

ENVIRONMENTAL CLEARANCE RENEWAL

ENVIRONMENTAL MANAGEMENT PLAN

**(REZONING OF ERF 6288 FROM PUBLIC OPEN SPACE
TO INSTITUTIONAL)**

**PROPOSED HEALTH CARE FACILITY ESTABLISHMENT &
RELATED INFRASTRUCTURE – ERF 6288, KUISEBMOND,
WALVIS BAY, ERONGO REGION, NAMIBIA**

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"Balancing Growth with Resilience"

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1 Project Background

The project involves the development of a Health Care Facility on Erf 6288 Kuisebmond, located in Walvis Bay, Namibia. The site, approximately 1.5 hectares in extent, is currently zoned as Public Open Space. The proposed facility aims to serve the medical needs of the community of Walvis Bay and surrounding areas. Planning for the project was initiated by Ubuntu Health Care, represented by Stewart Planning, in conjunction with the Municipality of Walvis Bay. The proposed land use required rezoning from Public Open Space to Institutional to accommodate the Health Care Facility. The project will adhere to the town planning regulations of Walvis Bay.



Figure 1: Layout Plan: Erf 6288 Kuisebmond, Walvis Bay, Namibia

→ HEALTH-CARE FACILITY- 6288 KUISEBMOND



Figure 2: Proposed Health Care Facility on Erf 6288, Kuisebmond, Walvis Bay.

1.1 Environmental Setting

The project site is situated in Walvis Bay, Namibia, characterized by unique environmental features typical of coastal regions. The environmental baseline assessment will encompass the following:

- 1.1.1 **Topography and geomorphology:** Walvis Bay exhibits varied topography, including coastal plains, sand dunes, and rocky outcrops. The terrain may influence slope stability, erosion potential, and geological formations within the project area.
- 1.1.2 **Vegetation and wildlife:** The coastal environment supports a diverse array of flora and fauna, including endemic species. Ecological surveys will identify and characterize plant and animal species potentially impacted by the project, including any protected or sensitive ecosystems such as coastal wetlands or dune ecosystems.
- 1.1.3 **Water resources:** Walvis Bay is situated along the Atlantic Ocean, with surface water resources influenced by tidal patterns and estuarine dynamics. Groundwater resources may be present, with water quality and flow patterns influenced by coastal processes and human activities. The project will assess potential interactions with construction activities to ensure water resource protection.
- 1.1.4 **Soil characteristics:** Soil properties in Walvis Bay vary depending on local geology and land use. Factors such as bearing capacity, contamination levels, and suitability for excavation or reuse will be analyzed to inform construction practices and minimize environmental impact.
- 1.1.5 **Air quality:** Walvis Bay experiences generally good air quality, although dust emissions from nearby desert regions and industrial activities may influence local air quality parameters. Baseline data for key pollutants such as particulate matter, nitrogen oxides, and sulfur oxides will be established to assess potential impacts of construction activities on air quality.
 - **Noise levels:** Ambient noise levels in Walvis Bay may vary depending on proximity to urban areas, industrial zones, and transportation corridors. Baseline measurements will be taken to evaluate potential noise impacts during construction activities and implement appropriate mitigation measures.
 - **Cultural and historical resources:** Walvis Bay has a rich cultural and historical heritage, including indigenous communities, colonial-era structures, and archaeological sites. Thorough cultural heritage assessments will be conducted to identify and protect any significant cultural or historical resources within the project area, in accordance with relevant regulations and guidelines.

1.2 Environmental Policy and Objectives

The Proponent is committed to minimizing environmental impact, preserving natural resources, and complying with legal requirements. Specific objectives will align with these goals, focusing on biodiversity protection, resource efficiency, and pollution control. These objectives will also integrate with national policies such as Namibia's Environmental Management Act (Act No. 7 of 2007), regional policies including the SADC Protocol on Environment and Sustainable Development, continental initiatives such as the African Union's Agenda 2063, and global frameworks such as the United Nations' Sustainable Development Goals (SDGs).

1.3 Scope of the EMP

The scope of the Environmental Management Plan (EMP) is extensive, encompassing various critical aspects of environmental management throughout all phases of the project. The importance of EMPs in development projects cannot be overstated, as they serve as comprehensive frameworks to ensure that environmental considerations are integrated into all stages of project planning, implementation, and operation. Key aspects of the importance of EMPs include:

1.3.1 Legal Compliance and Regulatory Requirements:

- EMPs are often required by regulatory bodies and environmental authorities as part of the permitting process for development projects. Compliance with environmental regulations and standards is essential to obtain necessary approvals and avoid legal complications.

1.3.2 Environmental Impact Assessment (EIA):

- Informed by Environmental Impact Assessments (EIAs), EMPs address potential environmental impacts associated with the project and propose mitigation measures to address them. By implementing the recommendations of the EIA within the EMP, adverse environmental effects can be minimized or mitigated effectively.

1.3.3 Risk Management and Prevention of Environmental Harm:

- EMPs provide a systematic approach to identify, assess, and mitigate environmental risks associated with project activities. Proactive measures such as pollution control, habitat preservation, and erosion control help safeguard ecosystems and minimize negative impacts on natural resources.

1.3.4 Stakeholder Engagement and Community Relations:

- EMPs facilitate stakeholder consultation and engagement processes, incorporating community concerns and feedback into the planning and implementation of mitigation measures. This fosters positive relationships between project developers and local communities.

1.3.5 Resource Efficiency and Sustainable Development:

- EMPs promote resource efficiency and sustainable development by optimizing resource use, minimizing waste generation, and adopting environmentally friendly technologies

and practices. This contributes to the conservation of natural resources and the preservation of ecosystem integrity.

1.3.6 Monitoring, Reporting, and Adaptive Management:

- EMPs include provisions for environmental monitoring, data collection, and reporting to track the effectiveness of mitigation measures and ensure ongoing compliance with environmental regulations. Incorporating adaptive management principles allows adjustments to be made in response to changing environmental conditions.

1.3.7 Enhanced Project Resilience and Risk Mitigation:

- By systematically addressing environmental risks and vulnerabilities, EMPs enhance the overall resilience of development projects. Proactive risk management measures help minimize the likelihood of environmental incidents and associated liabilities, enhancing project sustainability and longevity.

In summary, the EMP's scope extends beyond mere compliance, addressing a broad range of environmental considerations critical to the success and sustainability of the project. It ensures that environmental protection is integrated into all aspects of project planning and execution, contributing to both environmental and development objectives.

1.4 Structure of the EMP

The EMP will include sections on mitigation measures, monitoring plans, emergency response procedures, and training modules. The document will flow logically, providing a roadmap for navigating through the various environmental management aspects. It will also incorporate provisions to ensure compliance with national, regional, and international environmental policies and regulations.

2 Implementation, Monitoring, and Reporting

2.1 Mitigation and Monitoring Plans

The Construction Contractor, acting on behalf of Ubuntu Health Care (Pvty) Ltd (the Proponent), holds responsibility for implementing the mitigation measures outlined in this EMP, alongside securing all necessary permits and agreements for construction activities. To ensure full compliance with EMP requirements, an introductory meeting/training may be organized by the Contractor/Proponent for relevant personnel. This training could include basic environmental knowledge and specific guidance related to EMP implementation, such as

prevention of damage to vegetation and proper handling of construction materials and waste, including hazardous substances like oil.

Monitoring of the EMP will be overseen by the Supervision Contractor, to be hired by Ubuntu Health Care (Pvty) Ltd, and the Construction Supervision Unit led by the Civil Works and Environmental Specialist of Ubuntu Health Care (Pvty) Ltd. The Supervision Contractor will track compliance by civil works contractors with the EMP as part of overall construction activity supervision. Periodical visits to construction sites by appropriate specialists from Ubuntu Health Care (Pvty) Ltd will ensure proper EMP implementation. Additionally, environmental training for staff, designers, and local contractors will be coordinated to ensure an understanding of environmental requirements. Monitoring during the construction phase will be short-term and localized within the Health Care Facility site boundaries, conducted through visual inspections of materials, construction practices, and mitigation methods (see Monitoring Plan).

2.2 Estimated Cost

The estimated costs for implementing mitigation and monitoring plans are integrated into contract bids. Typically, the cost for implementing mitigation measures is estimated to constitute about 2-3% of the total construction cost estimate. Real costs will be determined during the construction phase. In the event of an accident or deemed necessity, appropriate samples will be taken and analyzed to ensure no hazardous material is dispersed. If pollution arises due to the Construction Contractor's fault, the Contractor will cover the cost of analysis; otherwise, Ubuntu Health Care (Pvty) Ltd will bear the expense. Mitigation measures during the operational phase will be financed from the operation and maintenance budget of the operating agency.

2.3 Implementation Schedule and Reporting

Reporting requirements are structured to monitor the progress of EMP implementation:

- The Construction Contractor will report quarterly to Ubuntu Health Care (Pvty) Ltd on the implementation of mitigation measures proposed in the EMP.
- The Supervision Contractor will utilize the Monitoring Plan framework outlined in the EMP to report the progress and compliance of the Construction Contractor concerning the implementation of mitigation measures.
- In case of emergencies, the Construction Contractor/Supervision Contractor shall complete the Incident Report Form and submit it to the proponent.

In addition to the above reports, the Safety, Health & Environmental (SHEQ) Officer will prepare reports on the status of EMP implementation as part of regular progress reporting. These reports will detail any environmental issues arising from project-supported activities, the status of mitigation measures, and any necessary next steps.

Table 1: Mitigation Plan

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
Construction Phase			
<p>Pollution of water and soil may occur as a result of civil works implementation, improper construction materials storage, management, and usage.</p>	<p>Establishment of Work Site and Concrete-Mixing Plant:</p> <ul style="list-style-type: none"> • A designated work site will be established to ensure organized construction activities. • A concrete-mixing plant will be installed at the site to facilitate efficient concrete production. • The work site layout will be carefully planned to minimize disturbance to vegetation cover and prevent obstruction of drainage water flow. • Measures will be implemented to prevent adverse impacts on water quality caused by construction run-off. 	Construction Contractor	Supervision Contractor
	<p>Storage of Oils and Lubricants:</p> <ul style="list-style-type: none"> • Oils and lubricants, along with other liquid materials, will be stored in closed tanks. • A specially designated area will be allocated for storage to prevent leakage and minimize pollution of soil and water in the event of a spill. • Sand or fine gravel will be spread on the ground in designated parking and servicing areas for construction machinery to absorb any potential spills. • In the event of a spillage, the contaminated layer will be promptly removed and disposed of at a designated waste disposal site. Subsequently, a new layer of sand or fine gravel will be applied. 	Construction Contractor	Supervision Contractor
	<p>Effective Protection Measures:</p> <ul style="list-style-type: none"> • Robust measures will be implemented to effectively protect construction work sites and storage facilities against spills. • These measures may include the installation of spill containment systems, such as berms or barriers, to prevent the spread of pollutants in case of accidental spills. 	Construction Contractor	Supervision Contractor

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> • Regular inspections and maintenance of storage facilities will be conducted to ensure their integrity and effectiveness in spill prevention. <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> • Training and Awareness: All personnel involved in construction activities will receive training on spill prevention and response procedures to ensure prompt and effective action in case of emergencies. • Monitoring and Reporting: Regular monitoring of storage facilities and work sites will be conducted to detect any signs of leakage or potential environmental hazards. Any incidents or near misses will be promptly reported, investigated, and documented to prevent recurrence. • Compliance with Regulations: All mitigation measures will be implemented in accordance with relevant environmental regulations and industry best practices to ensure compliance and minimize environmental impact. <p>By implementing these environmental mitigation measures, the project aims to effectively manage potential risks associated with water and soil pollution, thereby safeguarding the surrounding environment during the construction phase.</p>	Construction Contractor	Supervision Contractor
<p>Pollution of water and soil may occur as a result of improper disposal of excavated materials and construction wastes.</p>	<p>Establishment of Sites for Preliminary Accumulation:</p> <ul style="list-style-type: none"> • Sites will be designated for the preliminary accumulation of excavated materials and waste, ensuring no damage to vegetation cover or other environmental components. • These sites will be carefully selected and agreed upon with the Supervisor to ensure their suitability and compliance with environmental regulations. 	Construction Contractor	Supervision Contractor

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> Locations for waste preliminary accumulation will be chosen to avoid proximity to trees to prevent damage and minimize the risk of water pollution from construction run-off. 		
	<p>Proper Transport and Disposal:</p> <ul style="list-style-type: none"> Arrangements will be made for the proper transport and disposal of excavation materials and wastes to approved dump sites designated for this specific purpose. All disposal sites will be agreed upon with local and regional authorities to ensure compliance with regulations and minimize environmental impact. Waste shall not be disposed of into waterways, their beds, or in immediate proximity to them, and no waste shall be dumped into wetlands or flood plains to prevent contamination. 	Construction Contractor	Supervision Contractor
	<p>Direct Hauling to Approved Disposal Sites:</p> <ul style="list-style-type: none"> Whenever feasible, excavated materials and waste will be hauled directly to approved disposal sites to minimize double handling of waste, reduce site cleanup requirements, and minimize dust generation. This approach will streamline the disposal process, reducing the overall environmental footprint associated with waste management activities. 	Construction Contractor	Supervision Contractor
	<p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> Monitoring and Compliance: Regular monitoring will be conducted to ensure compliance with waste disposal protocols and regulations. Any deviations or non-compliance will be promptly addressed to mitigate potential environmental risks. 	Construction Contractor	Supervision Contractor

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> • Training and Awareness: Personnel involved in waste management activities will receive training on proper handling, transport, and disposal procedures to minimize the risk of environmental pollution and ensure regulatory compliance. • Emergency Response: Contingency plans will be in place to address any spills or accidents during the transport or disposal of waste materials. This includes the availability of spill kits and trained personnel to respond effectively to environmental emergencies. • Documentation and Reporting: Records of waste disposal activities will be maintained, documenting the types and quantities of materials disposed of, as well as the locations and methods of disposal. Any incidents or deviations from established procedures will be documented and reported as part of environmental monitoring and compliance efforts. <p>By implementing these environmental mitigation measures, the project aims to effectively manage the potential risks associated with the disposal of excavated materials and construction wastes, minimizing the impact on water and soil quality in the surrounding environment.</p>		
<p>Temporary air pollution (dust) may arise due to the transportation of construction materials/waste and truck traffic.</p>	<p>Use of Closed/Covered Trucks:</p> <ul style="list-style-type: none"> — Closed or covered trucks will be employed for the transportation of construction materials (such as gravel, sand, soil, etc.) to construction sites or the removal of construction waste to approved dump sites. — Where feasible, especially during warm and dry weather conditions, tires of trucks will be washed to minimize dust exposure during transportation. 	Construction Contractor	Supervision Contractor
	<p>Maintenance of Construction Equipment:</p> <ul style="list-style-type: none"> — All construction equipment will be maintained to a high standard to minimize emissions and pollution. 	Construction Contractor	Supervision Contractor

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> — Machinery that is found to be functioning improperly and causing excessive pollution will be prohibited from the construction site until repairs are made to rectify the issue. 		
	<p>Dust Control Measures:</p> <ul style="list-style-type: none"> — Regular water sprinkling will be conducted to suppress dust in the surrounding area of the worksite, particularly during warm and dry months. — Excess materials will be promptly removed, and sites will be cleaned upon completion of activities to prevent the accumulation of dust. — Effective dust control measures will be implemented to ensure that airborne particulate matter is minimized and environmental air quality is maintained. 	Construction Contractor	Supervision Contractor
	<p>Worker Protection:</p> <ul style="list-style-type: none"> — Workers exposed to dust will be provided with necessary protection gear, including respiratory masks and goggles, to safeguard their health and minimize inhalation of airborne particles. 	Construction Contractor	Supervision Contractor
	<p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> • Monitoring and Compliance: Regular monitoring of air quality will be conducted to assess the effectiveness of dust control measures and ensure compliance with regulatory standards. Any deviations or issues will be promptly addressed to mitigate potential environmental impacts. • Training and Awareness: Workers will receive training on the proper use of protection gear and adherence to dust control 	Construction Contractor	Supervision Contractor

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<p>protocols to minimize exposure to airborne pollutants and maintain a safe working environment.</p> <ul style="list-style-type: none"> • Community Engagement: Efforts will be made to communicate with the local community regarding dust control measures and their importance in mitigating temporary air pollution. Feedback from the community will be considered to improve the effectiveness of mitigation measures and address any concerns. <p>By implementing these environmental mitigation measures, the project aims to effectively manage the potential risks associated with temporary air pollution from construction activities, ensuring minimal impact on air quality in the surrounding environment.</p>		
<p>Noise and vibration disturbances may occur during construction activities.</p>	<p>Work Schedule Management:</p> <ul style="list-style-type: none"> — Construction activities will be scheduled to terminate at established times, such as during daylight hours, to minimize noise disturbances. — Efforts will be made to avoid increasing noise levels and the number of peak hours to mitigate impacts on the surrounding environment. 	<p>Construction Contractor</p>	<p>Supervision Contractor</p>
	<p>Proper Maintenance of Machinery and Vehicles:</p> <ul style="list-style-type: none"> — Machinery and vehicles will undergo regular maintenance to ensure their proper functioning and minimize noise and vibration impacts. — Effective exhaust silencers will be fitted to vehicles and machinery, and they will be maintained in good working order to reduce noise emissions. — Machinery that is intermittently used will be shut down or throttled down to a minimum when not in use to minimize noise and vibration disturbances. — Noisy equipment will be positioned as far as possible from nearby buildings to mitigate the impact on occupants. 	<p>Construction Contractor</p>	<p>Supervision Contractor</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<p>Worker Protection:</p> <ul style="list-style-type: none"> Workers operating in the vicinity of sources of high noise/vibration will be provided with necessary protection gear, such as earplugs, to minimize exposure to excessive noise levels. 	Construction Contractor	Supervision Contractor
	<p>Adherence to Standards:</p> <ul style="list-style-type: none"> Construction equipment will strictly adhere to Namibian standards for noise and vibration emissions. Regular checks will be conducted on vehicle conditions to ensure the appropriate use of mufflers and other noise-reducing measures. 	Construction Contractor	Supervision Contractor
	<p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> Community Communication: The local community will be informed about the construction schedule and measures taken to mitigate noise and vibration disturbances. Feedback from the community will be welcomed and considered in adjusting construction activities, if necessary. Monitoring and Compliance: Regular monitoring of noise and vibration levels will be conducted to assess compliance with regulatory standards and the effectiveness of mitigation measures. Any deviations or issues will be promptly addressed to minimize environmental impacts. Training and Awareness: Workers will receive training on the proper use of protection gear and adherence to noise and vibration control protocols to ensure their safety and minimize disturbances to the surrounding environment. <p>By implementing these environmental mitigation measures, the project aims to effectively manage the potential risks associated with noise and vibration disturbances, ensuring minimal impact on the surrounding community and environment.</p>	Construction Contractor	Supervision Contractor

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
<p>Impacts on archaeological sites may occur during earthworks at the construction site.</p>	<p>Immediately cease all construction work</p> <p>— Construction activities will cease immediately in the event of a chance find or discovery of archaeological artifacts or sites during earthworks at the construction site.</p> <p>Notification to National Heritage Council (NHC):</p> <p>— Relevant information regarding the discovery will be promptly provided to the National Heritage Council (NHC) in accordance with the provisions of the National Heritage Act 27 of 2004.</p> <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> • Preservation Protocols: Once construction activities cease due to a chance find, no further disturbance or excavation will occur in the vicinity of the archaeological site until appropriate protocols are established in consultation with the National Heritage Council. • Archaeological Assessment: Upon notification, the National Heritage Council will conduct an assessment of the archaeological site to determine its significance and the necessary steps for preservation or mitigation. • Legal Compliance: All actions regarding the discovery and handling of archaeological sites will adhere to the requirements and guidelines outlined in the National Heritage Act 27 of 2004 and any other relevant legislation. <p>By implementing these environmental mitigation measures, the project aims to minimize impacts on archaeological sites and ensure compliance with heritage conservation regulations, preserving Namibia's cultural heritage for future generations.</p>	<p>Construction Contractor</p>	<p>Supervision Contractor</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
<p>Landscape degradation and soil erosion may occur during construction activities.</p>	<p>Optimal Use of Excavated Soil:</p> <ul style="list-style-type: none"> — Excavated soil will be utilized for backfilling wherever feasible, reducing the need for additional soil importation and minimizing disruption to the landscape. <p>Designated Areas for Excavated Materials and Waste:</p> <ul style="list-style-type: none"> — Excavated materials and construction waste will be accumulated only in specially designated areas to prevent indiscriminate dumping and minimize landscape disturbance. <p>Restoration of Landscape and Vegetation Cover:</p> <ul style="list-style-type: none"> — Following the completion of construction works and the use of quarries, efforts will be made to restore the landscape to quasi-original conditions. — Restoration activities will include the restoration of vegetation cover using plant species characteristic to the landscape of the construction site. <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> — Erosion Control Measures: Measures such as the installation of erosion control barriers, vegetation cover, and slope stabilization techniques will be implemented to mitigate soil erosion and prevent further landscape degradation. — Monitoring and Maintenance: Regular monitoring will be conducted to assess the effectiveness of restoration efforts and ensure the long-term stability of the landscape. Maintenance activities, such as irrigation and weed control, will be undertaken as necessary to support vegetation establishment and growth. 	<p>Construction Contractor</p>	<p>Supervision Contractor</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<p>— Compliance with Regulations: All restoration activities will adhere to relevant environmental regulations and guidelines to ensure compliance with legal requirements and promote sustainable land management practices.</p> <p>By implementing these environmental mitigation measures, the project aims to minimize landscape degradation and soil erosion, preserving the natural integrity of the construction site and surrounding environment.</p>		
<p>Safety issues may arise during construction activities.</p>	<p>Worker Safety Measures:</p> <ul style="list-style-type: none"> — Workers will be provided with safety instructions and appropriate protective equipment as required by local laws and regulations. — Workers handling oil, chemicals, or hazardous materials will receive specific guidance on safe handling practices to prevent accidents and minimize environmental risks. <p>Traffic Management Measures:</p> <ul style="list-style-type: none"> — Appropriate traffic signs will be installed along nearby roads that will be intensively used for the transportation of construction materials and/or waste. These signs will ensure the smooth flow of traffic and enhance safety for both construction workers and the public. — In some cases, a flagman or traffic control supervisor will be engaged to manage traffic flow and ensure the safety of construction activities, particularly in areas where there is heavy vehicular movement. <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> — Training and Awareness: Workers will undergo training sessions to familiarize themselves with safety protocols and procedures, emphasizing the importance of adhering to safety guidelines to prevent accidents and injuries. 	<p>Construction Contractor</p>	<p>Supervision Contractor</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> — Regular Inspections: Routine inspections will be conducted to identify and address potential safety hazards on the construction site, with corrective actions implemented promptly to mitigate risks. — Emergency Response Planning: Emergency response plans will be developed and communicated to all workers, detailing procedures to be followed in the event of accidents, spills, or other emergencies to minimize environmental and safety impacts. <p>By implementing these environmental mitigation measures, the project aims to prioritize the safety of workers, contractors, and the surrounding community, reducing the likelihood of safety incidents and ensuring compliance with relevant regulations.</p>		
Operation Phase			
<p>Flooding and water pollution may occur as a result of improper maintenance of water supply, wastewater, and drainage systems at the Health Care Facility.</p>	<p>Regular Cleaning and Maintenance:</p> <ul style="list-style-type: none"> — Water supply and sewerage systems installed at the Health Care Facility will be periodically cleaned to ensure the provision of safe and reliable water supply and sewerage services. — Maintenance checks of the system will be performed regularly to identify and address any issues, ensuring the system's operational efficiency and preventing potential water contamination. — The drainage system installed at the Health Care Facility will undergo periodic cleaning to remove any debris or obstructions, ensuring proper water flow and reducing the risk of flooding. <p>—</p> <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> — Scheduled Inspections: Scheduled inspections will be conducted to assess the condition of water supply, wastewater, and drainage systems, 	<p>Water, Waste and Environmental Management Department of the Municipality of Walvis Bay</p>	<p>Kuisebmond Hall</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<p>with any maintenance or repairs carried out promptly to prevent system failures or leaks that could lead to water pollution.</p> <ul style="list-style-type: none"> — Emergency Response Plan: An emergency response plan will be developed to address any unexpected incidents, such as leaks or overflows, with procedures in place to contain and mitigate the impact on water quality and prevent flooding. — Staff Training: Staff responsible for the operation and maintenance of water supply, wastewater, and drainage systems will receive training on proper maintenance procedures and emergency response protocols to ensure effective system management and environmental protection. <p>By implementing these environmental mitigation measures during the operation phase, the Health Care Facility aims to minimize the risk of flooding and water pollution, safeguarding public health and environmental integrity.</p>		
<p>Pollution may occur as a result of non-timely waste disposal at the Health Care Facility.</p>	<p>Timely Waste Transportation and Disposal:</p> <ul style="list-style-type: none"> — Arrangements will be made for the timely transportation and disposal of waste to prevent over-accumulation on-site, reducing the risk of pollution to water and soil. <p>Proper Categorization and Disposal Mechanism:</p> <ul style="list-style-type: none"> — A mechanism for the proper categorization and disposal of both domestic and medical waste will be developed and implemented at the Health Care Facility. <p>Domestic Waste Management:</p> <ul style="list-style-type: none"> — Domestic waste will be collected and properly managed, ensuring timely transportation to an approved disposal site as agreed upon with Kuisebmond Hall. <p>Medical Waste Handling:</p>	<p>Proponent</p>	<p>Kuisebmond Hall</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> — The administration of the Health Care Facility will enter into agreements with licensed organizations responsible for the collection, transportation, and handling of medical waste. — These organizations will operate in accordance with Namibia's Pollution Control and Waste Management Act of 2003 and the Environmental Management Act 7 of 2007, ensuring the safe and environmentally sound management of medical waste. <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> — Training and Awareness: Staff at the Health Care Facility will receive training on waste management practices, emphasizing the importance of proper categorization, handling, and disposal procedures to minimize environmental impacts. — Monitoring and Compliance: Regular monitoring will be conducted to ensure compliance with waste management regulations and standards, with corrective actions implemented as necessary to address any deficiencies and prevent pollution incidents. — Community Engagement: The Health Care Facility will engage with the local community to raise awareness about the importance of waste management and encourage community participation in waste reduction and recycling initiatives. <p>By implementing these environmental mitigation measures, the Health Care Facility aims to effectively manage waste disposal activities, minimizing the risk of pollution and promoting environmental sustainability.</p>		
Emissions to the atmosphere from the boiler house may occur, leading to air pollution.	Boiler House Maintenance:	Health Care Facility	Water, Waste and Environmental

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> — Proper maintenance of the boiler house will be ensured to minimize emissions to the atmosphere associated with the operation of the heating system. — Regular maintenance checks will be conducted to identify and address any issues that could contribute to increased emissions, such as inefficient combustion or equipment malfunctions. <p>Compliance with Regulations:</p> <ul style="list-style-type: none"> — Compulsory payments for harmful substances emissions will be promptly provided to meet regulatory requirements and prevent air pollution. — All activities related to the boiler house operation and emissions will comply with the Environmental Management Act 7 of 2007 and the Atmospheric Pollution Prevention Ordinance 11 of 1976 to prevent pollution of surface and underground water, as well as other components of the environment. <p>ADDITIONAL CONSIDERATIONS:</p> <ul style="list-style-type: none"> — Emission Monitoring: Regular monitoring of emissions from the boiler house will be conducted to assess compliance with emission standards and identify opportunities for improvement. — Use of Cleaner Technologies: Where feasible, the adoption of cleaner technologies and energy-efficient practices will be explored to reduce emissions and minimize environmental impact. — Staff Training: Boiler operators and maintenance personnel will receive training on proper operation and maintenance procedures to optimize boiler performance and minimize emissions. <p>By implementing these environmental mitigation measures, the project aims to reduce emissions from the boiler house, ensuring compliance with</p>		<p>Management Department of the Municipality of Walvis Bay</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	regulatory standards and protecting air quality in the surrounding environment.		
<p>Safety issues may arise during project operations, posing risks to workers and personnel.</p>	<p>Equipment Maintenance:</p> <ul style="list-style-type: none"> — Ensure the presence, proper maintenance, and good condition of health and safety equipment and tools on-site. This includes regular inspections to identify and address any issues promptly. <p>Firefighting Equipment:</p> <ul style="list-style-type: none"> — Adequate firefighting equipment will be made available and maintained in optimal working condition to respond effectively to fire emergencies. <p>Access and Egress:</p> <ul style="list-style-type: none"> — Maintain adequate access and egress routes throughout the project site to facilitate safe movement of personnel and equipment, minimizing the risk of accidents or entrapment. <p>Fire Signage and Emergency Lighting:</p> <ul style="list-style-type: none"> — Install fire signage and emergency lighting to provide clear guidance and illumination in the event of emergencies, ensuring swift and safe evacuation procedures. <p>ADDITIONAL CONSIDERATIONS:</p> <p>Training and Awareness:</p> <ul style="list-style-type: none"> — Workers will receive training on the proper use of health and safety equipment, firefighting procedures, and emergency response protocols to enhance preparedness and minimize risks. <p>Regular Inspections:</p>	Health Care Facility	Fire-Protection Department – Walvis Bay Municipality

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<ul style="list-style-type: none"> — Regular inspections will be conducted to assess the condition of safety equipment, access routes, and emergency facilities, with corrective actions implemented as needed to maintain safety standards. <p>Emergency Response Plan:</p> <ul style="list-style-type: none"> — Develop and implement an emergency response plan detailing procedures to be followed in the event of safety incidents, with clear roles and responsibilities assigned to personnel. <p>By implementing these environmental mitigation measures, the project aims to prioritize the safety and well-being of workers and personnel, minimizing the risk of accidents and ensuring a safe working environment.</p>		
<p>Traffic jams may occur due to increased traffic flow to the Health Care Facility, including the operation of ambulance vehicles.</p>	<p>Traffic Management Signs:</p> <ul style="list-style-type: none"> — Special traffic management signs will be installed to regulate and maintain smooth traffic flow in the vicinity of the Health Care Facility. — These signs will provide clear guidance to drivers, indicating speed limits, designated lanes, parking areas, and other relevant traffic regulations. <p>ADDITIONAL CONSIDERATIONS:</p> <p>Traffic Monitoring:</p> <ul style="list-style-type: none"> — Regular monitoring of traffic flow patterns will be conducted to assess the effectiveness of traffic management measures and identify any areas requiring adjustments or improvements. <p>Coordination with Authorities:</p> <ul style="list-style-type: none"> — Coordination will be maintained with local traffic authorities to address any issues related to traffic congestion and ensure compliance with traffic regulations. <p>Emergency Vehicle Access:</p>	<p>Traffic Police</p>	<p>Nampol / Walvis Bay Traffic</p>

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL MITIGATION MEASURES	EXECUTING AGENCY	SUPERVISING AGENCY
	<p>— Priority access routes will be designated for ambulance vehicles to ensure prompt and unimpeded access to the Health Care Facility during emergencies.</p> <p>Community Awareness:</p> <p>— Awareness campaigns will be conducted to inform the local community about traffic management measures and encourage cooperation to minimize congestion and ensure the efficient operation of ambulance services.</p> <p>By implementing these environmental mitigation measures, the project aims to mitigate the potential impact of traffic congestion, ensuring smooth traffic flow and timely access to healthcare services for the community.</p>		

Table 2: Monitoring Plan

PHASE	WHAT PARAMETER is to be monitored?	WHERE THE PARAMETER is to be monitored?	HOW THE PARAMETER is to be monitored? Type of monitoring equipment	WHEN THE PARAMETER* is to be monitored? (frequency of measurement or continuously)	REPORTING AGENCY
Construction	Material borrow sites and quarries	At the Construction Contractor	Permits from Ministry of Environment, Fand Tourism (in case the opening of a new quarry is required)	After signing a contract, prior to commencement of civil works and opening of a new quarry	Supervisor
	Agreement for waste disposal	At the Construction Contractor	Agreement with Walvis Bay Municipality (local authority) (community leader)	Prior to waste transportation to dump site and disposal	Supervisor
	Soil erosion	In new cutting areas	Inspections at site	During construction works and after the restoration of site is finished	Supervisor
	Water pollution	In the nearby water bodies	Inspections at site, analysis of water samples (water quality basic parameters, organics) in an approved laboratory	During construction, when pollution by construction run-offs to nearby water objects is observed	Supervisor
	Proper storage of construction materials, fuel, oil, etc.	At work site in case it is used for storing of construction materials, fuel, oil, etc.	Inspection	During construction works, when work site areas are used for storing construction materials, fuel, oil, etc.	Supervisor
	Air pollution/dust	At work site	Inspections at site to make sure that the site is regularly watered and that dust is not significantly affecting the workers	During civil works	Supervisor

PHASE	WHAT PARAMETER is to be monitored?	WHERE THE PARAMETER is to be monitored?	HOW THE PARAMETER is to be monitored? Type of monitoring equipment	WHEN THE PARAMETER* is to be monitored? (frequency of measurement or continuously)	REPORTING AGENCY
	Noise and vibration	At work site	Inspections at site. Check of vehicles/machinery technical conditions. Measurement of noise level with portable (hand-held) device.	During earthworks. On complaint.	Supervisor
	Maintenance of construction sites, machinery, construction materials storage and waste accumulation sites, etc.	At work site	Inspection	During construction works and after restoration of construction sites	Supervisor
	Site safety (presence of relevant warning signs, fire-fighting equipment, first-aid kit)	At work site	Inspection	During construction works	Supervisor
	Personnel safety (availability and use of relevant safety uniform)	At work site	Inspection	During construction works	Supervisor
	Overall workers' camp site conditions	At work site	Inspection	According to the existing regulations	Supervisor
	Accidents at work site including those with environmental hazardous materials ¹	At work site	Accident report (see: EMP Table 3)	When accident occur	Supervisor

¹ In the case of accident should be filling accident reporting form

PHASE	WHAT PARAMETER is to be monitored?	WHERE THE PARAMETER is to be monitored?	HOW THE PARAMETER is to be monitored? Type of monitoring equipment	WHEN THE PARAMETER* is to be monitored? (frequency of measurement or continuously)	REPORTING AGENCY
Operation	Accidents with hazardous materials or wastes	At accident site	Accident report	Immediately after an accident	Traffic Police, Nampol,
	Disposal of domestic waste	At Health Care Facility site	Inspection	During operation	Kuisebmond Hall
	Disposal of medical waste	At Health Care Facility site	Inspection	During operation	Kuisebmond Hall, Walvis Bay Municipality
	Maintenance of water supply, wastewater and drainage systems	At Health Care Facility site	Inspection	According to operational guidelines of the water supply/wastewater company as well as relevant department of Walvis Bay Municipality	Kuisebmond Hall
	Maintenance of traffic flow	At streets nearby the Health Care Facility site	Inspection	According police rules	Road Police

*** Monitoring reports will be developed on quarterly basis as is stated in EMP Section on "Implementation Schedule and Reporting".**

ACCIDENT REPORT FORM

Traffic accidents and environmental accidents such as spills, etc.

CONSTRUCTION OF HEALTH CARE FACILITY ON ERF 6288 KUISEBMOND, WALVIS BAY, ERONGO REGION, NAMIBIA

Table 3: Accident Report Form

1	Date:	
2	Region:	Erongo
3	Location:	Erf 6288, Kuisebmond, Walvis Bay
4	Health Care Facility:	
5	Construction Contractor:	
6	Accident Type:	
7	Severity:	<ul style="list-style-type: none"> • High • Medium • Low
8	Damage to third party:	<ul style="list-style-type: none"> • Yes • No
9	Reported By:	
10	Description of Incident Root Cause:	
11	Corrective Action Taken:	
12	Corrective Action to be Taken:	
13	Action Taken to Prevent Recurrence:	
14	Corrective Action Carried Out By:	
15	Close Out By:	
16	Close Out Date:	
17	Person Involved:	
18	Machine Involved:	
19	Contractor/Sub Contractor Involved:	
20	Third Party Involvement:	
21	Photo Reference – Attached:	The photos with appropriate descriptions should be presented as an Attachment to the Incident Report

For Official use only

<i>Date</i>	
<i>Received by:</i>	
<i>Decision/Action made:</i>	