ENVIRONMENTAL SCOPING REPORT (ESR)

FOR THE CONSTRUCTION AND OPERATION OF A GUEST HOUSE IN OKALONGO SETTLEMENT, OMUSATI REGION

JANUARY 2024

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Tortoise Environmental Consultants (TEC)
One step @ a time

DOCUMENT INFORMATION	
Title	Environmental Scoping Report for the Construction and operation of a Guesthouse in Okalongo Settlement, Omusati Region.
Activity	Activity 6: Tourism Development Activities 6. The construction of resorts, lodges, hotels or other tourism and hospitality facilities
Location	Okafitu Ka Paulus village, Okalongo settlement, Omusati region
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Executive Summary

This document is prepared as part of the Environmental Impact Assessment (EIA), aimed at obtaining an Environmental Clearance Certificate (ECC) Construction and operation of a Guesthouse in Okalongo Settlement, Omusati Region.Okalongo Palm Tree Lodge an Okalongo based company intends to construct and operate a tourism facility in the Okafitu KaPaulus village, within the Okalongo settlement of Omusati region. The site vegetation is typical of the Savannah Woodland and Palm trees, with a patch of pan that formed as part of the Cuvelai drainage channel sediments deposit over the years.

In this report, various impacts linked to the Construction and Operation of the tourism facility in the proposed site have been identified, and mtigation measures were identified and have been recommended for adoption by the project proponent to manage the tourism facility activities. It is imperative that any further tourism facility activities should conform to the Environmental Management Act of 2007 and EIA regulations of 2012. Upon approval of the Environmental Clearance Certificate, the proponent (Okalongo Palm Tree Lodge) should commit and abides to the recommended mitigation and rehabilitation measures as prescribed herein.

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ABBREVIATIONS

DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (Act No. 7 of 2007)
EMP	Environmental Management Plan
SM	Site Manager
ESR	Environmental Scoping Report
MEFT	Ministry of Environment, Forestry and Tourism
TEC	Tortoise Environmental Consultants

1. INTRODUCTION

1.1 Project Description

This document is prepared as part of the Environmental Impact Assessment (EIA), aimed at obtaining an Environmental Clearance Certificate (ECC) for the proposed construction and operation of the Okalongo Palm Tree Lodge. An EIA is described as "*a technical tool that identifies, predicts, and analyses impacts on the physical environment, as well as social, cultural, and health impacts"*. Herein the Environment is described as "*the components of the Earth, which includes land, water and air, including all layers of the atmosphere, all organic and inorganic matter and living organisms, and the interacting natural systems".*

As the project proponent, Okalongo Palm Tree Lodge is a property developer, with business focus on properties construction and hospitality. Is pursuit of its business, it appointed Tortoise Environmental Consultancy (TEC) to conduct the Environmental Impact Assessment process (EIA) to deter Lodge possible threats and impacts of the proposed Lodge construction project on the environment.

1.2 Environmental Impact Assessment

An Environmental Impact Assessment (EIA) is a tool to manage negative environmental impacts that may arise from the proposed development and guides the project design to be more environmentally friendly.

The aim of the EIA is to reduce negative impacts (effects) and maximise positive impacts, through the adoption of best environmental practices and application of the precautionary principle.

1.3 Environmental Management Plan (EMP)

In-addition to the EIA Scoping Report, an Environmental Management Plan (EMP) is required under the EMA as part of the ECC application. The EMP is key document and consists of the set of measures to be taken during implementation and operation to eliminate, offset, or reduce adverse environmental impacts to acceptable levels. Also included in the plan are the actions needed to implement them (Ministry of Environment and Tourism, 2008).

1.4 EIA Process

An EIA is a systematic process of identifying, predicting, evaluating and mitigating the potential environmental and social effects that may arise from the activities of a proposed project.

1.4.1 Identification and Mitigation of Impacts

The backbone of the EIA report entails identification of impacts (whether real or perceived) and recommendations on suitable mitigation measures to ensure compliance with the principles of environmental management and highlight risks and measures to ensure an environmentally friendly development.

1.4.2 Purpose of the EIA Scoping Exercise

The purpose of this EIA scoping exercise is to:

a) Provide description of the proposed activity;
b) Describe the affected environment (proposed area),
c) Identify potential environmental impacts / aspects of concern;
d) Describe the methodology followed to assess the potential impacts;
e) Mitigate negative impacts that may arise from the proposed project

1.4.3 Rehabilitation

The EIA should not only focus on mitigating the impacts of the activity during the active operations but also should go further and recommend rehabilitation measures at project closure (when activities cease). Rehabilitation measures should not be parked waiting for project closure but should be implemented from the beginning and incrementally throughout the project lifespan.

1.4.4 Application for ECC

Upon completion, the EIA Scoping Report and Environmental Management Plan (EMP), will be submitted to MEFT for review and decision, in accordance with Section 8 of the EIA Regulations.

1.5 Scope and Purpose of this Report

The purpose of this report is to present the findings of the EIA for the proposed tourism development project, as part of the application of the Environmental Clearance Certificate (ECC).

The environmental assessment has been undertaken in accordance with the requirements of the Environmental Management Act, 2007 and the EIA Regulations.

1.6 Environmental Assessment Practitioner

Tortoise Environmental Consultants (TEC) has been appointed to carry out the requisite Environmental Impact Assessment (EIA) and develop an Environmental Management Plan (EMP), as part of the application for an Environmental Clearance (EC) for the envisaged tourism development.

1.7 Project Rationale

The rural to urban migration persistently experienced in the country is paralyzing the town planning and service delivery efforts of the main local authorities in the country. Discussions around addressing this have largely been focused on the decentralization, by growing the economies of the various small towns, settlements and village, with the aim of creating employment opportunities to retain the inhabitants of the said areas.

With the Okalongo settlement being a settlement of potential in terms of development, it is imperative that its economy growth is accelerated, in pursuit of the national decentralization efforts. The demand for tourism establishments is central to the subject economic development and the Okalongo settlement is no exception. Hence, while cognisant of the benefits of a healthy environment, the balance and/or trade-off has to be sought.

1.8 Alternatives Considered

As stipulated in the Environmental Management Act (EMA) and EIA regulations, alternatives should be considered during the project design, to deter Lodge if an alternative site (different locality) or alternative project (different project) would yield better socio-economic benefits.

- The proposed Okalongo Palm Tree Lodge is in the Iishana sub-basin drainage channels, however this is not active channel as it only runs occasionally during some wet season. The suggested site is hence not highly sensitive to the tourism activities detriment.

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2. PROJECT INFORMATION

2.1 Project Location

The property refers to a portion of land adjacent to the main D3608 Road in Okafitu KaPaulus Village, Okalongo settlement. This land roughly measures 4ha and is located to the left-hand side as you enter the Okafitu Ka Paulus village on the D3608 from Outapi.

There are no existing structures on the designated land and various bushes and trees occupy most of the site. The property is located within the communal jurisdiction of the Ombadja traditional authority, and all relevant permissions have been obtained as attached hereto.

Figure 1.1: The Location of the proposed Okalongo Palm Tree Lodge

View of the proposed site for the Okalongo Palm Tree Lodge.

Gravel Road that provides easy access to proposed Okalongo Plam Tree Lodge.

Fig 1.3. Imagery borders demarcations of the proposed Okalongo Palm Tree Lodge

2.2 Socio-Economic

The Okalongo constituency were the Okafitu kaPaulus village is situated has a total population of 32063 people, with about 42% of the population being youth aged 15-44. (NSA, 2023). The economically active portion of the constituency, experienced high level of unemployment, standing at a staggering 48% in 2023. The land use in Okalongo is predominately livestock and crop farming, is situated out of the main Onandjaba village and is a typical village setting. The village's livelihood predominantly agriculturally based, practising crop production and animal husbandry for own consumption food production and to a limited degree income generation, from the production surplus. The population's salaries and wages depend largely on the public service sector, specifically within the towns of Outapi and Oshikuku.

3. LEGAL FRAMEWORK

Table 3.1 This chapter outlines the regulatory framework that has guided the environmental assessment of proposed Okalongo Palm Tree Lodge Project, as mandated by the Environmental Management Act (Act 30 of 2014). Table 1 provides a list of applicable national legislation.

Legislation	Summary	Applicability
The Namibian Constitution	The Namibian constitution is the supreme law of the country which is committed to sustainable development. Article 95(1) of the Constitution of Namibia states that:- "The State shall actively promote and maintain the welfare of the people by adopting policies aimed at … The maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future".	Contact an EIA to maintain the ecological process and diversity of the project area
The Environmental Management Act	The Environmental Management Act No 7 of 2007 aims to promote the sustainable management of the environment and the use of natural resources and to provides for a process of assessment and control of activities which may have significant effects on the environment; and to provide for incidental matters. The acts provides a list of activities that may not be undertake without an environmental clearance certificate. Further, the Act ensures that; (a) Potential threats are considers timeously (b) A comprehensive stakeholder's consultations is conducted and all Interested and affected parties are given an opportunity to comment on the project (c) Decision are robust by taking into account the above mentioned activities	Statutory requirement of the EIA and guidelines

Legislation	Summary	Applicability
Draft Pollution Control and Waste Management Bill	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. The Bill will repeal the Atmospheric Pollution Prevention Ordinance (11 of 1976) when it comes into force. The Bill also provides for noise, dust or odour control that may be considered a nuisance. Further, the Bill advocates for duty of care with respect to waste management affecting humans and the environment and calls for a waste management licence for any activity relating to waste or hazardous waste management.	Management of Waste, such as sewer and solid waste.
Traditional Authorities Act, 25 of 2000	Provides for the establishment of traditional authorities and defines their powers, duties and obligations.	Land acquisition for the extraction of sand
Environmental Policy framework (1995)	This policy subjects all developments and project to environmental assessment and provides guideline for the Environmental Assessment. Its provision mandate that Environmental Assessment take due consideration of all possible impacts and incorporate them in the development or planning stages.	General requirement of the EIA and guidelines
The Occupational Safety and Health Act No. 11 of 2007;	Safety: A safety risk is a statistical concept representing the potential of an accident occurring, owing to unsafe operation and/or environment. In the working context "SAFETY" is regarded as "free from danger" to the health injury and to properties. Health: Occupational Health is aimed at the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations.	Employee health and safety risk at workplace In order to maintain good and healthy standards, at the work place, cleanliness, adequate sanitary facilities, protection

Legislation	Summary	Applicability
	This is done by ensuring that all work-related hazards are prevented and where they occur, managed.	against dangerous substances as well as education and training of both workers and management is necessary.
Public Health Act No. 36 of 1919	The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.	The proponent should ensure that the area being mined is fenced off to ensure public safety
Water Resources Management Act (2004)	This Act provides a framework for managing water resources based on the principles of integrated water resources management. It provides for the management, development, protection, conservation, and use of water resources. Furthermore, any watercourse on/or in close proximity to the site and associated ecosystems should be protected in alignment with the listed principles.	Construction activities pose danger to surface and underground water through the use of fuels and lubricants. The proponent must ensure adequate handling of hazardous substance that may pollute water sources
Water Act No, 54 of 1956	This act states that, all water resources belongs to the State. It prevents pollution and promotes the sustainable utilization of the resource. To protect this resources, this act requires that permits are obtained when activities involve the following; (a) Discharge of contaminated into water sources such as pipe, sewer, canal, sea outfall and (b) Disposal of water in a manner that may cause detrimental impact on the water resources	Prohibition of contaminated water or chemicals into the flood plain and groundwater intrusion. There is a constant need of keeping abreast with the progress of the on-going research into the Ohangwena aquifers.
Labour Act No. 6 of 1992	This Act aims to regulate labour in general and includes the protection of the health, safety and welfare of employees. The 1997 Regulations relating to the Health and Safety of employees at work sets out the duties of the employer, welfare and facilities at the workplace, safety of machinery, hazardous	No employer shall require or permit an employee to work in an environment that is deemed unfit without protective measures in place.

Legislation	Summary	Applicability
	substances, physical hazards, medical provisions, construction safety and electrical safety.	
Regional Council Act, 1992 (Act No. 22 of 1992)	The Regional Councils Act legislates the establishment of Regional Councils that are responsible for the planning and coordination of regional policies and development. The main objective of this Act is to initiate, supervise, manage and evaluate development at regional level.	Adhere to regional by laws, land acquisition should be done as require by law
Soil Conservation Act No. 76 of 1969	This act promotes the conservation of soil, prevention of soil erosion.	Indiscriminate mining and movement of heavy vehicle exacerbate soil erosion and land degradation
Convention on Biological Diversity Rio De Janeiro (1992)	Namibia is a signatory to convention of preservation of rare and endemic species.	The proposed site, although a currently barren drainage channel land, it support the seasonal grass populations during the rainy season. This grass is the feed source for the village's livestock.
National Heritage Act No. 27 of 2004	The Act makes provision for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains.	Scrapping and excavation may unearth archaeological material.
Word's Best Practises	***Precautionary Approach Principle*** This principle is worldwide accepted when there is a lack of sufficient knowledge and information about the possible threats to the environment. Hence if the anticipated impacts are greater, then precautionary approach is applied. In this project, there are no eminent uncertainty however in cases when they arise, this approach should be applied. ***Polluter Pays Principle***	The proposed Okalongo Palm Tree Lodge is widely practised and associated impacts are well known. However, the practise has the ability to disturb ground water, hence precaution measure during mining must be considered

Legislation	Summary	Applicability
	This principle ensures that proponents takes responsibility of their actions. Hence in cases of pollution, the proponent bears the full responsibility to clean up the environment.	In the event of an accident, where hydrocarbons or lubricant spillage occur, the proponent would be responsible to clean up the environment.

4. AFFECTED ENVIRONMENT

4.1 Agriculture

Agriculture is the core source of livelihood in the Okafitu KaPaulus village. The village households practise subsistence farming, through crop production and livestock farming. This village is hence largely dependent on a healthy environment to support their nature-based livelihoods. This particularly so, due to the fact that a sizeable portion of the population has no other income earning power, in terms of the area's employment.

Protection and sustainable management of the natural resources such as secure water source of acceptable quality, especially for their livestock that depend on the environment for the supply of water. This is also true for their rain-fed agriculture that largely depends on a healthy hydrological system

4.2 Landscape Integrity

The excess and unsustainable removal of sand from the streams and flood plains can throw the hydrological system out of equilibrium. Further, it may also cause destruction to properties, both at the extraction site and the down the stream. Although these impacts maybe be more severe in the active streams (flowing streams). The core focus should be to avoid environmental degradation.

4.3 Water Resource

Typical of the central northern Namibia, there is no surface water source in Okafitu kaPaulus village. However, with good rain and seasonal floods, the village get pools surface water, *called ''eendobe''*. Untreated, water from eendobe is not of good quality, and is hence not suited for human consumption, but it is a valuable seasonal, water sources for the livestock (Mendelsohn et. al., 2013). The village's portable water is supplied through pipeline network. Further, there is a limited, reliance on the groundwater source, especially for the livestock, through the deep hand-dug wells (*eendungu*) within the village. These wells abstract the water from the low yielding shallow aquifers.

Special care should hence be taken to avoid the contamination of the ground water by the tourism operations.

4.4 Climate

Okafitu kaPaulus village falls within the boad-leafed savannah woodland, with highly variable summer (October-March) annual rainfall, 450-600mm and long dry spell during the winter months. The woodland savanna is characterized largely by sizeable woody trees canopy with sizeable shrubs layer, on a thick Kalahari sand deposit. Woody tree species in the area are mainly include deciduous tree species such as *Arecaceae*, *Baikiaea plurijuga, Burkea africana, Pterocarpus angolensis, Combretum collinum* and *Terminalia sericea*.

The woodland savanna generally provides a rich habitat range for various wild animals. In past decades, large mammals such as kudu, springbok and duiker use to frequent the area, but due to changed land use over the years, which is presently crop production and livestock farming, these have since moved out of the area.

4.5 Socio-economics

The Okalongo constituency were the OkafitukaPaulus village is situated has a total population of 32063 people, with about 42% of the population being youth aged 15-44. (NSA, 2023). The economically active portion of the constituency, experienced high level of unemployment, standing at a staggering 48% in 2023. The land use in Okalongo is predominately livestock and crop farming, is situated out of the main Onandjaba village and is a typical village setting.
The village's livelihood predominantly agricultural based, practising crop production and animal husbandry for own consumption food production and to a limited degree income generation, from the production surplus. The population's salaries and wages depend largely on the public service sector, specifically within the towns of Outapi and Oshikuku.

Projects like the Okalongo Palm Tree Lodge which is a support sector, complimenting the local economy growth through infrastructures development are welcomed by the locals (see section, minutes of public consultations).

5. IMPACT ASSESSMENT METHODOLOGY

5.1 Assessment of Impact Significance

The significance of an impact is determined by considering and measuring the temporal and spatial scales and magnitude of the project and the specific activities associated with the project.

The assessment of the environmental impacts of development activities should strive to be objective and impartial at all times. However, environmental assessment processes can be exposed to subjectivity inherent in attempting to measure significance.

The determination of the significance of an impact depends on both the context (spatial and temporal scale) and intensity of that impact.

5.2 Impact Assessment Criteria

For each impact, the **EXTENT** (spatial scale), **MAGNITUDE** and **DURATION** will be described. These criteria would be used to ascertain the **SIGNIFICANCE** of the impact, firstly in the case of no mitigation and then with the most effective mitigation measure/s in place. The mitigation described in the Scoping Report would represent the full range of plausible and pragmatic measures.

Table 5-1: Assessment criteria for the evaluation of impacts

CRITERIA	CATEGORY	DESCRIPTION
Extent or spatial influence of impact	**National**	Beyond a 20km radius of the site
	Regional	Within a 20 km radius of the site
	Local	Within a 2 km radius of the centre of the site
	Site specific	On site or within the boundaries of the property
	Zero	
Magnitude of impact (at the indicated spatial scale)	**High**	Natural and/ or social functions and/ or processes are *severely* altered
	Medium	Natural and/ or social functions and/ or processes are *notably* altered
	Low	Natural and/ or social functions and/ or processes are *slightly* altered

	Very Low	Natural and/ or social functions and/ or processes are *negligibly* altered
	Zero	Natural and/ or social functions and/ or processes remain *unaltered*
Duration of impact	**Zero**	Zero time
	Short Term	Up to 18 months
	Medium Term	0-5 years (after operation)
	Long Term	5- 10 years (after operation)
	Permanent	More than 10 years (after operation)
Probability	**Definite**	Estimated greater than 95 % chance of the impact occurring.
	Very likely	Estimated 50 to 95% chance of the impact occurring
	Fairly likely	Estimated 5 to 50 % chance of the impact occurring.
	Unlikely	Estimated less than 5 % chance of the impact occurring.
	Zero	Definitely no chance of occurrence
Confidence	**Certain**	Wealth of information on and sound understanding of the environmental factors potentially influencing the impact.
	Sure	Reasonable amount of useful information on and relatively sound understanding of the environmental factors potentially influencing the impact.
	Unsure	Limited useful information on and understanding of the environmental factors potentially influencing this impact.
Reversibility	**Irreversible**	The activity will lead to an impact that is permanent.
	Reversible	The impact is reversible, within a period of 10 years.

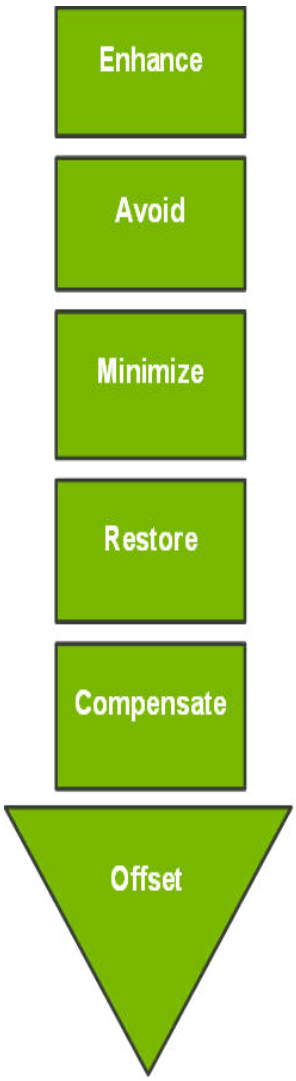
5.3 Mitigation Measures

For each impact assessed, mitigation measures should be identified to reduce and/ or avoid negative impacts. These mitigation measures are also incorporated in the Environmental Management Plan (EMP) to ensure that they are implemented throughout the lifespan of the proposed activity. The EMP forms part of the Scoping Report, and upon project approval, the implementation thereof, would become a binding requirement.

5.4 Mitigation Hierarchy

Actions to mitigate a potential impact can be done in as systematic manner as guided by what is referred to as Mitigation Hierarchy (Figure 4.1).

From the onset, the positive impacts of the proposed activity should be enhanced, however, where an impact in is inevitable, the following sequence should be followed.



Impact avoidance: This step is most effective when applied at an early stage of project conceptualization and planning. It can be achieved by:

- Not undertaking certain projects or elements that could result in adverse impacts;
- Avoiding areas that are environmentally sensitive; and
- Putting in place preventative measures to stop adverse impacts from occurring.

Impact minimisation: This step is usually taken during impact identification and prediction to limit or reduce the degree, extent, magnitude, or duration of adverse impacts. It can be achieved by:

- Scaling down or relocating the proposal;
- Redesigning elements of the project; and
- Taking supplementary measures to manage the impacts.

Impact compensation: This step is usually applied to remedy unavoidable residual adverse impacts. It can be achieved by:

- Rehabilitation of the affected site or environment, for example, by habitat enhancement;
- Restoration of the affected site or environment to its previous state or better; and
- Replacement of the same resource values at another location (off-set), for example, by wetland engineering to provide an equivalent area to that lost to drainage or infill.

Figure 5-1. Mitigation Hierarchy

5.5 Assessment of Cumulative Impacts

The Environmental Assessment Policy in Namibia requires that, cumulative impacts should be considered in all environmental assessment processes. However, EIAs have traditionally failed to account for cumulative impacts, largely as a result of the following considerations:

- Cumulative effects may be local, regional or global in scale and dealing with such impacts requires coordinated institutional arrangements.

- Environmental assessments are typically carried out on specific developments, whereas cumulative impacts result from broader biophysical, social and economic considerations, which may not always be practical to address at the project level.

6. ENVIRONMENTAL IMPACT ASSESSMENT

In this section, the focus is being made to the environment area were potential impacts as results of the proposed project implementations are foreseen. In this regard, special emphasis is made to those impacts' assessment that the construction and operation of the Okalongo Palm Tree Lodge is likely to bring about.

The areas being assessed for potential environmental impact from this construction and operation of the Okalongo Palm Tree Lodge are: Landscape Alteration; Biodiversity; Water Resources; Noise Pollution; as well as the local Socio-economic arena. For each potential impact assessed, associated mitigation measures have been proposed to reduce and/ or avoid negative impacts and enhance positive impacts. The full mitigation measures are presented in the Environmental Management Plan (EMP) and should be implemented throughout the two years life span of the project.

6.1 Biodiversity

Although this proposed Okalongo palm tree lodge site currently look like a barren piece of land, the area make a unique ecosystem, especially during the rainy period, a community of grass found supports the village's livestock herds. Preserving the fertile, topsoil will be of utmost importance in order rehabilitate the area's vegetation after tourism operations. The site is dotted with some tree, which will have to be cleared. However, clearance off trees will only be done if absolutely necessary and preservation of the natural environment will be maintained as far as possible including preservation of all flora.

<table>
<tr><td>IMPACT DESCRIPTION</td><td colspan="3">(Fauna and Flora)</td></tr>
<tr><td>Predicted for (specific activity / project phase)</td><td colspan="3">Land clearing</td></tr>
<tr><td>Dimension</td><td colspan="3">Rating</td></tr>
<tr><td>Duration</td><td>Short term</td><td rowspan="3">Reversibility:

Reversible</td><td rowspan="4">Degree to which impact can be mitigated:
High</td></tr>
<tr><td>Extent</td><td>Site specific</td></tr>
<tr><td>Magnitude</td><td>Very low</td></tr>
<tr><td>Probability</td><td colspan="2">Definite</td></tr>
<tr><td colspan="4">MITIGATION:</td></tr>
</table>

- No bush fires shall be allowed, fire should only be made at designated fire places only
- Stock pile the topsoil overburden, to be re-introduced after lodge operations

6.2 Water Resource

There are no open surface water sources in Okafitu KaPaulus at the time of this assessment; however, the village has a number of these during the rainy seasons, e.g. *''eendobe''*, which sustain the livestock populations. Further, there are still some, scanty deep, hand-dug wells ''*eendungu*''. Care should be taken so that these are not contaminated by the mining operations, in particular, as well as the area's groundwater in general. Care should also be taken to ensure the water is used sparingly at the lodge.

<table>
<tr><td>IMPACT DESCRIPTION</td><td colspan="3">Water Resource Protection</td></tr>
<tr><td>Predicted for (specific activity / project phase)</td><td colspan="3">During operations: Excavation and handling of chemicals</td></tr>
<tr><td>Dimension</td><td colspan="3">Rating</td></tr>
<tr><td>Duration</td><td>Permanent</td><td rowspan="3">Reversibility:

Irreversible</td><td rowspan="4">Degree to which impact can be mitigated: High</td></tr>
<tr><td>Extent</td><td>National</td></tr>
<tr><td>Magnitude</td><td>High</td></tr>
<tr><td>Probability</td><td colspan="2">Definite</td></tr>
<tr><td colspan="4">MITIGATION:
• Vehicles should be serviced regularly, but never at the mining site
• All contaminate soil should be collected and dumped at the relevant site at Okalongo
• Provide drip trays for stationary vehicles</td></tr>
</table>

6.3 Pollution: Noise and Dust

Both the village community and the lodge personnel must be protected from any form of noise. Employees must NOT be exposed to noise levels above the required -85dB (A) limit over a period of 8 hours. Should the noise level be higher than 85dB (A), the employer must implement a hearing conservation program such as noise monitoring. Access road to the lodge site from Onandjaba is via a gravel road section connecting to the C17 passing though homesteads, which can get very noisy with lodge vehicles.

<table>
<tr><td>IMPACT DESCRIPTION</td><td colspan="3">Noise</td></tr>
<tr><td>Predicted for (specific activity / project phase)</td><td colspan="3">Extraction and transportations of the sand to the storage pile</td></tr>
<tr><td>Dimension</td><td colspan="3">Rating</td></tr>
<tr><td>Duration</td><td colspan="2">Short term</td><td rowspan="3">Reversibility:

Reversible</td></tr>
<tr><td>Extent</td><td colspan="2">Local</td></tr>
<tr><td>Magnitude</td><td colspan="2">Medium</td></tr>
<tr><td>Probability</td><td colspan="2">Definite</td><td>Degree to which impact can be mitigated:
High</td></tr>
<tr><td colspan="4">MITIGATION:
• Use dust suppression measures to mitigate dust impacts, especially at stock pile area.
• Avoid working during windy times
• Provide dust masks and ear muffs to all employees operating in a dusty or noisy environment
• Reduce vehicle speed on gravel roads
• Where possible, install silencer on exhaust to reduce noise levels
• Only work during normal working hours, do not work during the night
• Vehicle engines must be shut down when it is not in use
• Vehicles and machines must be well serviced to avoid unnecessary noise emission</td></tr>
</table>

6.4 Solid Waste Management

Scattered waste, littering and any other unsightly waste at the site or anywhere around the village, as a result of Okalongo palm tree lodge operations will be an eye sore. Domestic waste has need to be managed to avoid littering, and unhygiencic conditions.

<table>
<tr><td>IMPACT DESCRIPTION:</td><td colspan="3">Solid Waste Management</td></tr>
<tr><td>Predicted for (specific activity / project phase)</td><td colspan="3">Lodge Operations</td></tr>
<tr><td>Dimension</td><td colspan="3">Rating</td></tr>
<tr><td>Duration</td><td colspan="2">Short term</td><td rowspan="2">Reversibility:</td></tr>
<tr><td>Extent</td><td colspan="2">Local</td></tr>
<tr><td colspan="3"></td><td>Degree to which</td></tr>
</table>

Magnitude	**Medium**	**Reversible**	impact can be mitigated: **High**
Probability	**Highly likely**		
MITIGATION: • Ablution facilities must be commissioned before project operation • There must be sufficient waste bins. Color segregated for different waste; • General waste must be separated from hazardous waste; • Hazardous waste must be disposed of at an approved site; • Each category should be collected separated disposed of, in the most suitable and environmentally acceptable manner			

6.5 Safety and Security

Soil pollution may occur as a result of oil leakages, fuel, or lubricants from the machinery and vehicles.

IMPACT DESCRIPTION	**Soil Pollution**		
Predicted for (specific activity / project phase)	**Oil Leakages from Machinery**		
Dimension	**Rating**		
Duration	**Short-term**	Reversibility: **Reversible**	Degree to which impact can be mitigated: **Medium**
Extent	**Local**		
Magnitude	**Low**		
Probability	**Definite**		
MITIGATION: **Fuel, Oil and Lubricants Leakages** • There must be an oil spill response kit on site. Workers should be properly trained on dangers oil pollutions and response actions; • If an oil spill occurs, collect the contaminated soil, store in drums or appropriate structures and dispose at approved waste disposal site; • Ensure all vehicles / machinery are well service, install drip trays and conduct regular leak inspection			

6.6 Socio-Economic Environment

In reflection of the national population profile, Okalongo constituency is characterised by bigger portion of young people, with 42% of the total population being youth aged 15-44 (NSA, 2023). In the same constituency, unemployment stood at an alarming 43% in 2023. Development projects like this Okalongo palm tree lodge attracts many hopeful locals, vying to get jobs and also to bring other different, community developments

<table>
<tr><td>IMPACT DESCRIPTION</td><td colspan="3">Socio-economic</td></tr>
<tr><td>Predicted for (specific activity / project phase)</td><td colspan="3">Employment and Community Projects</td></tr>
<tr><td>Dimension</td><td colspan="3">Rating</td></tr>
<tr><td>Duration</td><td>Long and Short- term</td><td rowspan="3">Reversibility:

Irreversible</td><td rowspan="4">Degree to which impact can be mitigated: Medium</td></tr>
<tr><td>Extent</td><td>National & Local</td></tr>
<tr><td>Magnitude</td><td>Medium</td></tr>
<tr><td>Probability</td><td colspan="2">Definite</td></tr>
<tr><td colspan="4">MITIGATION:
Employ local labour as far as possible (people from Okafitu KaPaulus community or nearby villages, to prevent in-flux of people from far.)
Monitor employee behaviour and provide social life lessons
Construct the Okafitu KaPaulus community Hall and Kindergarden</td></tr>
</table>

7. CULTURAL HERITAGE

7.1 Cultural Heritage – Legal Requirements

The principal instrument of legal protection for heritage resources in Namibia is the National Heritage Act (27 of 2004), Part V Section 46, which prohibits the removal, damage, alteration or excavation of heritage sites or remains (defined in Part 1, Definitions 1), while Section 48 sets out the procedure for application and granting of permits as may be required in the event of damage to a protected site occurring as an inevitable result of the proposed development.

Furthermore, Section 51 (3) sets out the requirements for impact assessment. Part VI Section 55 Paragraphs 3 and 4 require that any person who discovers an archaeological site should notify the National Heritage Council.

In-addition to the National Heritage Act (No. 27 of 2004), international guidelines such as the World Bank OP and BP of 2006, particularly guideline no: 4.11 which refers to the "Physical Cultural Resources" (R2006-0049), and provide direction regarding project screening, baseline survey and mitigation.

Archaeological impact assessment is also a requirement of the Environmental Management Act (7 of 2007), which specifically includes anthropogenic elements in its definition of environment. The List of activities that may not be undertaken without Environmental Clearance Certificate: Environmental Management Act, 2007 (Govt Notice 29 of 2012), and the Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Govt Notice 30 of 2012) both apply to the management of impacts on archaeological sites, remains or and artefacts.

7.2 Archaeological Assessment Methodology

The archaeological assessment carried out in and around the proposed Okalongo Palm Tree Lodge relies on the indicative value of surface finds for cultural and heritage artefacts.

Following standard practice both in Namibia and internationally, a chance-find procedure for cultural heritage should be recommended as a component of the Environmental Management Plan (EMP), and the necessary precautions should be taken throughout the project lifespan.

7.3 Cultural Heritage sites / artefacts within the Proposed Okalongo Palm Tree Site

a) **NO** cultural heritage sites or artefacts were observed within the proposed Okalongo Palm Tree Lodge,

b) **NO** cultural heritage sites or artefacts are known to occur in or around the Okalongo Palm Tree Lodge (local knowledge),

c) **NO** cultural heritage sites or artefacts are registered by the National Heritage council in or around the proposed Okalongo Palm Tree Lodge.

7.4 Limitations

Although, there were no surface finds for cultural and heritage artefacts, there is a possibility that there could be cultural or heritage artefacts underground (e.g. unknown war graves, fossils etc), that could be uncovered during the establishment and management of Okalongo Palm Tree Lodge.

7.5 Recommendations

Based on the limitations, it is recommended that:

i. All employees, contractors or sub-contractors working on the establishment of Okalongo Palm Tree Lodge site should be made aware that it is a legal requirement under the National Heritage Act that if any items protected under the definition of heritage is found during the course of development should be reported to the National Heritage Council.

ii. The establishment and management of the Okalongo Palm Tree Lodge should be conducted in a vigilant and cautious manner, and

iii. If any cultural artefacts are found during the Okalongo Palm Tree Lodge activities, the necessary steps and due process as presented in Table 9.1 (in the EMP) should be followed.

8. PUBLIC PARTICIPATION PROCESSESS

As mandated by the national Environmental Management Act (Act 7 of 2017), Interested and Affected parties (I&APs) to the proposed project must be consulted and engaged during the environmental assessment of the proposed project. Public Participations Processes (PPP) provides the I&APs an opportunity to gain knowledge about the project, present them a platform to provide their inputs and raise concerns on aspects that they feel should be covered by the Environmental Impact Assessment. Okafitu KaPaulus project have been consulted and engaged in the environmental assessment of project.

8.1 The PPP Process undertaken

The PPP undertaken to date is summarised in Table 6-1 and the PPP still to be undertaken is include in

Table 7-1: Summary of the PPP to date

I&AP notification (relevant authorities and I&APs)		
Task	**Details**	**Date**
I&AP identification	An I&AP database was developed for the Okalongo Palm Tree Lodge project by identifying the relevant stakeholders (Okafitu KaPaulus village community, Okalongo Constituency council and institutions / organizations with vested in interest),	**October 2023**
Background Information Document	A Background Information Document (BID) was compiled and distributed to the public. The BID introduced the proposed project and its associated activities, it also provided details on how I&APs could register their interest. A copy of the BID is included as Annexure B.	**November 2023**
Addressing comments received	No comments were received on the BID	
Review of Draft Scoping Report		
Public Meeting (Presentation of DSR)	All potential I&APs were informed of the availability of the Draft Scoping Report. The Draft Scoping Report was presented to the public on 26 November 2016 at Okafitu Ka Paulus Village	**Public meeting held on 03 November 2023**
Addressing comments received	All comments received on the Draft Scoping Report has been collated into a Comments and Responses Report and will be included in the FSR.	

Table 7-2: PPP tasks still to be undertaken

Notification of MEFT decision-making		
Notification of the MEFT's Decision	To comply with the EMA (2007 and the EIA regulations of 2012, MET's decision on whether to issue the Environmental Clearance Certificate (ECC) or not, will be communicated to all registered I&APs.	

8.2 Stakeholder involvement

I&APs and authorities have been invited to participate in the process, as described in Table 3.1, to ensure that the final documentation satisfies the respective authority requirements and that they are fully informed with respect to the nature and scope of the proposed Tourism development.

CONCLUSION

This report focused on the envisaged environmental impact assessment related to the proposed Okalongo Palm Tree Lodge in the Okafitu KaPaulus village. The proposed site is a barren drainage channel pan with combination of thick Kalahari sand. The various impacts linked to the Okalongo Palm Tree Lodge in the proposed site have been identified, and mitigation measures were identified and have been recommended for adoption by the Project proponent to manage the Okalongo Palm Tree Lodge activities. It is imperative that any further Okalongo Palm Tree Lodge activities should conform to the Environmental Management Act of 2007 and EIA regulations of 2012.

Upon approval of the Environmental Clearance Certificate, the proponent (Okalongo Palm Tree Lodge) should commit and abide to the recommended mitigation and rehabilitation measures as prescribed herein.

REFERENCES

National Statistical Agency, NSA. (2011). National Population and Housing Census

BGR-DWAF. (2006). Desk Study Report, Cuvelai-Etosha Groundwater Investigation

Mendelsohn J., Jarvs A., and Robertson T. (2013) Profile and Atlas of the Cuvelai Etosha Basin