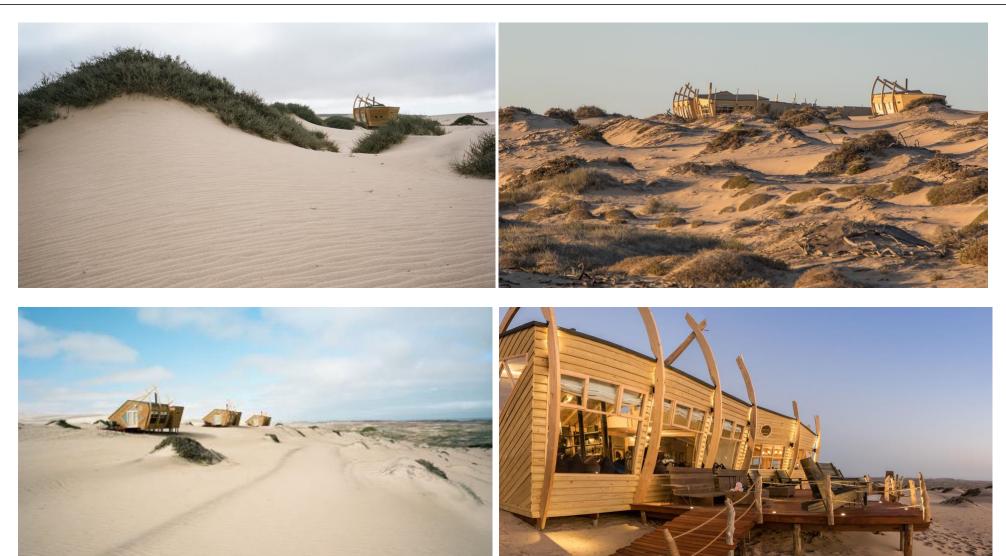


Figure 5. Four pictures showing how the lodge fits into the landscape. The topography and vegetation were incorporated in the design and not disturbed.



Figure 6. The staff village and workshop area is located and constructed so as to cause no visual disturbance.

3.2 Construction phase

Responsible Person	Measures	Audit 2020
Spillages of poten	tially toxic materials	
The Developer, Builders and Workforce	a. Any spillages of potentially toxic materials, whether by accident or through negligence, must be reported and the corrective action must be undertaken to 'clean' and to remove the evidence of the spillage.	Diesel and petrol are stored off-site at Möwe Bay and vehicles fill up there. Jerry cans with fuel are kept at lodge for quad bikes.
	b. Make use of design structures and transfer equipment so as to avoid spillage as far as possible.	Done
	c. Train the staff members on how to make use of diesel/fuel transfer and to avoid spillage.	Done
	d. Any spill must be cleaned up immediately by removing the spill together with the polluted soil and disposing of it at a recognized dumping site or facility.	Vehicle maintenance (service and oil changes) is done in Swakopmund. Break-downs are repaired in the workshop - mechanic is brought in with parts and equipment. Floor is interlocks.
	e. Install oil traps in all appropriate places to collect potentially toxic materials.	Fat traps in all kitchen outlets.
	f. When there is made use of diesel generators on site it must be placed on concrete slabs.	Generator is in a sealed shipping container.
	g. When a workshop is introduced, the entire work area must be lined by concrete.	Interlocks. The concession agreement prohibits permanent structures and concrete foundations.
	h. Any runoff from the work areas either arising from wash downs or rainfall must be channelled into a pollution control pond.	Waste water goes into the sewerage system.
	i. There must be a weekly monitoring of all equipment namely a visual check; there must also be a weekly monitoring of work areas.	Done.
Site Preparation		

Responsible Person	Measures	Audit 2020
The Developer, Builders and Architect	a. Before any workers, equipment or building materials are brought in; the developer must set out the entire plan. The corners of every building, chalet, walkway, driveway, parking area, water installation, power generator, etc must clearly be marked.	Done in 2017-2018 - not possible to audit now.
	b. The marked out area must be inspected and approved by the architect before any construction is started.	
	c. The building contractor must demarcate the area with metal droppers and hazard tape so that there will be no confusion about which area may be disturbed for additional development and which areas will strictly be off-limits.	
	d. Disturbance and risks related to sitting and construction should be minimized at all time. Construction activities and site location should comply with national environment protection legislations and best practice environmental management guidelines.	
	e. Construction should be carried out in a safe and effective manner and obstruction or danger to visitors or vehicles caused by the location of the facility, construction activity or material used in construction should be minimized.	
Building Materials		
The Developer, Builders and Workforce	a. All the materials needed for construction namely steel, bricks, sand, cement, poles, roofing, etc., must be brought into the site from outside.	Done.

Responsible Person	Measures	Audit 2020
	b. In the case of items that are not bought from a registered shop for example poles, the contractor must ensure that the harvesting of these materials did not cause any serious impacts at the place which they came from.	Driftwood only. Driftwood was collected from the beach after obtaining permission from MET and used for stabilising dunes to prevent movement and erosion around the structures.
	c. Sand that will be used for building may only be collected from a registered shop/construction company and not from the rivers or coast nearby.	No cement, concrete or sand was used in construction.
	d. However, rocks that will be used for cladding may be collected from the site.	No rocks were used in construction.
	e. No materials, including rocks for building purposes may be collected from the environmentally sensitive areas pointed out in the Environmental Impact Assessment.	Done.
	f. The design, location, installation and operation of the underground cables or ducts must be in accordance with the principles as set out.	Done.
	g. Where underground cable or duct require the removal of protected plant species, a permit from the Ministry of Forestry is required for the removal of such plant.	No plants were removed.
	h. The land in which cable or duct is laid must be reinstated in accordance with a reinstatement Environmental Management Plan agreed, prior to construction, with the owner or if on municipal land, the Council Environmental Management Manager.	Cables and pipes are laid in sand.
Facilities for Wor	kers	

Responsible Person	Measures	Audit 2020
The Proponent, Developer and Builders	a. All workers that need to reside on the site while construction is in progress will have to be housed in temporary structures like tents or caravans to limit the impact on the environment. The majority of the workforce will consist of people already living in the area and therefore minimum impact on the environment is expected.	Tents were brought by contractor and removed after construction.
	b. The workforce residing on the site must be provided with water, proper toilets and washing facilities.	Sealed septic tank systems were brought in by the plumbing company and removed after construction.
	c. The toilets established on the site must preferably be flush type toilets that are mounted over a septic tank or a dry toilet system that is similar to the units used during road construction projects.	See above.
	d. Cooking on the site must be done on gas or open fires. When the workers make use of open fires, these must be made in a designated spot so that there will be no possibility for a veldt fire occurring.	Gas facilities were provided, no open fires were allowed.
	e. Although the surrounding settlers collect wood in the area, construction workers working or residing on site should not be allowed to collect wood for cooking purposes. The manager or developer must provide them with wood/charcoal preferably from intruder bush from outside sources.	No fires.
Waste Manageme	ent	

Responsible Person	Measures	Audit 2020
The Contractor, Developer and Builders	a. Should the developers and sub-contractors make use of combustible waste for example empty cement bags, it must be burnt in a drum and the necessary care must be taken to avoid any possibility of starting a veldt fire.	No burning was done on site. All waste was removed: vehicles bringing building materials went out with waste.
	b. All non-combustible waste must be removed from the site at least once a week.	Done
	c. Any waste that is stored temporarily on the site must be secured in refuse bags stored in a fenced-in area to avoid it being blown into the veldt.	Shipping container used for waste storage. No spillage is possible and no animals can enter.
	d. A temporary waste storage site may not be set up close to any dam, river, the coast or any water courses.	Done
	e. Measures must be taken to prevent waste that attracts scavengers for example jackals or vultures.	Done
	f. All waste must be dumped at a properly managed rubbish dump site.	Done
	g. No paint, solvents, thinners, diesel, oil or any other harmful substances may be poured onto the ground. The substances must be collected in containers and be removed from the site for proper disposal.	Done
Water Use		
The Developer, Builders and Workforce	a. Water must at all times be used sparingly in the construction period as well as in all the other phases.	Done
	b. All taps, pipes and tanks that will be constructed must be maintained and managed so that they do not leak.	Daily inspections of the water reticulation system are part of the Standard Operating Procedure (SOP).

Responsible Person	Measures	Audit 2020
	c. Water pipelines laid to the site shall be done in such a manner that the surface and natural vegetation are not unduly disturbed.	Surface is sand and no plants were damaged or removed.
	d. Weekly visual checks on possible spillages must be conducted.	SOP
	e. Effluent water from washing facilities must be disposed of in properly constructed drains that must be located as far as possible, but not less than 50 meters from a stream, river, pan, dam, the coast or borehole.	Waste water goes into the sewerage system.
	f. Drains may only collect domestic type wash water, any effluent containing oil, grease or other industrial substances must be collected in a suitable receptacle and must be removed from the site, it could either be for resale or for appropriate disposal at a recognized facility.	No hydrocarbon effluent was generated.
	g. There must be weekly inspections of drains.	2018 - not possible to audit now.
	h. These drains must be demolished after construction and the sites must be cleaned and restored to its natural state.	No sign left of construction water system.
	i. If concrete reservoir walls are built, it must be painted in a camouflage colour to aid in concealing it.	Not applicable - sealed plastic tanks are used for water storage.
	j. When reservoirs are built, it must be covered to reduce evaporation.	Sealed plastic tanks.
	k. No reservoirs must be visible from the main road.	Done.
	I. There must also be weekly visual checks of the reservoirs and it must be supervised on site by the managers.	SOP
	m. Water must be recovered if used for cutting, cooling or washing.	Laundry water goes into sewerage.

Responsible Person	Measures	Audit 2020
	n. The workforce must be advised to use water sparingly for human consumption.	SOP
	o. Water consumption must be checked on a three monthly basis.	Water meter readings are recorded and reported monthly.
Wildlife		
The Workforce, Builders, Contractors and Residents	a. No wild animals on the site may be trapped or killed for any reason whatsoever by the workers, builders, contractors or residents.	SOP
Fuel, Transport and	l Storage	
The Vehicle Drivers, Builders, Contractors	a. Vehicles that transport materials to and from the site must be roadworthy.	Completed in 2018, not possible to audit now.
	b. All drivers that transport materials must have a valid driver's license and must at all times adhere to traffic rules and regulations.	
	c. Vehicles carrying loads must be properly secured in order to completely avoid items falling off the vehicle at any time.	
	d. The materials used in the construction process for example cement, bricks, poles, etc., must be stored at a central storage area on the site in order that the site be neat and orderly and to avoid a situation where materials are lying all over the place.	No signs of spillage or incorrect historical storage.
	e. Fuels, paints, solvents and chemicals must be stored in watertight containers that will ensure it cannot react with each other or be spilled onto the ground.	Petrol and diesel were stored in 200 litre drums which were removed after building.
Vehicles, Trucks, Ro	oads and Tracks	

Responsible Person	Measures	Audit 2020
The Vehicle Drivers, Builders	a. Any haphazard driving of any vehicles across the veldt where there are no existing routes must be avoided.	Completed in 2018, not possible to audit now.
and Contractors	b. Vehicles, trucks and earthmoving equipment with headlights must switch their headlights on at all times.	
	c. No vehicles or trucks that move in the area may exceed 40km/h with warning, and speed signs must be positioned at relevant locations.	
	d. All the personnel responsible for the driving of transport vehicles must be in possession of a valid driver's license.	
	e. Any access points off the gravel road must be well signposted in advance.	
	f. No littering is allowed along the road, dumping of waste and scrap, etc. and all drivers must be made aware of this.	
	g. Daily or weekly visual checks are required and all drivers must be supervised.	
	h. The safety of surrounding residents and land users, other motorists and animals should not be compromised by the vehicle associated with the constructional operation.	
	i. Traffic control measures should be taken during construction in accordance with the traffic control regulations	
Vegetation		
The Builders, Contractors and Workforce	a. There must be an overall preservation of vegetation communities to ensure minimal disruption of important vegetation communities and valuable plant specimens.	No plants were disturbed, damaged or removed.

Responsible Person	Measures	Audit 2020
	b. At all times, clearance of vegetation for firewood must be avoided.	No firewood is collected on or near site.
	c. Alternative fuel and/or power sources must be made available namely paraffin stoves and diesel-driven generators if workers are accommodated on the site.	Solar.
	d. No trees or shrubs must be damaged for the purpose of obtaining firewood.	Done.
	e. Daily inspections must be carried out and weekly checks whether the stock of alternative sources is sufficient.	Done.
	f. The developers or constructors must ensure the maximum use of local plant material for rehabilitation processes.	Minimal disturbance was caused. No vegetation is available on site for rehabilitation.
	g. Before new site construction begins, the upper level of the soil must be stripped and stockpiled separately so that this layer can be utilized in the rehabilitation process.	Not applicable - no soil was disturbed or removed.
	h. There must also be a visual check on the wind erosion on a monthly basis.	SOP
	i. Disturbance of flora and fauna should be minimized during construction and vegetation replaced to the satisfaction of the responsible authority at the conclusion of work.	No plants were disturbed, damaged or removed.
Fauna		
The Developers, Constructors,	a. No hunting and trapping of resident animals will be allowed on the site.	

Responsible Person	Measures	Audit 2020
Residents and Workforce	b. The developers or constructors must fence off waste pit storage areas to prevent animals from falling in or getting entangled in waste.	This was strictly enforced during construction, but not possible to audinow. All these measures and more are implemented during the operational phase as a matter of SOP.
	c. The fences must be sufficient to control the access of large and small animals.	
	d. There must be weekly visual checks of the fences and staff must report to the managers.	
	e. Prevent possible areas of high sensitivity in the area namely:	
	- Areas below the flood line (average high water mark)	
	- Breeding areas	
	- Animal and bird migration routes	
	- Animal dens/lairs	
Noise		
The Workforce, Contractor and Builders	a. If a generator is used, it must be positioned away from neighbouring land and must have boarding to help suppress noise.	Sealed shipping container.
	b. There must be limited impacts on the surroundings and on the workforce.	
	c. There must be a weekly noise check of the generator and other equipment namely of trucks and construction machinery.	
Dust		
	a. The impact of dust on the air quality in general and on the fauna and flora must be limited.	Minimal dust generation because no land moving equipment was used.

Responsible Person	Measures	Audit 2020
The Developers, Constructors and	b. The general speed limit on the haul road and construction site must be kept below 40km/h to limit dust generated by construction traffic.	Done in 2018 - not possible to audit now.
Builders	c. There must be daily visual monitoring of transport activities and dust generation in the area.	
Visual Impacts		
The Proponent, Developer, Constructor and Builders	a. The height of the buildings must ensure that the development is aesthetically pleasing. Waste and stockpile dumps must not be visible from the road or neighbouring developments.	Figure 5 and Figure 6.
	b. The developer must ensure that all structures on the sites are blending with the surrounding landscape.	
	c. The design and architectural concepts proposed in the planning phase must be adhered to and implemented to ensure that the development is in harmony with the surrounding natural environment.	
Historical, archaeo	logical and cultural heritage	
The Contractor, Developer and Builders	a. No archaeological or cultural heritage sites had been identified or observed during the environmental assessment. However the developer and his subcontractors must carefully examine on the area before any construction is undertaken.	None was found.
	b. If any archaeological or cultural heritage sites are found on the site, the manager must immediately advise the National Monuments Council to ensure that steps are taken for the preservation of the site or artefacts.	
Accommodation ar	nd Sanitation	

Responsible Person	Measures	Audit 2020
The Constructors, Developers and Builders	a. There must be no camp or office site located closer than 100 meters from any spring, river, dam, pan or the coast.	The site location and the positioning of infrastructure were approved by MET during the planning phase.
	b. If space is required for a camp or office site, it must be kept to a minimum.	
	c. Chemical toilet facilities are preferred by the Ministry of Environment and Tourism. Other approved toilet facilities such as a septic drain must be used and located on the camp site in a way that it does not cause harm to any water bodies or the environment. If tanks should be emptied, it should be conducted by an approved truck system that will prevent spillages of harmful substances.	
Rehabilitation of si	te after completion of construction phase	
The Builders, Workforce, Constructors,	a. Before any final rehabilitation is started on the site, the Ministry of Environment and Tourism must be advised to set certain terms and conditions.	Done: MET was advised via the JMC.
Developers and Residents	b. Qualified or accredited personnel from the constructing or developing companies must refill pits alternately with waste and not saleable stockpiled blocks and smaller fragments of larger blocks.	No pits were dug.
	c. Refilled rock waste must be covered with saved topsoil and complemented if necessary by scraping the area adjoining the pit on the condition that no vegetation is cleared for this operation.	No pits. No rock waste was generated. No topsoil was removed or disturbed.

Responsible Person	Measures	Audit 2020
	d. All rehabilitated areas must be monitored over a 4 year time period from the onset of the rehabilitation procedures. (The frequency of monitoring suggested is dependent on satisfactory performance. If however the requirements are not being met, the frequency of the monitoring must be increased).	Minimal disturbance of the topography took place during construction. Substrate of receiving environment consists of sand dunes and is subject to daily strong winds that constantly move the dunes around. No plants were disturbed, damaged or removed. Laydown areas were chosen in unvegetated areas. Figure 7 and Figure 8.
	e. Unwanted materials and all waste namely domestic or industrial must be collected. Remaining domestic waste on site must be collected and transported to a recognised disposal facility.	Done
	f. Waste material must be collected in drums and transported to a recognised disposal facility as well.	Done
	g. All weedy species present on the site must manually be removed.	No vegetation was introduced.
	h. Monitoring must be conducted when grasses are flowering.	Grass is extremely sparsely distributed on site and was not disturbed.
	i. Upon the completion of all construction activities, remove workshops, surrounding fencing, generators and any scrap materials in the vicinity of the work area.	All contractors brought their own accommodation and support structures, and they removed it all upon completion. All scrap was driven out of the concession to the Walvis Bay landfill.
	j. Seal all petrol, diesel, oil and grease containers and remove it from the site to a recognised storage facility.	Done
	k. Break up all unnecessary concrete slabs and structures on the site and transport the fragments to a suitable site for disposal or dump it in one of the pits.	No cement was used. No concrete was present on site at any stage.

Responsible Person	Measures	Audit 2020
	I. There must be photographic evidence at different rehabilitated places with a camera providing dates on the prints. These photographs must be taken every year around the same period at the same places.	A maintenance team is dedicated to daily rehabilitation: wind-blown sand builds up against structures. No permanent effects of rehabilitation is visible because of wind. Figure 7 and Figure 8.
Health		
The Builders, Workforce, Constructors, Developers and Residents	 a. The workforce should receive an induction course on awareness and spreading of HIV/AIDS. And the figures of infected people should be made available. b. The workers should be informed that prevention is better than cure however condoms should be made available to the workers. c. The Ministry of Health and Social Services can be consulted to inform the workers of the dangers regarding the disease. d. HIV/AIDS's negative impacts/aspects should be discussed and the workers should know the dangers regarding the disease for instance sickness, loss of energy and eventually death. 	Not possible in 2020 to audit the contractors' compliance. Operational phase: HIV/AIDS education is part of the Journeys Namibia HR policy.
Energy Saving		
The Builders, Workforce, Constructors, Developers and Residents	a. Energy saving standards that should be introduced by the Operator will include: Bulbs that are of the energy saving type, which saves large amounts of energy. Wherever possible, use of Light Emitting Diode technology (LED) will be used as these are the most energy efficient bulbs on the market. This breakthrough in light production uses even less energy per unit and it is a far more environmentally friendly bulb, using zero mercury and less energy in the manufacturing process	Done.

Responsible Person	Measures	Audit 2020
	b. Modern inverter systems, using state of the art, digital technology, are able to provide 24 hours AC power, thus providing the guests with constant power whilst saving on generator running time. The battery bank of the inverter systems should be positioned on an impermeable surface to prevent any acid from spilling into the soil. Gas usage should be regularly monitored to prevent leakages. Gas will only be used in kitchens for cooking purposes. Correct gauge copper gas piping should be installed up to the stove for enhanced safety wherever possible.	Generator, batteries and inverter are mounted in shipping containers with sealed floors and walls - during construction and operations. The other requirements are complied with - during operations and construction.
	c. Through an awareness programme, the Operator should increase energy and resource conservation by encouraging guests and staff to switch off lights and lower the use of water and other resources. However, efficiency involves the use of different and better technologies as well as less waste by introducing improved management systems. The concept of efficiency cannot be over stressed as it may be the single biggest saver of energy and reducer of emissions.	Operational phase: SOP. During guest meet and greet these measures are stressed and there are booklets and signs in all rooms. Staff training includes resource conservation.



Figure 7. Photographic evidence of rehabilitated laydown area

Photo left: during building, photo right: after construction phase





Figure 8. Photographic evidence of rehabilitated rubbish area

Photo left: during building, photo right: after rubble removal after construction

3.3 Operational phase

Responsible Person	Measures	Audit 2020
Human Waste Man	agement	
The Proponent, Developer,	a. All the toilets must be flush-type toilets and must drain into septic tanks/French drains.	A "Bubbler Water Efficiency" system. Sealed unit that treats effluent and does not release any water into the environment.
Constructor and Builders	b. The overflow from the septic tank must be into a reed- bed soak-away or stone bed.	No overflow is generated.
	c. They must make use of biodegradable toilet cleaners that do not kill the bacteria in the septic tanks.	Done.
Solid Waste Manag	ement (namely kitchen scraps, tins, bottles, paper, etc.)	
The Proponent, Manager and Residents	a. At the end of each day waste must be taken to a dedicated waste management area. The site must be properly managed and the waste must be burned at the site to reduce the mass, to reduce the flies, to reduce the scavengers, to reduce the smell and to reduce wind-blown litter. b. The bins or drums must be washed after having been	Shipping container. No waste or smell can get out, no animals can get in. SOP
	emptied. The bins must return to the site clean and dry. c. Cans, bottles or beverage containers must either be recycled or reused, or taken to the waste management area. The cans, bottles and containers must not accumulate on the site either near the buildings or anywhere on the site.	SOP
Water Managemen	t	
The Proponent, Manager and Residents	a. The workforce, residents and visitors must keep their water consumption below 100 litres of water per day per person.	Water meter was installed recently.

Responsible Person	Measures	Audit 2020
	b. The manager must place notices that inform guests and staff about the importance of saving water on a daily basis.	SOP
	c. Vehicles must be washed with a bucket and not with a hosepipe.	No water is used to clean vehicles.
	d. Driveways on the site must be cleaned with brooms and not with water.	Substrate of the site consists of deep sand (Figure 5 and Figure 6). Driveways are marked out but any form of sweeping is made redundant by a strong daily wind.
	e. All pipes must be well maintained and leaks must be repaired immediately.	SOP
	f. All taps must be turned off after it had been used.	SOP
	g. Floors must be cleaned with mops and not with a hosepipe.	SOP
	h. A water meter must be installed and it must be checked regularly to keep a register of water consumption and to monitor trends.	see a.
Energy Managemer	it	
The Proponent, Constructor, Builders, Manager and Residents	a. Electricity must be obtained from approved electrical suppliers to ensure efficiency of generation and use as well as sustainability of supply. However solar panels are advised to be installed and used.	Solar system and generator from Rosco Electrical and Refrigeration, Windhoek.
	b. Gas must be used as alternative to electricity in kitchens due to its efficiency and low pollution factor.	All cooking on gas.

Responsible Person	Measures	Audit 2020
	c. They may only use a generator as emergency source of electricity as continues operation thereof normally creates additional noise, require the bulk storage of fuel and oil which can have a negative impact on the environment if not managed properly.	Generator used as back-up only, for days when solar radiation is low.
	d. When fires are used on the site, the workforce must make use of alien-invasive wood that is readily available for example wood that comes from bush encroaching species for example <i>Acacia mellifera</i> . The workers must avoid using species that might be harvested unsustainably.	Staff do not make fire at all – gas stove is installed in staff kitchen (Figure 10) and gas is provided by the company. Some firewood is bought in Walvis Bay and is used ONLY in main area and guest rooms, where small heating stoves are installed.
	e. The workers may not buy wood from the local people since that might lead to increased deforestation by cutting down protected species or the natural forests.	Done.
Visitor Managemen	nt	
The Proponent, Manager, Residents and	a. Information/notices must be placed in rooms in which residents/visitors must be informed about the importance of conserving water.	SOP. During meet-and-greet of all guests, booklets and signs in rooms.
Visitors	b. Residents/visitors must receive information on how to use energy efficiently.	
	c. Certain rules must be communicated and enforced regarding the feeding of animals.	
	d. Visitors must be informed not to throw foreign objects down the toilets.	
	e. Visitors must refrain from making a noise and playing radios or musical instruments, etc.	
Nature Conservation	on	

Responsible Person	Measures	Audit 2020
The Proponent, Manager and Residents	To sustain the natural attributes on the site, it needs to be preserved and protected to the best of their abilities. The manager of the activities has a key responsibility in protecting the wildlife on the site and the following measures should be taken:	
	a. Management must adopt pest control measures as also noted earlier in this EMP.	No insect vermin detected so far - no repellents or pest control measures have been used.
	b. They must have adequate waste management control.	See above
	c. They must have adequate water management control.	See above
	d. They must adopt and encourage responsible behavior during driving on the site.	SOP
	e. The workforce must refrain from planting alien plants.	No one plants anything.
	f. A general environmental awareness must be established amongst staff members and visitors.	SOP
Maintaining Sense	of Place	
The Proponent, Manager and Residents	Sense of place is seen as the style of the area, the atmosphere present when entering the site and the general "vibe" of the place. The "sense of place" normally differentiates one area from the other and therefore management must avoid the following:	SOP. See pictures taken on 4th March 2020 (Figure 9, Figure 10, Figure 11, Figure 12, Figure 13).
	a. They may not make use of any inappropriate décor for example bright or clashing colors, unattractive murals or art, unnecessary statues, etc.	
	b. No shabbiness may be experienced on the site; management must make sure that they abstain from untidiness, un-emptied ashtrays, rubbish bins etc.	

Responsible Person	Measures	Audit 2020
	c. The manager must repair and maintain all infrastructure since un-repaired infrastructure creates a poor impression.	
	d. Noise pollution must be avoided as far as possible namely no radio's, televisions, hi-fi's, noisy staff members, revving vehicles, lawnmowers, air conditioners, low-flying aircrafts, motorcycles, quad bikes, etc.	
	e. Waste must be properly managed on the site; visitors and residents may not smell rubbish bins. The manager must keep drains clean in order to avoid unpleasant smells.	
	f. The site may not have many signs or objects that distract tourists driving past it from the natural beauty of the area.	
	g. No scrap metal for example old vehicles or equipment may lie around in various states of disrepair, the site must be clean and neat.	
	h. The manager may not allow overcrowding at the sites since this will destroy the sense of place in a way that it will takes away the feeling of exclusivity.	
	i. There may be no people loitering around at the site, whether visiting or looking for work.	
Community Relation	ns	
The Proponent, Manager and Residents	a. The manager must have sound relations with communities in the vicinity.	Puros and Sesfontein conservancies are the concessionaires. JMC meetings are held quarterly with MET and the conservancies present.
	b. They may not damage any cultural or archaeological sites.	Done.
	c. They must employ as many local people as possible for all levels of operation.	JMC

Responsible Person	Measures	Audit 2020
	d. They must make use of dispute resolution methods and	JMC
	labour practices that are within the law and cultural norms.	
	e. All staff must be trained in order that they have the knowledge to do their work properly.	Staff training is set out in the HR policy
	f. The manager must provide opportunities for career advancement and skills development.	HR policy



Figure 9. The staff village and workshop complex is built entirely from shipping containers.



Figure 10. The kitchen and rubbish bins in the staff village.



Figure 11. Solid waste is temporarily stored in a sealed shipping container and removed to Walvis Bay with the weekly supply truck.



Figure 12. Fat traps at both the lodge kitchen and the staff kitchen.



Figure 13. The Bubbler sewage treatment system: aboveground (top two pictures) and the insides of the breakdown and enzyme chambers (bottom three pictures).

4 SUMMARY AND RECOMMENDATIONS

There is a high level of compliance with the EMP, monitored by Journeys Namibia as a matter of standard operating procedure. MET is directly involved in overall management of the concession via their place on the JMC.

These aspects combine to show a continued commitment to the prevention and mitigation of impacts to the receiving environment. It is recommended that environmental clearance be granted to Shipwreck Lodge.

5 BIBLIOGRAPHY

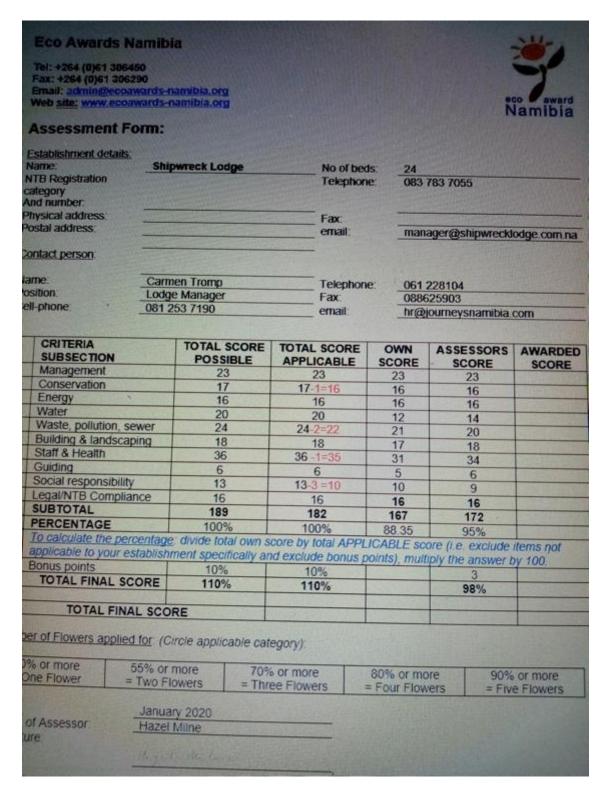
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APPENDIX I. ECO AWARDS 2020

Provisional results of the January 2020 assessment of Shipwreck Lodge.

The page below shows the score awarded by the Eco Awards assessor. The assessment was being processed at the time of submitting this document and the final score was not available yet.



APPENDIX II. AWARDS AND MEDIA RECOGNITION

In the 18 months since opening, Shipwreck Lodge received outstanding international media recognition and several awards for design, architecture and hospitality.

Awards for design and hospitality include:

- Winner of the Lodges category in the Awards for Hospitality, Experience and Design (Ahead) in 2019. This is an award for aesthetic excellence, guest experience and commercial viability.
- Timbuktu, Africa's Most Beautifully Designed Safari Lodges: listed as one of nine architectural masterpieces in Africa, lodges that blend seamlessly into their surroundings.
- Surface Magazine Travel Awards 2019: winner
- National Geographic Big Sleep Awards 2019: winner

Links to some of the awards and articles:

The Safari Guild Awards

AHEAD MEA 2019 Winners

Big Sleep Awards

<u>Timbuktu, Africa's Most Beautifully Designed Safari Lodges</u>

2019 Surface Magazine Travel Awards

Shipwreck Lodge was selected for Fodor's Finest Hotels 2020

<u>Travel + Leisure list as one of the 50 best places to travel too in 2019</u>

Timbuktu Travel

Jetsetter

Conde Nast Traveller Top Holiday Destinations 2019

A full list of international media exposure is available on the following web page: https://naturalselection.travel/camps/shipwreck-lodge-2/

APPENDIX III. STANDARD OPERATING PROCEDURE

The "Journeys Namibia Policies & Procedures Manual" governs day-to-day operations at Shipwreck Lodge.

Due to space limitations, only the contents pages ("Index") of the Manual is given in this appendix. The full document can be made available to MET on request.

February 2020 - This Manual is subject to continuous updates and additions

Index

1. Human Resources

- 1.1 RECRUITMENT AND HIRING
- 1.2 STAFF INFORMATION DOCUMENTS
- 1.3 CONTRACT AND CODE OF CONDUCT
- 1.4 No Alcohol Policy
- 1.5 OVERTIME AND SHIFT ROSTER
- 1.6 PAYROLL INFORMATION
- 1.7 LEAVE APPLICATION AND RECORD BOOKS
- 1.8 STAFF LOANS
- 1.9 STAFF RATIONS
- 1.10 DISCIPLINARY PROCEDURES AND COUNSELLING
- 1.11 Performance Reviews
- 1.12 INCENTIVE SCHEME
- 1.13 GRIEVANCES POLICY
- 1.14 CHILD POLICY
- 1.15 VISITORS AND BEDNIGHTS
- 1.16 AFFIRMATIVE ACTION POLICY
- 1.17 STAFF PARTY RULES

2. Food and Beverage

- 2.1 WEEKLY ORDERS OF PRODUCTS
- 2.2 STOCK CONTROL PROCEDURES
- Issuing of Stock
- Bar Stock Levels
- What is the Daily Bar Sheet and how to use it
- Activity Drinks stock control
- Daily and Weekly Stock Control
- Enter Usages and check Variances
- ? Check-in stock received
- Pruel Stock Control
- Month-end Reports
- o Electronic Month-end
- o Physical Month-end
- Stock Control Daily Duties
- Stock Control Weekly Duties
- 2.3 KEYS AND ACCOUNTABILITY

3. Admin Procedures

- 3.1 STOCK SHEETS ADMIN
- How to prepare your weekly Invoices
- Weekly Bill Breakdown
- How to create the new month stock sheets
- Stock Sheet admin procedures
- Peculiarities for each stock sheet
- Recording Usages
- Puel Stock Sheet
- 3.2 MONTH-END REPORTS

- 3.3 PETTY CASH AND S&T
- Direct Settlement Sheet
- Weekly Petty Cash Sheet
- Monthly Cashbook
- Petty Cash Count
- 2 Cashbook month-end email
- □ S&T Rules
- ② Company Policy and Procedures for Petty cash at the lodges
- 3.4 HANDOVER BETWEEN MANAGERS
- Safe Handover

4. Lodge Operations

- 4.1 DAILY OPERATIONS
- Morning Meetings
- ② Opening and Closing Procedures
- 4.2 WEEKLY ORDERING
- 4.3 PROCUREMENT AND PAY-RUNS
- Procurement Procedures
- Waybills
- Group Suppliers

5. Reception and Reservation

- 5.1 CHECK-IN PROCEDURES
- 5.2 CHECK-OUT PROCEDURES
- 5.3 RECEPTION DAILY ROUTINE
- 5.4 HOPE ADMIN
- 5.5 REPORTING GUEST INCIDENTS

6. Front of House

- **6.1 Breakfast**
- 6.2 LUNCH
- 6.3 TEA-TIME
- 6.4 DINNER
- 6.5 Hosting
- 6.6 UNIFORMS

7. Guiding

- 7.1 GUIDING CODE OF CONDUCT NATH
- 7.2 VEHICLE CARE
- 7.3 EQUIPMENT CARE

8. Back of House

- 8.1 MAINTENANCE
- Weekly Reporting
- ? Preventative Maintenance
- Staff Village
- 8.2 Housekeeping
- Daily Reporting
- Cleaning Hacks
- Turndown Standards
- Photo Standards

9. Marketing and Media

- 9.1 DEALING WITH COMPLAINTS
- 9.2 Marketing Material Newsletter

10. Curio Shops

- 10.1 MONTHLY SELLING TARGET
- 10.2 POLICY AND PROCEDURES
- 10.3 CENTRALIZED PROCUREMENT
- 10.4 SELLING STRATEGIES

11. Lodge Documentation

11.1 LICENSES AND RENEWAL DATES

11.2 CERTIFICATES

February 2020 – This Manual is subject to continuous updates and additions