

ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED
SUBDIVISION OF ERF 133 INTO PORTION A AND REMAINDER AND
PERMANENT CLOSURE OF PORTION A AS A PUBLIC OPEN SPACE IN
EENHANA TOWN, OHANGWENA REGION.



August 2022

Prepared by:

Ouholamo Trading & Environmental Solution cc
P.O. Box 64363
Okuryangava
Cel: +264 81 2277 164
E-mail: elina.sp85@gmail.com

Prepared for:

Monte Carlo Guest House
P. O. Box 13692
Eenhana
Cel: +264 81 2304915

Prepareres of the Environmental Impact Assessment

Name of representative of the EAP	Education qualifications	Professional affiliations
Elina SP Vakuwile	B-tech Environmental Management	Environmental Scientist (EAPAN Member)

Client

Name	Position/ Role	Address
Monte Carlo Guest House	Monte Carlo Guest House (Proponent)	P. O Box 13692 Eenhana

LIST OF ABBRECIATIONS

TERM	DEFINITION
ECO	Environmental Control Officer
RoD.	Record of Decision
EO	Environmental Officer
RE	Resident Engineer
ELO	Environmental Liaison Officer
PPE	Personal Protective Equipment
EMP	Environmental Management Plan
EIA	Environmental Impact Assessment

Contents

1. INTRODUCTION AND BACKGROUND	4
2. PROJECT DESCRIPTION	4
2.1. Locality of the project.....	5
2.2. Description of the Proposed project Activities	5
3. PURPOSE OF THE EMP	6
4. POLICY AND OTHER RELEVANT LEGISLATIONS.....	7
5. MANAGEMENT PRINCIPLES	7
6. ENVIRONMENTAL ISSUES TO BE MANAGED	8
6.1. Pre-Construction Phase	8
6.2. Construction, Operational and Decommissioning Phases	8
6.3. Consultation with Interested and Affected parties (IAPs).....	8
6.4. Record Keeping	9
6.5. Photographs	9
7. ROLES AND RESPONSIBILITIES	9
7.1. Competent Authority.....	10
7.2. Monte Carlo Guest House (Applicant)	10
7.3. Monte Carlo Guest House (Project Manager).....	10
7.4. Monte Carlo Guest House (Environmental Control Officer).....	11
7.5. Contractor’s Safety Officer.....	12
7.6. Contractors.....	12
7.7. Resident Engineer (RE)	13
8. PHASES OF THE PROJECT	13
8.1. The Construction Phase.....	13
8.2. The Operational Phase	27
8.3. Impacts Associated with Decommissioning Phase.....	33
9. ENVIRONMENTAL MONITORING PLAN	33
10. CONCLUSION.....	35
11. RECOMMENDATIONS.....	35

1. INTRODUCTION AND BACKGROUND

The EMP is a working document which consists of a set of mitigation measures that will be implemented to eliminate, offset or reduce adverse environmental impacts to acceptable levels during the various phases (i.e. construction, operations and decommissioning). This document is prepared for Monte Carlo Guest House who proposes to subdivide Erf 133 in Eenhana Townlands NO 859 into Portion A and Remainder and to permanently close Portion A as a Public Open Space.

Ouholamo Trading & Environmental Solutions had conducted an Environmental Impact Assessment and Environmental Management Plan (EMP) for the proposed project at Eenhana to cater for the Guest House, Conference Facilities and Recreational Facilities for the Monte Carlo Guest House. The study investigated the biophysical and socio-economic, environmental issues related to the proposed project. The Environmental Impact Assessment had been conducted to meet the requisites of Namibia's Environmental Management Act (No. 7 of 2007). The proposed Project is situated in Eenhana Townlands No 859 in close proximity to the Eenhana Open Market. See locality map (Figure 1).

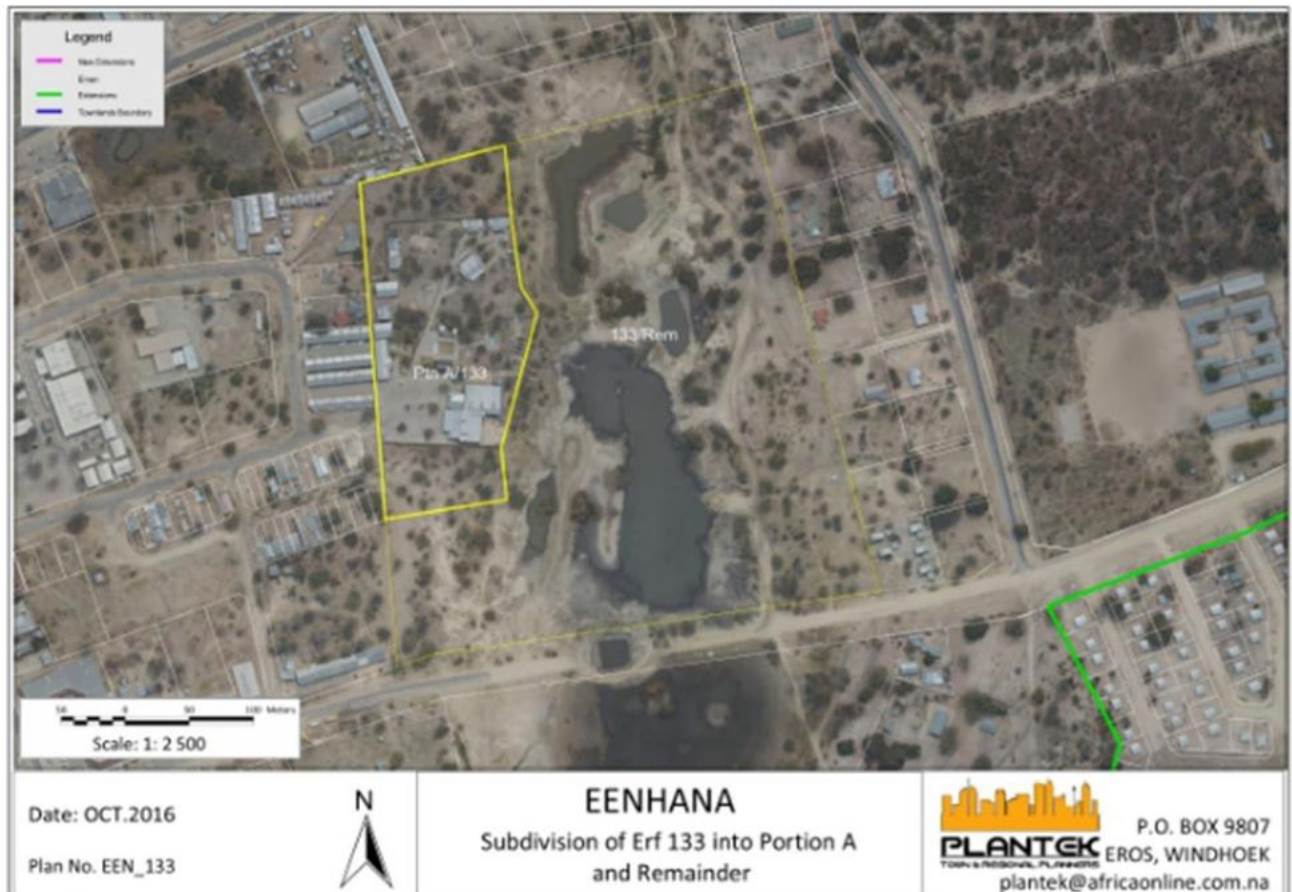
2. PROJECT DESCRIPTION

The proposed project is for the Subdivision of Erf 133 into Portion A and Remainder and the Permanent Closure of Portion A as a Public Open Space in Eenhana Townlands No 859 to cater for the guest house facilities and conferences facilities as well as the recreational facilities in Eenhana, Ohangwena Region Namibia.

The project involves the constructions of buildings, parking areas, recreational facilities as well as the construction of the access road/pathways within the proposed site. The project also involves the constructions, installations and connections of bulk services which are already made available in the surrounding.

2.1. Locality of the project

The proposed Project which is the Erf 133 Eenhana is situated in Eenhana Townlands No 859 in close proximity to the Eenhana Open Market. The Monte Carlo Conference facilities are currently developed on Erf 133 in the proposed Portion A in Eenhana. The coordinates for the proposed project are Latitude: 17°28'40.63"S and Longitude: 16°20'8.93"E. See locality map (Figure 1).



2.2. Description of the Proposed project Activities

The proposed development will entail the following activities:

- Subdivision of Erf 133 which is a Public Open Space into Portion A and remainder
- Permanent closure of Portion A as a Public Open Space

3. PURPOSE OF THE EMP

The Environmental Management Plan (EMP) is the tool that can provide the assurance that the proponent has made suitable provisions for mitigation. The EMP describes the methods and procedures for mitigation and monitoring the impacts identified in the EIA report. The overall aims of this EMP are to:

Ensure that the project complies with the goals of the Namibian Environmental Management Act 2007, (No. 7 of 2007), and;

- ❖ To describe action plans for achieving the mitigation measures described in the EIA for construction, operational and decommissioning phases of the activities associated with the development of the proposed guest house facility and recreational facilities.
- ❖ To indicate responsibilities of staff regarding the implementation of the described action plans. That is to allow employees and contractors to become familiar with the environmental procedures to be followed and facilitate their compliance with the recommendations made within this document;

This EMP is to be submitted to the Environmental Commissioner in the Ministry of Environment and Tourism as part of the application to receive an environmental clearance certificate for the proposed project. The EMP covers the same project scope as included in the EIA. The detailed description of the proposed project is contained in (Section 7) of the EIA report. The detailed description of the affected environment is also included in the EIA report (see section 9).

The overall purpose of this document is mainly focussing on reducing the negative impacts and maximizing the positive impacts associated with the project activities through a programme of continuous improvement.

4. POLICY AND OTHER RELEVANT LEGISLATIONS

The following are the legal instruments that govern or advocate the construction and operation of a Service Station:

- ❖ The Namibian Constitution
- ❖ Environmental Assessment Policy (1994)
 - Cradle to Grave Responsibility
 - Precautionary Principle
 - The Polluter Pays Principle
 - Public Participation and Access to Information
- ❖ Environmental Management Act of Namibia (2007)
- ❖ Environmental Management Act Regulations (2012)
- ❖ National Heritage Act No. 27 of 2004
- ❖ Water Resource Management Act on Namibia (2004)
- ❖ Petroleum Products and Energy Act of Namibia (Act No. 13 of 1990)
- ❖ Pollution Control and Waste Management Bill (guideline only)
- ❖ Atmospheric Pollution Prevention Ordinance of Namibia (No. 11 of 1976)
 - Hazardous Substances Ordinance (No. 14 of 1974)
 - Public Health Act (Act 36 of 1919)

5. MANAGEMENT PRINCIPLES

These guideline principles will form the basis for environmental management on site. Should these principles require modification or additions during the project this should be done at the discretion of the responsible person, who will ensure that any modifications are communicated, explained to and discussed with all affected parties (i.e. the Ministry of Environment and Tourism, Monte Carlo Guest House, the Ouholamo Trading & Environmental Solution, the contractors, service providers, and any affected party who may requests this information).

The environmental operational procedures and environmental issues are identified and managed, under different phases of the project. The different phases are:

- Pre-construction (including design);
- Construction Phase;
- Operational Phase; and
- Decommissioning Phase

6. ENVIRONMENTAL ISSUES TO BE MANAGED

6.1. Pre-Construction Phase

The Ministry of Environment and Tourism (MET) Department of Environmental Affairs must be notified:

- Within 30 days, of change of ownership / developer.
- Of any change of address of the owner / developer.
- One month prior to commencement of construction activities.
- One month prior to commencement of operation.

6.2. Construction, Operational and Decommissioning Phases

Unless otherwise indicated, the responsibilities of the construction contractor(s) and service providers will adhere to specified EMP actions for the construction phase. During the operational phase, Monte Carlo Guest House will ensure that the following actions are implemented by establishing accountability and responsibility between the different role players.

6.3. Consultation with Interested and Affected parties (IAPs)

During all phases of the project, namely the Construction Phase, Operational Phase and the Decommissioning Phase, it is of great value to establish an open communication channel between the developers (Monte Carlo Guest House), the contractors and IAPs such that any queries, complaints or suggestions can be dealt with quickly and by the appropriate person(s).

6.4. Record Keeping

It is recommended to keep records for all incidents or records for all environmental issues that might occur during all the phases of the project. Therefore, all records related to the implementation of this EMP (e.g. audit reports, incident reports, etc.) must be filed by Monte Carlo Guest House in a safe place where they can be easily retrieved. Those records should be kept for two years and should, at any time, be available for scrutiny by relevant authorities such as Ministry of Urban and Rural Development or Ministry of Environment, Tourism and Forestry (etc).

6.5. Photographs

It is recommended that the appointed Contractor's Project Manager/ Environmental Consultant or Environmental Liaison Officer to have the responsibilities of taking photographs prior to, during and immediately after construction, as a visual reference. These photographs should be stored with other records related to this EMP.

7. ROLES AND RESPONSIBILITIES

This section describes the roles and responsibilities of the key stakeholders involved in the development, implementation and review of the EMP. The contractor in this report refers to the Monte Carlo Guest House (proponent) and its appointed contractors.

7.1. Competent Authority

The Department of Environmental Affairs: Ministry of Environment and Tourism is responsible for the review of the EMP documents it is the competent authority.

7.2. Monte Carlo Guest House (Applicant)

The role of the applicant is as follows:

Monte Carlo Guest House as it is the applicant, should hire suitably qualified person(s) and assign them with the responsibility to ensure implementation of the EMP, and should:

- ❖ Know the contents and implications of the EIA and monitor the implementation of EIA findings using the EMP.
- ❖ Revise the EMP as required and inform the relevant parties of the changes.
- ❖ The applicant should Review report regarding the implementation of the EMP and make payments to the Contractor if the EMP is being implemented in a satisfactory manner.
- ❖ Give warnings and impose fines and penalties on the Contractor if the Contractor neglects to implement the EMP satisfactorily.
- ❖ Protect the environment and rehabilitate the environment as prescribed in the EIA.

7.3. Monte Carlo Guest House (Project Manager)

The Applicant will appoint the Project Manager. The role of the project manager will be:

- ❖ Liaising directly with the relevant authorities with respect to the preparation and implementation of the EMP and meeting the conditions documented in the environmental clearance certificate.
- ❖ Bear the overall responsibility for managing the project contractors and ensuring that the environmental management requirements are met.
- ❖ Inform the contractors of the EMP and Environmental clearance certificate obligations.

- ❖ Approve all decisions regarding environmental procedures and protocols that must be followed.
- ❖ Have the authority to stop any construction in contravention with the EMP and Record of Decision.
- ❖ In consultation with the Environmental Control Officer (ECO) has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP.
- ❖ Maintain open and direct lines of communication between the proponent, Contractor and Interested and Affected Parties (I&APs) with regards to environmental matters.
- ❖ Attend regular site meetings and inspections where required.

7.4. Monte Carlo Guest House (Environmental Control Officer)

An Environmental Control Officer (ECO) should be employed by the Contractor. This person should be available for the duration of the construction period and should have appropriate training and experience in the implementation of the EMP and overseeing construction process. This ECO will implement EMP at all levels and sections (sub-contractors) during the construction of the Monte Carlo Guest House. The responsibilities of the ECO include the following:

- ❖ Assist the Project Manager and Contractor in finding environmentally responsible solutions to challenges that may arise.
- ❖ Monitor performance of the contractors and ensure compliance with the EMP and associated method statements.
- ❖ Liaison between the contractors, authorities and other key stakeholders on all environmental concerns as well as to communicate all amendments of the EMP to the relevant stakeholders.
- ❖ Validating regular site inspection reports which are prepared by the Contractor's Environmental Officer (EO).
- ❖ Checking the EO's record of environmental incidents as well as corrective and preventative actions taken.

- ❖ Checking the EO's public complaints register in which all complaints are registered and actions taken thereof.
- ❖ Issuing site instructions to the contractors ECO for corrective actions required.
- ❖ Conduct monthly audits to ensure that the system for implementing the EMP is effective.

7.5. Contractor's Safety Officer

Implement the recommendations in the EIA and satisfy the conditions in the Record of Decision.

- ❖ Ensure that safety is practiced for all activities on site.
- ❖ Prepare and implement safety procedures.
- ❖ Communicate all safety related issues.

7.6. Contractors

The contractor should appoint the Contractor's representative who is suitably qualified to implement the EMP. The responsibilities of the Contractor include:

- ❖ Compliance with the relevant legislation and the EMP.
- ❖ Preparation and submission to the proponent through Project Manager the following Management Plans prior to commencing work:
 - ❖ Environmental Awareness Training and Inductions;
 - ❖ Emergency Preparedness and Response;
 - ❖ Waste Management; and
 - ❖ Health and Safety.

7.7. Resident Engineer (RE)

The Resident Engineer (RE) will be appointed by the 'Consultant' and will be required to oversee the construction programme and construction activities performed by the Contractor. The RE is expected to liaise with the Contractor and ECO on environmental matters, as well as any relevant engineering matters where these may have environmental consequences.

8. PHASES OF THE PROJECT

8.1. The Construction Phase

The bulk of the impacts during this phase will have immediate effects (e.g. noise, dust and water demand). If the site is monitored on a continual basis during the construction phase, it is possible to identify these impacts as they occur. These impacts can then be mitigated through the contingency plans identified in the planning phase, together with a commitment to sound environmental management from the developer.

Generation of Waste- Illegal dumping of construction wastes attracts vagrants.

Impacts	Description	Mitigation	Monitoring	Responsible Body
Generation of waste	<p>This can be in a form of contaminated soil and building rubble.</p> <p>Excavated soil from the installation of the bulk infrastructure.</p> <p>Littering</p>	<p>To avoid contaminating the soil and underground ecosystem, no wastewater should be disposed on soil.</p> <p>Ensure that no excavated soil, refuse or building rubble generated on site are placed or dumped on surrounding properties or land.</p> <p>The contractor should provide an adequate number of waste receptacles for general waste at points around the construction site, and a single collection point for hazardous waste;</p> <p>Bins/skips shall not be used for any purpose other than waste collection and shall be emptied on a regular basis.</p> <p>The Contractor shall ensure that all litter is collected from the work and camp areas daily.</p> <p>Soil from excavation activities must be reused as fill elsewhere on the site</p> <p>Ensure all hazardous materials are transported to a hazardous waste site for disposal by a licensed removal contractor.</p> <p>Strictly, no burning of waste on the site or at the disposal site is allowed as it possess environmental and public health impacts;</p>	<p>Bins and / or skips should be emptied regularly and waste should be disposed of at a registered landfill site/disposal site. Engineer / ECO.</p>	<p>Monte Carlo Guest House / Appointed Contractor/ECO/Engineer</p>

		<p>Waste handling procedures must be cleared with the Eenhana Town Council and the construction contractor should be informed about this.</p> <p>Contaminated wastes in the form of soil, litter, building rubble and other material must be disposed off at an appropriate disposal site.</p> <p>The contractor and developer should ensure that all the waste generated by the development is appropriately disposed of at the recommended waste disposal sites close to the area.</p>		
--	--	--	--	--

Air Quality Impacts-

Impacts	Description	Mitigation	Monitoring	Responsible Body
Air Quality Impacts	<p>Dust may be generated during the construction/decommissioning phase and might be aggravated when strong winds occur.</p> <p>These are expected to be site specific, short-termed and will most probably pose a negligible nuisance and health threat to those residing nearby.</p> <p>The construction of the proposed development will have impact on the surrounding air quality as construction vehicle will be frequenting the site and surrounding</p> <p>Particulate Matter is contributing to respiratory tract infections.</p> <p>The clearing of vegetation in preparation for construction exposes the soil to dust which increases the Particulate Matter concentration in the atmosphere.</p>	<p>Dust may be generated during the construction/decommissioning phase and might be aggravated when strong winds occur therefore; dust suppression during the construction process is advised if dust becomes an issue.</p> <p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 40 km/hr should be set for all vehicles travelling over exposed areas.</p> <p>Loads could be covered to avoid loss of material in transport, especially if material is transported off site.</p>	Regular visual inspection by Project Manager	Monte Carlo Guest House / Appointed Contractor/ECO/Engineer

Noise caused by construction activities

Impacts	Description	Mitigation	Monitoring	Responsible Body
Noise	<p>Noise levels are expected to rise during the construction phase of the development.</p> <p>Construction activities that cause noise include vehicle trafficking, generator noise, pressure hammers and construction worker's voices, including earthmoving equipment which will be utilized during the construction phase.</p>	<p>Construction should be limited to normal working days and office hours from 08h00 to 17h00 and 7:30 – 13:00 on Saturdays.</p> <p>Provide ear plugs and ear muffs to staff undertaking the noisy activity or working within close proximity thereof or alternatively, all construction workers should be equipped with ear protection equipment.</p> <p>Noise pollution should be addressed and mitigated at an early stage of construction phase.</p>	<p>Strict operational times. Regular inspection. By Safety Officer</p>	<p>Appointed Contractor /Safety Officer</p>

Soil Loss and Erosion-

Impacts	Description	Mitigation	Monitoring	Responsible Body
Soil Loss and Erosion-	<p>Loss of topsoil during the construction period caused by the clearing and removal of vegetation.</p> <p>The digging of structure foundations, and earthworks may expose soils to wind and rain and could result in localized erosion.</p>	<p>Removal of vegetation to take place only within demarcated construction site.</p> <p>No work is to be conducted within 30 meters of all drainage lines;</p> <p>Topsoil should only be exposed for minimal periods of time and adequately stockpiled to prevent the topsoil loss and run-off.</p> <p>Planting more indigenous trees on the recreational area and on some open space within the erven should be done.</p> <p>Reuse topsoil to rehabilitate disturbed areas.</p>	Project Manager/ Safety Officer	Monte Carlo Guest House Project Manager/ Appointed Contractor/ Safety Officer

Groundwater Contamination

Impacts	Description	Mitigation	Monitoring	Responsible Body
Groundwater Contamination	Leakages from equipment and machinery might occur during the construction phase or mixing of cement and the use of toilets all will lead to the contamination of the groundwater.	<p>Chemicals used during construction e.g. paint and paint remover is also posing a risk. Care must be taken to avoid contamination of soil and groundwater.</p> <p>Ensure no cement or cement containers should be left lying around.</p> <p>Mixing of cement should be done at specifically selected areas on mortar boards or similar structures to contain surface run-off.</p> <p>Proper toilet facilities should be installed at the construction site.</p> <p>The contractor shall ensure that there is no spillage when the toilets are cleaned and that the contents are properly removed from site.</p> <p>Cleaning of cement mixing equipment should be done on proper cleaning trays.</p> <p>Prevent spillage of contaminants or of water potentially contaminated by cement, chemicals, sewage</p>	Regular inspection By EO/Safety Officer	EO/Safety Officer

Sewage

Impacts	Description	Mitigation	Monitoring	Responsible Body
Sewage	Pollution of environment with waste materials	<p>Adequate sanitation facilities e.g. chemical toilets must be provided at the camp depot and construction site.</p> <p>Adequate sanitation facilities i.e. 15 employees per facility should be provided.</p> <p>The toilets should be located at least 50m from the construction site.</p> <p>They should be kept clean and hygienic regularly to ensure that they are usable.</p> <p>Effluent must not be discharged into natural environment and bush-toileting is prohibited.</p> <p>Letter of consent from a registered waste facility to allow contractor to empty the toilet facility at their sewer system should be provided.</p>	EO/Safety Officer	Monte Carlo Guest House Project Manager/ Appointed Contractor /EO/Safety Officer

Ecological Impacts

Impacts	Description	Mitigation	Monitoring	Responsible Body
Ecological	Protected species/vegetation to be conserved	<p>The proposed development is in the business industrial zone, therefore there are no known conservation worthy vegetation located on the proposed development.</p> <p>If trees with stem diameter > 20mm be found within the development site, it should be conserved and be made part of the development.</p>	Project Manager/EO/Safety Officer	Monte Carlo Guest House Project Manager/EO/Safety Officer

Heritage Impacts

Impacts	Description	Mitigation	Monitoring	Responsible Body
Heritage Impacts	There are no known heritage areas or artefacts were identified at the project site during the site visit. However, there is a potential damage or destruction to undiscovered heritage sites in the area	There were no sites or objects of archaeological finds, Graves, historical and cultural significance identified, however, if during construction any possible finds are made (e.g. Pottery, bones, shells, ancient clothing or weapons, ancient cutlery, graves etc), it should be barricaded off and the operations must be stopped and the relevant authorities should be contacted immediately for the qualified archaeologist to come and do the assessment of the findings. Work may only commence once approval is given from the heritage agency.	EO/Safety Officer	Monte Carlo Guest House Project Manager/ Appointed Contractor/EO/Safety Officer

Employment Creation

Impacts	Description	Mitigation	Monitoring	Responsible Body
Employment Creation	(Positive Impact) this is a job creation and economic benefit to local community since the construction activities associates with the installation of services infrastructure which will require labourers from the surrounding.	<p>Various employment opportunities will be created during all phases of the development, ranging from highly skilled to unskilled.</p> <p>When recruiting, the responsible contractor should ensure gender equality is taken into consideration that both men and women are employed equally and treated equally.</p> <p>The contractor must make use of local laborers where possible in order to stimulate the local economy.</p> <p>In terms of human resource development and capacity building, the contractor must enforce training programs that skilled workers should always train unskilled workers when necessary, in order for them to enhance their performances and to gain more knowledge that they might demonstrate at other levels in future.</p>	Monitored once off by the Project Manager	Monte Carlo Guest House Project Manager/ Appointed Contractor/

Safety and Security-

Impacts	Description	Mitigation	Monitoring	Responsible Body
Safety and Security	During the construction and decommissioning phase, earthmoving equipment will be used on site. This increases the possibility of injuries. Presence of equipment may encourage criminal activities (theft).	<p>The site must be fenced off to prevent unauthorized access during construction. All visitors must report to the site office.</p> <p>Ensure that the contact details of the police or security company and ambulance services are available on site.</p> <p>Strictly, no burning of waste on the site or at the disposal site is allowed as it possess environmental and public health impacts;</p>	Security System Monitoring. Safety Procedures. First Aid Training by Safety Officer/ Project Manager.	Monte Carlo Guest House Project Manager / Appointed Contractor/Safety Officer

Health and Safety

Impacts	Description	Mitigation	Monitoring	Responsible Body
Health and Safety	<p>Health and Safety Regulations pertaining to personal protective clothing, first aid kits being available on site, warning signs, etc. is very important and should be adhered to.</p> <p>During construction phase, there is a possibility of injuries to occur if no measures are taken into consideration.</p>	<p>A health and safety plan is to be developed and implemented as soon as land clearing commences.</p> <p>During construction, earthmoving equipment will be used on site. This increases the possibility of injuries and the responsible contractor must ensure that all staff members are briefed about the potential risks of injuries on site.</p> <p>Ensure the appointment of a Safety Officer to continuously monitor the safety conditions during construction.</p> <p>The contractor is further advised to ensure that adequate emergency facilities are available on site.</p> <p>Official training in the correct fit, use, care, storage and limitations of all Personal Protective Clothing, Respiratory and Hearing Equipment must be given to the employees.</p> <p>The construction staff handling chemicals or hazardous materials must be trained in the use of the substances and the environmental, health and safety consequences of incidents.</p> <p>All construction staff must have the appropriate PPE.</p>	Regular visual inspection by Safety Officer	Monte Carlo Guest House Project Manager / Appointed Contractor

Traffic

Impacts	Description	Mitigation	Monitoring	Responsible Body
Traffic	Congestion in traffic	<p>No diversion of traffic or closure of the road is expected.</p> <p>Flag mans and traffic controllers should be appointed to regulate traffic flow of vehicle construction.</p> <p>The responsible contractor must ensure that all drivers employed have valid driver's licenses of vehicle types they employed for, and that they have experience in driving those vehicles.</p> <p>The contractor must ensure that there is always a supervisor on site to ensure that no driver under the influence of alcohol or narcotics to be authorized to drive company's vehicles.</p> <p>The vehicle construction should limit speed to 40km/h and also be considerate of the surrounding land users.</p>	Strict operational times. Regular inspection. By Project Manager/ Safety Officer	Monte Carlo Guest House Project Manager / Appointed Contractor

Increased Spread of HIV/ AIDS

Impacts	Description	Mitigation	Monitoring	Responsible Body
Increased Spread of HIV/ AIDS	Migrant workers with HIV/AIDS may affect local people leading to a high rate of HIV/AIDS in Eenhana Town.	<p>The spending power of locals and expatriates working for the developer and/or its contractors are likely to increase, and this might be a perfect opportunity for sex workers to explore.</p> <p>Migrant labourers from other regions and expatriates are normally vulnerable and may use the services rendered by the sex workers.</p> <p>External construction workers should be housed in secure camp and are to abide by rules of the EMP to prevent public disruption (ie. Spread of HIV/AIDS, crime, public disturbance).</p> <p>Contractors should be encouraged to source labour from surrounding areas to prevent the spread of HIV/AIDS from external workers who will be sourced from other areas out of Eenhana because sourcing labour from the surrounding will prevent the spread of the HIV/AIDS as the residents will not be vulnerable to new workers in the area.</p> <p>Condoms as a contraceptive should be distributed to construction employees.</p>	By Project Manager/ Safety Officer	Monte Carlo Guest House Project Manager / Appointed Contractor/Safety Officer

8.2. The Operational Phase

By taking pro-active measures during the planning and construction phases, potential environmental impacts emanating during the operational phase will be minimised. This, in turn, will minimise the risk and reduce the monitoring effort, but it does not make monitoring obsolete.

Employment creation

Impacts	Description	Mitigation	Monitoring	Responsible Body
<p>Employment creation</p> <p><i>Equity, transparency, should be put into account when hiring and recruiting and that committees should also take part in the recruiting process for decision makings.</i></p>	<p>Employment opportunities are one of the long-term major impacts of the proposed Commercial and Recreational development that will be realized after construction and during the operation and maintenance of the facility. These will involve working crew such as housekeepers, receptionist, cooks, and security guards among other ancillary staff as may be required.</p>	<p>When recruiting, the responsible contractor should ensure gender equality is taken into consideration that both men and women are employed equally and treated equally.</p> <p>All qualified professionals hired to work for the development should be Namibians.</p> <p>Other Labor or services (e.g. security guards) should be sourced from the local supplies or Security Companies within Eenhana area or Oshana Region.</p>	<p>Monitored once off by the Project Manager/Monte Carlo Guest House</p>	<p>Monte Carlo Guest House</p>

Storm water-

Impacts	Description	Mitigation	Monitoring	Responsible Body
Storm water-	<p>Storm water usually runs off the areas and flow into the water bodies without any kind of treatment. This can pollute the water bodies like creeks, lakes and rivers and have adverse effects on their chemical as well as biological nature. In this project, the building roofs and pavements will lead to increased volume and velocity of storm water or run-off flowing across the area covered. This will lead to increased amounts of storm water entering the drainage systems, resulting in overflow and possible damage to such systems in addition to increased erosion or water logging in the neighbouring.</p>	<p>A system of drains to be installed to cater for surface run-off.</p> <p>They would be adequately sized to prevent over flooding of the site.</p> <p>Surface runoff and roof water should be collected in a reservoir and treated for reuse.</p>	<p>Monitored once off by the Project Manager/Monte Carlo Guest House/EO</p>	<p>Monte Carlo Guest House</p>

Increased water utilization

Impacts	Description	Mitigation	Monitoring	Responsible Body
Increased water utilization	Namibia is a water scarcity country, therefore, the additional development like this one will increase the water demand.	<p>The proponent will install water-conserving automatic taps or push type taps.</p> <p>Any water leaks resulting from damaged pipes and/or faulty taps, should be fixed by qualified staff.</p> <p>Water saving awareness programme should be in place to inform people/staff on the importance of saving water to reduce water consumption.</p>	Monitored once off by the EO	Monte Carlo Guest House

Improved aesthetic look of the area

Impacts	Description	Mitigation	Monitoring	Responsible Body
Improved aesthetic look of the area	The development of this project at this site is essential to improve the visual and aesthetics view of the area. This potential impact of the infrastructure on the economic structure is positive impact.	<p>No mitigation required because it's a positive impact. However, the developer should create awareness among the personnel working on the development about energy conservation and other resources as well as to implement measures to prevent or minimize any adverse effects on the environment.</p> <p>It should provide accessibility to the services provided in the building.</p> <p>Parking areas will be provided with 1 parking bay per 25m².</p> <p>Ensure proper and regular maintenance of the area.</p> <p>No illegal dumping of waste should be allowed</p>	Regular visual inspection by Project Manager	Monte Carlo Guest House & Eenhana Town Council

Energy Consumption

Impacts	Description	Mitigation	Monitoring	Responsible Body
Energy Consumption	Namibia is experiencing power shortage, therefore electricity should be used wisely in order to sustain the future generation.	<p>The proponent should install an energy-efficient lighting system at the proposed conference facilities and Recreational facilities.</p> <p>Encourage use of renewable energy i.e. Solar lights at parkings and walkways to supplement the electricity supply</p> <p>Make use of Solar Panels for water heating.</p> <p>The developments design should be done in such way that natural daylight reaches most areas of the building to reduce the need for excessive additional lighting.</p> <p>Power should be off in areas that are not in use/avoid unnecessary lights</p>	Monitored once off by the EO	Monte Carlo Guest House

Waste management

Impacts	Description	Mitigation	Monitoring	Responsible Body
Waste management	The project is expected to generate solid waste during its operation phase. The bulk of the solid waste generated during the operation of the project will consist mainly of organic wastes, packaging wastes amongst others. Such wastes can be injurious to the environment through blockage of drainage systems, choking of water bodies.	<p>During the operations phase, the Eenhana Town Council waste management will service the proposed project.</p> <p>Eenhana Town Council to develop a formal waste collection strategy and that the waste is to be collected regularly by disposed of at authorized dumping site or disposal site.</p> <p>Illegal dumping should be prohibited.</p>	Regular inspection By EO	Monte Carlo Guest House & Eenhana Town Council

8.3. Impacts Associated with Decommissioning Phase

The decommissioning phase of this development is very difficult to visualise at this point in time. However impacts associated with this phase will be similar to that of the construction phase.

During the decommissioning phase, rubble and waste will be created, as buildings and other structures are being demolished. These should be contained and disposed of at an approved waste facility and not dumped in the surrounding areas. These should be done in recognition with the Eenhana Town Council's waste management regulations and guidelines.

An environmental assessment should be made and an Environmental Impact Assessment (EIA) may be required. Special disposal of decommissioned equipment and hazardous and contaminated materials will be required.

9. ENVIRONMENTAL MONITORING PLAN

Environmental monitoring plan is part of the EMP performance assessment and will need to be compiled and submitted as determined by the Environmental Commissioner. The process of monitoring performances against the objectives and documenting all environmental activities is part of internal and external auditing. This will be coordinated by the Environmental Control Officer (ECO) / External Consultant / Suitable qualified in-house resource person. Tables 3 outline the type of information that shall need to be recorded on a regular basis by the Environmental Control Officer (ECO) as part of the monitoring process of the activities and the effects.

Mitigation	Compliance	Follow-up action required	By whom	By When	Completed
Is there an Environmental awareness training programme?					
How many people have been given environmental awareness training?					
Is a copy of the EMP on site?					
How effective is the awareness training?					
Do people understand the contents of the EMP?					
If not, where are the weaknesses?					
Ask 3 people at random various questions about the EMP.					

10. CONCLUSION

This Environmental Management Plan is to be implemented at all the phases of this project. If this EMP is implemented properly, it will help to minimise the adverse impacts on the environment. In order to achieve that, this Environmental Management Plan should be used as an on-site reference document during all the phases of the proposed project, and auditing should take place in order to determine compliance with the EMP for the proposed site. It is the proponent's responsibility to ensure that this EMP is made binding on the contractor by including the EMP in the contract documentation. It is advised that contractors should thoroughly familiarise themselves with the requirements of the EMP and appoint an environmental officer/s to oversee the implementation of the EMP on a day-to-day basis. By law, all parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken (Refer to Polluter Pays Principle under the Environmental Assessment Policy (1994)). If this project is mitigated, as per the above EMP, then the project will result in limited negative environmental impacts that can be mitigated through implementation of this EMP.

11. RECOMMENDATIONS

All Contractors and sub-Contractors taking part in any of the phases should be made aware of the contents of the EMP and of the Environmental Impact Assessment (EIA), so as to plan their activities accordingly in an environmental sound manner. It is unanimously concluded that the project/development go ahead without any objections.

In terms of waste management, an integrated solid waste management system is recommended. First, the proponent should give priority to reduction at Source of the materials. This option will demand a solid waste management awareness programme in the management and the staff. Secondly, Recycling, Reuse and compositing of the waste should be the second alternative in priority.