

MET REFERENCE: APP-0068

**ENVIRONMENTAL MANAGEMENT PLAN (EMP) REPORT
SCOPING/ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT
AND ENVIRONMENTAL MANAGEMENT (EMP)**

Construction and operation of a Private Air-strip for Leisure Aircraft (Non-military) Operations at Brandberg White Lady Lodge, Daures Constituency, Erongo Region, Namibia

Prepared on behalf of

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1. INTRODUCTION

This EMP (Environmental Management Plan) detail how the proponents will incorporate environmental protection while undertaking various project activities during construction and operation of the BWLL private air-strip.

An EMP is similar to a policy and for companies that have environmental policies it is usually easy to implement EMPs.

2. OBJECTIVES

Purpose of this EMP is to demonstrate how the proponents intend to implement the EMP by providing a clear and concise baseline environmental monitoring plan.

Specific objectives are to:

- List documentations (e.g. permits, methods statement, SOPs, etc) required for operating a private air-strip;
- Establish baseline environmental conditions before and after construction, and
- Monitor environment during the operation phase.

3. ENVIRONMENTAL CERTIFICATIONS AND DOCUMENTATIONS

Environmental certifications will include permits and certificates needed to authorize air-strip operations as well as undertake tourism activities as required by law. Documentations will be communicable materials that will be required to describe, explain or instruct and communicate information regarding the air-strip operational procedures.

Before commencement of the proposed development, the following environmental certifications and documentations shall be required:

Table 1: permits and authorization.

Certification and documentation	Institution/competent authority	Contact person/details
Environmental clearance certificate (ECC)	Ministry of Environmental, Forestry and Tourism	Environmental Commissioner
Domestic and industrial wastewater and effluent discharge permits	Ministry of Agriculture, Water and Land Reform	Department of Water Affairs

Baseline environmental monitoring plan.	Ministry of Environment, Forestry and Tourism	Department of Environmental Affairs
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4. MITIGATION ACTIONS

All activities during construction will be temporary and their impacts negligible. The following environmental impacts were of particular concern:

- Aircraft noise;
- Bird striking, and
- Increase in tourism activities and possible impacts on the Brandberg National Monument.

Mitigation actions that are required to reduce or minimize negative impacts are described in **table 1**.

4.1. Risk preparedness and response plan

Risk is an event that may or may not happen; whereas an impact is what will happen if a risk occurs. Risks poses a significant impact on people, the environment or and property. Although they may not happen, there is a need to be prepared to respond to risks at all times during construction and operation phase of the project.

All response actions should be geared toward the following priorities and in the order below:

- **Safety** of people (always **First**);
- **Protection** of the Environment, and
- **Protection** of Assets or equipment.

Emergence preparedness and response management involves 5 basic steps as follows:

- **Preventive actions** are taken to avoid an incident.
- **Mitigation measures** are actions taken to prevent an emergency, reduce the chance of an emergency happening, or reduce the damaging effects of unavoidable emergencies.
- **Preparedness** increase the proponent's ability to respond when a risk occurs. Typical preparedness measures include developing a method statement and emergence exit procedures, awareness and training for both response personnel and affected parties and conducting drills to reinforce training and test capabilities.

- **Response** is an action carried out immediately before, during, and immediately after a hazard impact, which is aimed at saving lives, reducing economic losses, and alleviating suffering. Response actions may include activating the emergency operations center, evacuating threatened employees or equipment, opening shelters and providing mass care, emergency rescue and medical care.
- **Recovery**. These are actions taken to return to normal or near-normal conditions, including the restoration of basic services and the repair of environmental, social and economic damages. Typical recovery actions include debris cleanup, financial assistance to individuals, rebuilding of infrastructures and key facilities, and sustained mass care for displaced marine animal populations.

5. GRIEVANCE MECHANISM

The procedure the management will apply to deal with the employees' grievances will be enforced as follows:

5.1. Timely Action

The first and foremost requisite in grievance handling shall be immediate settlement as they arise. The sooner a grievance is settled, the lesser it will affect employees' performance. This requires the first line supervisors to be trained in recognizing and handling a grievance properly and promptly.

5.2. Accepting the Grievance

The supervisor shall recognize and accept the employee grievance as and when it shall be expressed. Acceptance shall not necessarily mean agreeing with the grievance; it rather shows the supervisor's willingness to look into the complaint objectively and dispassionately.

5.3. Identifying the Problem

The grievance expressed by the employee shall be at times simply emotional, over-toned, imaginary or vague. The supervisor, therefore, shall be required to identify or diagnose the problem stated by the employee.

5.4. Collecting the Facts

Once the problem is identified as a real problem; the supervisor should, then, collect all the relevant facts and proofs relating to the grievance. The facts so collected shall be separated from the opinions and feelings to avoid distortions of the facts.

5.5. Analysing the cause of the Grievance

Having collected all the facts and figures relating to the grievance, the next step involved in the grievance procedure shall be to establish and analyse the cause that led to grievance. The analysis of the cause shall involve studying various aspects of the grievance such as the employees past history, frequency of the occurrence, management practices, union practices, etc. Identification of the cause of the grievance helps the management to take corrective measures to settle the grievance and also to prevent its recurrence.

5.6. Taking Decision

In order to take the best decision to handle the grievance, alternative courses of actions shall be worked out. These are, then, evaluated in view of their consequences on the aggrieved employee, the union and the management. Finally, a decision taken should best suite a given situation. Such decision should serve as a precedent both within the department and the company.

5.7. Implementing the Decision

The decision shall be immediately communicated to the employee and also implemented by the competent authority.

In case, it is not resolved, the supervisor once again needs to go back to the whole procedure step by step to find out an appropriate decision or solution to resolve the grievance.

6. EXTERNAL COMMUNICATIONS

External communications shall be handled in line with company procedures.

7. RECOMMENDATIONS

It is recommended that:

- The proponent should strictly adhere to the EMP and undertake baseline environmental monitoring;
- Data from baseline environmental monitoring should be kept, and availed to authorities whenever requested.

8. REPORTING

Baseline monitoring and environmental monitoring should be reported to the Ministry of Environment, Forestry and Tourism.

Table 1: environmental management plan.

Phase	Impacts	Mitigation Actions	Responsible Personnel
A. CONSTRUCTION	1. Dust	<ul style="list-style-type: none"> • Proponent should appoint an Environmental coordinator (ECO) to advise on dust hazard and effects on public health and the environment. • Construction area should be watered frequency to suppress dust. • Inform affected persons in the surrounding area about the dust and the frequency it will occur so that they can be prepared. 	Lodge Operator. Contractor.
	2. Noise	<ul style="list-style-type: none"> • Inform affected persons in the surrounding about noise and the frequency it will occur so that they can be prepared. • Frequency use of noisy vehicles should be kept to lowest possible limit and should only be used when absolutely necessary. 	Lodge Operator. Contractor.
	3. Release of GHGs from fuel combustion	<ul style="list-style-type: none"> • Air pollution should be kept at minimal by using well maintained construction machineries and vehicles. • Use low Sulphur oils because they emit low sulphur and NOx. 	Lodge Operator. Contractor.
	4. Exclusion from grazing land	<ul style="list-style-type: none"> • Construction of BWLL should not take place in a higher value grazing area or wetland or riverbed where local depend on livestock production. • Where construction of BWLL is taking place in such an area, local farmers should be provided with an alternative grazing area and such area should offer similar grazing conditions or better. 	Lodge Operator.
	5. Water contamination	<ul style="list-style-type: none"> • No waste should be dumped near a water source or waterway. • Waste should only be disposed at an approved landfill site. • Construction should not be allowed at an aquifer or near an aquifer. 	Lodge Operator. Contractor.
	6. Waste pollution	<ul style="list-style-type: none"> • Place recycle bins at the construction site for workers to sort materials respectively and encourage them to prevent littering. 	Lodge Operator. Contractor.

	7. Removal of grasses	<ul style="list-style-type: none"> Plant some plants after construction beside the airstrip to replace the destructed grass. 	Lodge Operator. Contractor.
	8. Habitat modification	<ul style="list-style-type: none"> The general surrounding area where construction will take place should be surveyed to determine baseline biodiversity. Perimeter where construction will take place should be fenced off and activities should only be limited within fenced boundary. The location of all sensitive habitats should be identified and recorded. 	Lodge Operator. ECO (Environmental Co-ordinator)
	9. Loss of endangered or protected species	<ul style="list-style-type: none"> Excavate short lengths of trenches and box areas for services or foundations in such a way that the trench will not be left unused for more than 24 hours. This will prevent small mammals, reptiles and results away from trenches. Record all endangered or protected species encountered. 	Lodge Operator. Contractor.
	10. Accident road kills by vehicles	<ul style="list-style-type: none"> Limit speed to 20 km/h to avoid fatalities. Injured wildlife should be rehabilitated. Record all endangered or protected species encountered. 	Lodge Operator.
	11. Destruction of rock paintings.	<ul style="list-style-type: none"> During visit to heritage site, avoid touching rock paintings. No photos should be taken with flash cameras. Travel to heritage site is strictly by hiking and use of helicopters is prohibited. 	Lodge Operator.
	12. Disturbance of heritage sites.	<ul style="list-style-type: none"> Being contracted to construct a BWLL air-strip does not imply free access to heritage sites. Appointed contractor and employees should apply to visit the heritage sites. Construction of the BWLL air-strip should be done in consultation with the Heritage Act and its regulations. 	Lodge Operator.

		<ul style="list-style-type: none"> • A representative from the Namibian Heritage Council should be appointed to supervise on their handling, in case there will be arts or rock paintings discovered, to undertake baseline. 	
	13. Limited access to heritage sites.	<ul style="list-style-type: none"> • Runway should not block ways to the entrance of the heritage sites. 	Lodge Operator.
B. OPERATION	14. Dust during taking or and landing	<ul style="list-style-type: none"> • Runaway should be paved to prevent dust during operations. • Maintain regular repairs to fix rough surfaces. 	Lodge Operator.
	15. Aircraft noise	<ul style="list-style-type: none"> • Since large aircraft creates more noise on single-engine aircrafts and small jets should be operated. • Air traffic should be limited to 2 or 3 flights per week at peak tourist season. 	Lodge Operator.
	16. Bird striking	<ul style="list-style-type: none"> • Use pyrotechnics daily to drive the birds away before aircrafts takeoff and landings. 	Lodge Operator.
	17. General waste generation	<ul style="list-style-type: none"> • All waste materials must be contained and disposed of according to the relevant legal requirements. • Waste must be stored in such a manner that no pollution of the environment occurs at any time. • All domestic waste generated must be disposed of in a proper manner at the Local Authority Landfill site. • Spill clean-up kits and absorbent materials must be kept on site to assist in immediate clean-up if any hazardous material spills. 	Lodge Operator.
	18. Solid waste	<ul style="list-style-type: none"> • Waste collection bins should be provided on-site. • Garbage bins should be collected routinely and solid waste transported and disposed at an authorized solid waste facility. 	Lodge Operator.
	19. Liquid waste	<ul style="list-style-type: none"> • Ensure regular maintenance of sewerage dump stations to prevent overflow or clogging that may occur as result of poor maintenance. 	Lodge Operator.

	20. Waste pollution	<ul style="list-style-type: none"> • All grease, oil, and similar wastes should not be discarded in the river. These should be contained and temporarily stored before disposing off properly. • During borehole installation or maintenance care should be made to avoid polluting underground water. • The sewage septic tanks should be carefully lined to avoid leaching. Dish washing and laundry detergents should be biodegradable. 	
	21. Loss of endangered or protected species	<ul style="list-style-type: none"> • Ensure good management practices to reduce disturbance to local wildlife. 	Lodge Operator.
	22. Destruction of rock paintings.	<ul style="list-style-type: none"> • Make the employees aware of the importance of the rock paintings to prevent from destructing them. • Fly the aircrafts far on the sides of the Brandberg mountain to avoid any possibility of them to crash into the rock paintings. 	Lodge Operator.
	23. Disturbance of holy sites	<ul style="list-style-type: none"> • Ask the community when they exactly have holy events to control aircraft flights to prevent disturbing them. 	Lodge Operator.
	24. Limited access to holy sites.	<ul style="list-style-type: none"> • Do not block any route to the holy sites and discourage unnecessary visits to the holy sites. 	Lodge Operator.
	25. Traffic and safety	<ul style="list-style-type: none"> • Enforce speed limit to reduce animal road kills. • Road signs should be placed to indicate speed limit. • Where less speed is required put stop or yield signs. • All drivers should have driver's license. • Install speed cameras. 	Lodge Operator.