APP No: 260113006887

Updated Environmental Management Plan (EMP) for the Renewal of Environmental Clearance Certificate Mining License 186 (ML-186), Tubusis Area, Karibib District, Erongo Region

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CLIENT	Eximus Technologica Corporation (Pty) Ltd
LOCATION	Tubusis Area, Karibib District, Erongo Region
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ACRONYMS

DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
EC	Environmental Commissioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
PPE	Personal Protective Equipment
RD	Red-Dune Consulting CC

EXECUTIVE SUMMARY

This Environmental Management Plan (EMP) has been prepared in support of the renewal of the Environmental Clearance Certificate (ECC) for Mining Licence 186 (ML 186), located in the Tubusis area, Karibib District, Erongo Region. The EMP provides a structured framework for managing and mitigating potential environmental and social impacts associated with mining-related activities within the licence area.

Mining activities have not commenced since the initial issuance of the ECC in 2014, and baseline environmental conditions remain largely unchanged. The updated EMP aligns with the Environmental Management Act, 2007, and aims to ensure environmental protection, legal compliance, and responsible resource management during any future operational phase, as well as during rehabilitation and decommissioning.

This Environmental Management Plan (EMP) has been prepared for Mining License 186 held by Eximus Technologica Corporation (Pty) Ltd for demantoid garnet mining operations in the Tubusis area, Karibib District, Erongo Region. This EMP supports the renewal application for the Environmental Clearance Certificate in accordance with the Environmental Management Act No. 7 of 2007.

The EMP provides a framework for managing environmental impacts throughout the project lifecycle, and decommissioning phase. It establishes clear management actions, responsibilities, monitoring requirements, and compliance procedures.

1 INTRODUCTION

1.1 Background

Mining Licence 186 is held by Eximus Technologica Corporation (Pty) Ltd and covers an area that includes the historic Green Dragon Mine, where mining ceased several decades ago. The licence area has experienced limited historical prospecting disturbances, primarily from informal small-scale activities predating the current licence holder. An Environmental Clearance Certificate was first issued in August 2014 and has been renewed in accordance with legislative requirements. Due to delays in licence finalisation and limited investor confidence, no mining operations were initiated during the validity of previous ECCs. This EMP is submitted as part of the statutory process to renew the ECC following its expiry in March 2025.

1.2 Proponent

The proponent of the project is **Eximus Technologica Corporation (Pty) Ltd**, the registered holder of Mining Licence 186. The proponent bears overall responsibility for ensuring that all mining-related activities comply with applicable environmental legislation, permit conditions, and the commitments contained in this EMP.

1.3 Environmental Assessment Practitioner

The Environmental Assessment Practitioner appointed for the preparation of the updated EMP and ECC renewal application is Red-Dune Consulting CC, an independent Namibian environmental consultancy. The EAP is responsible for ensuring that the EMP is prepared objectively, in accordance with legal requirements, and reflects best environmental management practices.

1.4 Renewal of Environmental Clearance Certificate

The most recent ECC for ML 186 expired in March 2025. In accordance with Section 56 of the Environmental Management Act, an ECC is valid for three years and may be renewed upon application. This updated EMP is submitted as part of the renewal process to demonstrate continued environmental compliance and readiness for responsible mining operations.

2 PROJECT DESCRIPTION

2.1 Location

The mining licence area is located approximately 30 km north of Usakos, along the D2306 graded road toward Okombahe, in the Karibib District, Erongo Region, coordinate -21.670355°, 15.387629°. The turnoff to the mine is from the D2306 to the west, about 5 km before the village of Tubusis.

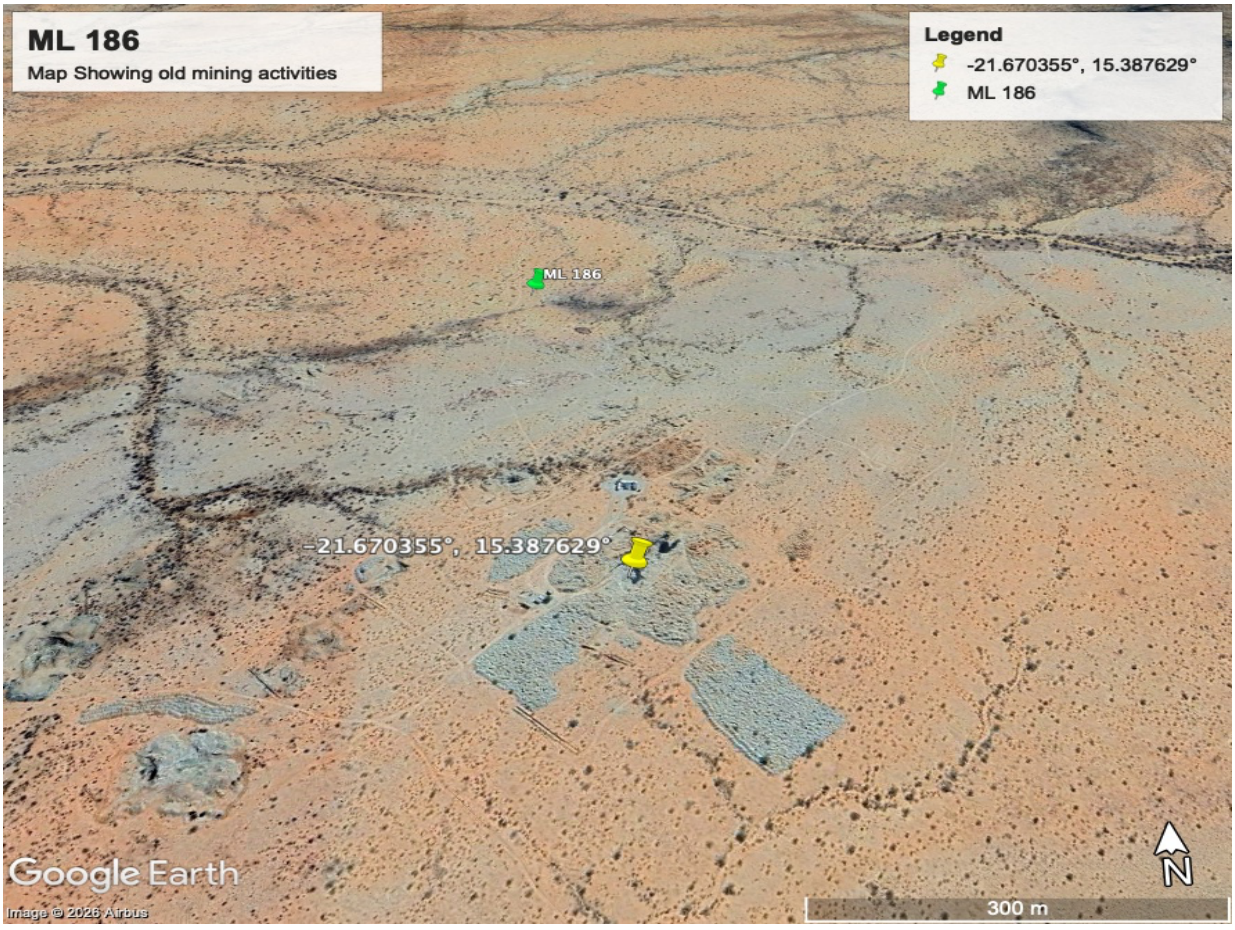

Figure 1 ML 186 Locality Map

3 STATUS OF MINING ACTIVITIES

No mining activities have taken place within the ML 186 area since the initial issuance of the ECC in 2014. Existing site infrastructure is limited to a small, prefabricated office and accommodation unit, storage containers, and previously mobilised processing equipment. As a result, no additional environmental disturbances have occurred, and the baseline environment remains consistent with conditions described in the original EIA.

4 THE ENVIRONMENTAL MANAGEMENT PLAN

4.1 Purpose of Updated EMP

The purpose of this updated Environmental Management Plan (EMP) is to support the renewal of the Environmental Clearance Certificate (ECC) for mining activities under Mining Licence (ML) No. 186, held by Eximus Technologica Corporation (Pty) Ltd. This update ensures that the project remains fully compliant with the Environmental Management Act, 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment Regulations of 2012, as administered by the Ministry of Environment, Forestry and Tourism (MEFT).

The EMP reaffirms the proponent's commitment to responsible and sustainable environmental management by achieving the following key objectives: ensuring compliance with Namibian environmental legislation and regulations; minimizing negative environmental impacts while enhancing positive socio-economic benefits; establishing clear environmental management procedures and responsibilities; providing a monitoring framework to track environmental performance; ensuring effective communication with stakeholders and regulatory authorities; facilitating continuous improvement in environmental management practices; ensuring safe working conditions and protecting worker health; and planning for responsible mine closure and rehabilitation. Since the initial issuance of the ECC, no mining activities have been undertaken within the licence area, and consequently, no environmental disturbances or impacts have occurred. This update therefore provides MEFT and other stakeholders with assurance that

appropriate environmental safeguards remain in place and that the proponent is fully prepared to implement all required mitigation, management, and monitoring measures once mining activities commence.

4.2 Compliance to the EMP

Compliance with this EMP is mandatory for all employees, contractors, and subcontractors operating on site. The proponent shall ensure that the EMP is implemented, monitored, and reviewed regularly, and that corrective actions are taken where non-compliance is identified.

4.3 Roles and Responsibilities

The proponent retains overall responsibility for EMP implementation. Site management is responsible for daily environmental control, while all employees and contractors are required to comply with the prescribed mitigation measures.

- **Mine Manager:** Overall responsibility for EMP implementation and liaison with regulatory authorities.
- **Environmental Officer:** Day-to-day EMP implementation, monitoring, inspections, record keeping, and training.
- **Site Supervisors:** Ensuring compliance within their areas of responsibility and reporting incidents.
- **Employees and Contractors:** Compliance with environmental procedures and reporting of incidents.
- **Financial Responsibility of the Proponent:** Eximus Technologica Corporation (Pty) Ltd shall ensure that adequate financial resources are allocated and made available for the effective implementation of this EMP. This includes funding for environmental monitoring, mitigation measures, progressive rehabilitation, and final decommissioning and closure activities. The proponent shall periodically review financial provision requirements to ensure that sufficient resources remain available throughout the life of the mine, in accordance with the Environmental Management Act, 2007, the Minerals

(Prospecting and Mining) Act, 1992, and any conditions attached to the Environmental Clearance Certificate.

5 REGULATORY AND INSTITUTIONAL FRAMEWORK

The mining activities proposed under Mining Licence 186 are governed by a comprehensive legal and regulatory framework designed to ensure environmental protection, sustainable resource use, and the safeguarding of human health and safety. Compliance with these legal instruments is mandatory and forms the basis upon which the Environmental Clearance Certificate renewal is assessed.

Table 5:1 Key Legal and Regulatory Framework Applicable to ML 186

Legislation / Policy	Relevant Authority	Key Provisions Relevant to the Project	Applicability to ML 186
Environmental Management Act, 2007 (Act No. 7 of 2007)	Ministry of Environment, Forestry and Tourism (MEFT)	Establishes the requirement for an Environmental Clearance Certificate; promotes sustainable development; requires mitigation of environmental impacts and public participation	Governs the need for ECC renewal and implementation of the EMP throughout the project lifecycle
Environmental Impact Assessment Regulations, 2012 (GN No. 30 of 2012)	MEFT	Prescribes procedures for EIA, EMP preparation, ECC issuance, renewal, monitoring, and compliance	Provides procedural requirements for ECC renewal and EMP approval
Minerals (Prospecting and Mining) Act, 1992 (Act No. 33 of 1992)	Ministry of Industries, Mines and Energy (MIME)	Regulates mining licences, mining operations, rehabilitation obligations, and mine closure responsibilities	Authorises mining under ML 186 and requires environmentally responsible mining practices

Legislation / Policy	Relevant Authority	Key Provisions Relevant to the Project	Applicability to ML 186
Labour Act, 2007 (Act No. 11 of 2007)	Ministry of Labour, Industrial Relations and Employment Creation	Provides for occupational health and safety, fair labour practices, and worker welfare	Applies to all employees and contractors working on the mine site
Water Resources Management Act, 2013 (Act No. 11 of 2013)	Ministry of Agriculture, Water and Land Reform	Protects surface and groundwater resources; regulates water abstraction, use, and pollution prevention	Governs water use, borehole protection, wastewater management, and spill prevention measures
Public and Environmental Health Act, 2015 (Act No. 1 of 2015)	Ministry of Health and Social Services	Addresses sanitation, waste management, pollution control, and public health protection	Applies to waste handling, sewage management, and worker accommodation facilities
National Heritage Act, 2004 (Act No. 27 of 2004)	National Heritage Council of Namibia	Protects archaeological, cultural, and heritage resources; requires chance-find procedures	Requires implementation of heritage protection and chance-find procedures during mining
Atmospheric Pollution Prevention Ordinance, 1976 (Ordinance No. 11 of 1976)	MEFT / Local Authorities	Controls air pollution, dust emissions, and noxious fumes	Applicable to dust generation, vehicle emissions, and processing activities

Legislation / Policy	Relevant Authority	Key Provisions Relevant to the Project	Applicability to ML 186
Nature Conservation Ordinance, 1975 (Ordinance No. 4 of 1975)	MEFT	Provides for protection of wildlife and natural habitats	Relevant to minimising disturbance to fauna and preventing unnecessary habitat destruction
Minerals Policy of Namibia	Ministry of Mines and Energy	Promotes sustainable mining, environmental protection, and socio-economic development	Guides responsible resource extraction and local socio-economic benefits
EMP Approval Conditions (ECC Conditions)	MEFT	Sets project-specific environmental conditions and monitoring requirements	Binding conditions once ECC renewal is approved

6 The ESMP

This ESMP Environmental Management Plan (EMP) is structured to address potential impacts across four categories: ESMP awareness, Biophysical, Health and Safety, and Social Environment. These categories encompass various potential impacts, including air quality, water use, waste management, soil disturbance, erosion, noise, occupational health and safety, community relations, and heritage protection as provided in the **Table 2** below.

Table 6:1. Structure ESMP

Impact	**Aspects**	**Project Phase**
Lack of ESMP awareness and general communication	ESMP availability	Construction & Operation
	Adequate Communications	Construction & Operation
Bio-Physical Environment	Land disturbance and habitat loss = Loss of Biodiversity	Construction
	Land Degradation (Excavation and pitting)	Construction and Operation
	Visual Impacts	Construction
	Waste generation (hazardous and non-hazardous) (Hydrocarbon spills & construction chemicals, waste rock / dump facility)	Construction and operation
	Soil and water pollution	Construction and operation
	Noise, dust and vehicle emissions	Construction and operation
	Excess water use in washing/sorting and potential discharge of turbid or chemically contaminated water	Construction and operation
	General Hazardous Waste	Construction and operation

Impact	Aspects	Project Phase
Occupational, Health and Safety (OHS)	Noise	Construction and operation
	Dust	Construction and operation
	Construction machinery, heights, hot works,	Construction and operation
	Vehicle Accident	Construction and operation
	Use of mining explosives	Construction and operation
	Chemical burns	Construction and operation
Social Environment	Employment opportunities	Construction and operation
	Skills enhancement	Construction and operation
	Alcohol and Drug abuse	Construction and operation
	Health provision (Infectious Diseases)	Construction and operation
	Community impacts and social disruption- influx of workers, pressure on local services, potential land use conflict	Construction and operation
	Heritage resources / artefacts (Archaeology)	Construction and operation

This EMP serves as a dynamic, living document, subject to periodic review and updates to incorporate changes in operational activities, legislative requirements, and evolving best practices in environmental management. All employees, contractors, and subcontractors associated with Mining License 186 must implement and comply with its provisions at all times.

The ESMP tables below outline management objectives, mitigation actions, monitoring indicators, monitoring frequencies, and responsible parties, systematically controlling environmental risks throughout the project lifecycle.

6.1 Section A. Construction Phase

Table 6:2 ESMP awareness – Construction Phase

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring program		
				Aspect to monitor	Monitoring Frequency	How
ESMP awareness	To ensure that all staff / employees are conversant with the requirements of the ESMP	1. Undertake induction for all workers / employees on the provisions of the ESMP before work commencement. 2. Ensure that a copy of the ESMP is kept on site and accessible to all.	Proponent and Contractors	Induction Minutes and Attendance Register, Signed by each staff member.	Monthly	Induction meeting attendance registers Physical verification of ESMP on site
Communication	To ensure effective communication during construction	1. Develop a communication strategy 2. Where necessary, translate critical aspects of the ESMP into infographic (pollution, health and safety). 3. Place site contact numbers for Site managers and other emergency response team	Site Environmental Officer	Communication Strategy Emergency number place on site and clearly seen Radio communication	Bi-Annually	Communication strategy ESMP translated into infographics Physical observation of emergency number

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring program		
				Aspect to monitor	Monitoring Frequency	How
		such as police and ambulances.				

Table 6:3. Biophysical Environment - Construction Phase

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Monitoring frequency	How
Loss of Biodiversity	Protect and conserve biodiversity	1. Only remove trees when necessary 2. Do not kill animals 3. Bird nest must be relocated by experts	Proponent and Contractors	Indiscriminatory clearing Report of killed animals	Quarterly	Physical observation Report of killed animals
Dust emission	Prevent and reduce dust pollution	1. Apply dust suppression measures such as water spraying. 2. Spray water on stockpiles of aggregate and rock dust 3. Movement of heavy vehicles must strictly be restricted on site. 4. Adhere to the minimum speed limit of 30 or 40km/hour. 5. Do not excavate and/or offload sand during heavy winds. 6. Trucks carrying sand must be	Site Environmental Officer	Dust plumes Public complaints Water truck (s) Concrete mixers Truck carrying sand covers	Daily	Physical observation Public Complains

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Monitoring frequency	How
		covered. 7. Sand stockpiles must be covered or regularly water sprayed with water. 8. On site where soil is loosened by vehicle movement, apply dust a suppression method such as water spraying. 9. Install an onsite concrete batching plant 10. Cement and concrete must be mixed with concrete mixers and not manually in the open. 11. Cement bags must be stored and disposed of properly and may not be shaken in the open.				
Land degradation / Soil erosion	Prevent land degradation and enhance	1. Movement of heavy vehicles must be coordinated and restricted to be within the site and access roads	Proponent and Contractors	Undesignated tracks by heavy vehicles	Bi-Weekly	Physical observation

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Monitoring frequency	How
	soil conservation	2. Loosen soil must be sprayed with water and compacted	Site Environmental Officer			
Noise and vibration	Avoid excessive noise pollution and protect employee's health	1. Maintain low speed on project sites 2. All vehicles must be well serviced to prevent excessive noise 3. Do not hoot unnecessary 4. Do not rev vehicle / machinery engines 5. Switch off engine when not in use. 6. No employees must be exposed to noise levels above the 85dB (A) limit over a period of 8 hours. Should the noise level be higher than 85dB (A), the employer must implement a hearing	Proponent and Contractors Site Environmental Officer	Records of vehicle service records Complaints of noise from employees and general public	Daily	Physical observation Public Complains

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Monitoring frequency	How
		conservation program such as noise monitoring; 7. Stationary vehicles and machines must be switched off at time 8. Warn public and employee on blasting times. 9. Blasting site / areas must be free of people. 10. Use approved contractor to undertake blasting				
Vehicle / machinery emission	To reduce greenhouse gases emission	1. Ensure that vehicles are well serviced and road worthy 2. Stationary vehicles must be switched off	Proponent and Contractors Site Environmental Officer	Records of vehicle service records Black smoke from exhaust	Monthly	Vehicle service records Physical observation
Waste generation	Prevent litter and pollution	1. Develop a construction phase waste management plan 2. Develop an onsite domestic wastewater treatment plant / equal alternative	Proponent and Contractors Site Environmental Officer	Scatter litter, Wastewater treatment plant / temporally ablution facilities,	Weekly	Scattered waste, Physical observation of

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	**Monitoring frequency**	**How**
		3. Ensure good house keeping 4. Provide dustbins and ensure waste segregation to enable recycling. 5. Designate a storage area for building rubbles. 6. Provide labelled household waste drums for household solid waste. 7. Ensure separate ablution facilities for men and women. 8. Construction sites generate garbage, refuse and building rubbles. Therefore, waste generated from the construction site should be classified into different categories, e.g. Material Waste (Wood, steel, corrugated iron, etc.), Building Rubble (concrete,		Labelled household dustbins, Skip bins, Waste collection records, Designated hazardous waste bins,		monitoring indicators

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Monitoring frequency	How
		bricks etc.), Garden Waste (tree stumps, branches, etc.), Domestic Waste (Litter – cans, plastics, tissue, plastics etc.) 9. Each category should be collected separated disposed of, in the most suitable and environmentally acceptable manner 10. All waste produced on site should be contained and disposed as required by law 11. There must be sufficient skip containers at the site for building rubbles 12. No onsite burying, dumping of waste material is permitted. 13. General waste must be separated from hazardous				

Environmental / Social Impact	Objective	Key Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	**Monitoring frequency**	**How**
		waste; 14. Hazardous waste must be disposed of at an approved site; 15. The Waste Bin for oil cans must be clearly marked Hazardous;				
Hazardous waste	Avoid pollution from hazardous materials	1. Vehicles must be well survived to avoid oil spills and excessive emissions 2. All hydrocarbons must be stored in an enclosed environment. 3. Fuelling of site bound equipment such as excavators must be done on bunded structure 4. Parked vehicles / machinery must be provided with drip trays	Proponent and Contractors Site Environmental Officer Random check by designated law environmental / health inspector	Vehicle service records Drip Trays Bonded storage areas	Bi-Weekly	Service records Physical observation of places of hydrocarbons storages Drip trays

Table 6:4. Occupational Health and Safety- Construction Phase

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
Occupational Health and Safety	To ensure employees' public health and safety	1. Develop a healthy and safety plan / policy. 2. Provide awareness to the employees on dangers of HIV/AIDS, alcohol and drug abuse 3. All employees must be screen with the breathalyser to avoid intoxicated personnel on site 4. Provide condoms on site 5. All employees must go through a health and safety induction. 6. Only licensed employees should be allowed to operate specialized vehicle 7. All heavy vehicles must have a rotating flushing light installed for visibility	Proponent and Contractors Site Environmental Officer Random check by designated law environmental / health / labour inspector	Health and Safety Policy Drunk / misbehaving employees monitor presence of alcohol at the construction site Injuries at work Personal Protective Equipment Availability of the first aid kit onsite Driver's licenses Minutes of training Warning signs First aid training attendance register Rotating flushing lights on heavy and construction	Daily Weekly Quarterly	Health and Policy Breathalyzer report Accident at work PPE Condom on site Attendance registers, Random interviews with employees.

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
		8. Ensure that all vehicle are well serviced and roadworthy 9. All employees must be provided with adequate Personal Protective Equipment (PPE) 10. No employee must be allowed to be at work station without adequate PPE 11. There must be a first aid kid with adequate medicine 12. Provide adequate gender sensitive ablution facility 13. Provide clean drinking water. 14. Erect warning signs at designated sites to alert public of potential dangers		vehicles, substance abuse awareness raising		

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
		15. Trucks carrying sand and aggregate must be covered to avoid material flying off 16. Transportation of construction material at night is not allowed 17. Adhere to the Labour act, non-toxic human dust exposure levels may not exceed 5mg/m3 for respiratory dust and 15mg/m3 for total dust. 18. Abide by the Occupational Health and Safety and Labour Act of Namibia and other statutory requirement such as International Labour Practise (ILO) 19. Supervisors must undergo an occupational health and first aid course,				

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
		20. Train employees on the possible health hazards to avoid potential risks 21. Cordon off the construction areas / sites				

Table 6:5. Social Environment- Construction Phase

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
Visual impacts	To prevent eye sore	1. Ensure the building paints reflect the surrounding to blend in. 2. The use of earth colours is advised 3. Ensure good house keeping	Proponent and Contractors	Building paint in relation to the environment Untidy construction area	Annually	Physical observation
Employment creation	To enhance employment opportunities and	1. Unskilled labour must all be reserved for local	Proponent	Employment contract	Quarterly	Employment records

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
	promote local hiring	2. Only employ foreigners where skills and expertise in not in Namibia 3. Abide by the labour act 4. Provide contract to employees 5. Support local training to develop capacity.	Site Environmental Officer Labour inspector	Training and capacity building programs Workshop and Training attendance registers Employees certificate of attendance		On-site inspection and interviews with employees
Increase in local economy	To enhance local procurement	1. Procure from local supplier 2. Subcontract SME 3. Ensure Corporate Social Responsibility	Proponent and Contractors	Procurement contracts No SME subcontracted Evidence of CSR	Bi-Annual	Procurement records Records of SME subcontracted Documentation od CSR
Increased demand for water	To promote water conservation	1. Ensure optimal utilization of water 2. Use as far as possible approved grey water for dust	Proponent and Contractors Site Environmental Officer	Dripping water storage tanks Use of grey water for dust suppression	Daily	Physical observation at water storage areas

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	**Frequency**	**How**
				Water wastage		
Heritage and Archaeological Resource	To prevent damage to heritage and archaeological materials	1. Workers must be trained on the possible find of archaeological material in the area 2. Establish a "Chance Find Procedure" where if any archaeological finding (Heritage (rock painting and drawings), human remains or artefacts) is encountered; 3. The activity must be stopped immediately and the operation manager of that activity be informed; 4. The manager must ensure the cordoning off the area with a danger tape and take appropriate records and pictures	Proponent and Contractors Site Environmental Officer	Report of Archaeological material	Daily	Incidental reports

Environmental / Social Impact	Objective	Proposes Mitigation Measures	Responsibility	Monitoring Program		
				Aspect to monitor	Frequency	How
		5. The manager must immediately report the findings to the National Museum (+264 61 276800) or the National Forensic Laboratory (+264 61 240461).				

6.2 Section B - Operational Phase

Table 6:6. Bio-Physical Environment – Operational Phase

Environmental Aspects	Management objective	Key Mitigation Measures	Monitoring Indicator	Action Plan		
				Monitoring Frequency	Responsible Party	How
Dust / Air quality	Minimize dust emissions and maintain ambient air quality within legal/health standards.	Water spraying on haul roads/work areas; cover vehicle loads; limit vehicle speeds; use dust suppressants; vegetative buffers; maintain equipment filters.	PM10/PM2.5 concentrations, visible dust nuisance incidents, road surface condition.	Weekly visual checks; PM sampling monthly (or as required by regulator).	Site Environmental Officer / Mining Operations Manager; Contractors.	Physical observation Compliance report (Speeding)
Biodiversity	To protect plants and animals, both domestic and wildlife	Fence the working area along its perimeter to control ingress by domestic and wildlife; implement a zero tolerance on poaching for plant and animals	Reported incidence of animal and plant theft	Daily	Site Environmental Officer / Mining Operations Manager; Contractors.	Reports Public / Community complaint Disciplinary records
Vehicles emission	Apply similar mitigation as during construction phase					
Land degradation	Apply similar mitigation as during construction phase					

Environmental Aspects	Management objective	Key Mitigation Measures	Monitoring Indicator	Action Plan		
				Monitoring Frequency	Responsible Party	How
Hydrocarbon Spills and leakages.	Apply similar mitigation as during construction phase					
Dust and noise from crushing operations	Reduce airborne particulate emissions	Install water sprays on crushing equipment; use dust suppression systems during processing; locate crushers downwind of accommodation; cover stockpiles during windy conditions; PPE for workers (Dust must, ear muff, eye gloves etc)	Effectiveness of dust suppression systems; visible dust plumes	Daily	Operations Manager	Physical observation and ambient air quality monitoring.
Water use	Promote efficient and sustainable water use and prevent contamination of surface and groundwater.	Monitor daily water usage and maintain records; implement water recycling where feasible (dust suppression); install water-efficient fixtures in ablution facilities; repair leaks immediately	Water usage records	Daily water-use logs; monthly water quality sampling; post-storm inspections.	Environmental Officer	Water logs

Environmental Aspects	Management objective	Key Mitigation Measures	Monitoring Indicator	Action Plan		
				Monitoring Frequency	Responsible Party	How
Waste Management	To ensure safe handling and disposing of waste	Develop a waste management plan for the mining operation	Waste management plan	Bi-Annually	Mine Manager	Physical Observation
Wastewater management	Prevent contamination of soil and water	Install septic tank system for sewage treatment; regular emptying by licensed contractor; no discharge to the environment; maintain records of wastewater disposal	Septic tank inspection records; disposal certificates	Weekly	Site Manager	Physical observation
Stormwater management	Prevent polluted runoff and erosion	Construct berms around fuel storage areas; install silt traps in drainage channels; prevent contaminated runoff from workshops; direct clean stormwater away from operational areas	Condition of berms and silt traps; runoff observations	Seasonal (during rainfall	Site Supervisor	Physical Observation

Environmental Aspects	Management objective	Key Mitigation Measures	Monitoring Indicator	Action Plan		
				Monitoring Frequency	Responsible Party	How
Groundwater protection	Protect groundwater resources from pollution	No disposal of chemicals or waste near boreholes; maintain 100 m buffer zone around water sources; store hazardous materials in bunded areas; immediate cleanup of spills	Spill records; inspections near boreholes	Bi-Annual	Environmental Officer, Site Supervisor	Ground water monitoring well Water quality analysis
Surface water protection	Protect surface water and drainage lines	Prevent sediment discharge to drainage lines; install erosion control measures; no washing of vehicles in natural drainage areas;	Visual inspection of drainage lines	Seasonal	Environmental Officer	Physical observation
Topsoil management	Ensure successful rehabilitation	Strip and stockpile topsoil separately from subsoil; maximum stockpile height of 2 m; protect stockpiles from erosion using berms; clearly mark stockpile locations	Stockpile condition and location	Weekley	Mining Supervisor Environmental Officer	Physical observation
Erosion control	Minimise erosion on disturbed land	Install contour berms on slopes; establish vegetation	Signs of erosion; condition of berms	Monthly	Environmental Officer	Physical observation

Environmental Aspects	Management objective	Key Mitigation Measures	Monitoring Indicator	Action Plan		
				Monitoring Frequency	Responsible Party	How
		on disturbed areas; maintain drainage channels; stabilise pit edges				
Soil compaction	Maintain soil structure	Restrict vehicle movement to designated roads; avoid operations on wet soils; rehabilitate compacted areas by ripping before topsoil replacement	Compliance with designated routes	Weekly	Site Supervisor	Physical observation
Waste management (general & hazardous)	Prevent pollution and environmental degradation	Provide covered waste bins; separate hazardous and non-hazardous waste; licensed disposal; bunded storage for hazardous waste; maintain disposal records; no burning of waste	Waste inspection logs; disposal certificates	Daily	Site Manager	Physical observation
Hazardous materials and spills	Prevent soil and water contamination	Store fuel in bunded areas with 110% capacity; install spill kits; train staff in spill response; immediate	Spill incident register	Weekly	Environmental Officer	Physical observation

Environmental Aspects	Management objective	Key Mitigation Measures	Monitoring Indicator	Action Plan		
				Monitoring Frequency	Responsible Party	How
		containment and cleanup of spills; refuelling on impermeable surfaces only				
Noise and vibration	Minimise noise nuisance	Ensure functional mufflers; regular equipment maintenance; restrict operations to daylight hours; provide hearing protection; inform community about scheduled blasting	Noise complaints; maintenance records	During blasting	Mine Manager	Public / community complaint record and physical observation

Table 6:7 Social Environment Aspects – Operational Phase

Social Aspect	Objective	Proposed Mitigation Measures	Action Plan		
			Monitoring Indicator	Responsible Party	How
Local employment	Enhance local socio-economic benefits	Prioritise recruitment from surrounding communities; provide	Employment records	Mine Manager	Maintain an up-to-date employment register.

Social Aspect	Objective	Proposed Mitigation Measures	Action Plan		
			Monitoring Indicator	**Responsible Party**	**How**
		skills training; ensure fair wages and gender inclusion			
Local procurement	Support local businesses	Source goods and services locally where feasible; maintain procurement records; apply fair tender processes	Procurement records	Procurement Officer	Maintain procurement documentation and supplier registers.
Occupational health and safety	Ensure a safe working environment	Provide appropriate PPE (hard hats, safety boots, gloves, dust masks); always enforce PPE use; replace damaged PPE immediately; conduct regular inspections	PPE compliance records	Site Supervisor	Record PPE issue, replacement, and inspection results.
Safety training and induction	Improve worker awareness and preparedness	All workers to complete safety induction before starting work; regular toolbox talks; emergency response drills; maintain training records	Training attendance records	HSE Officer	Keep a training log and attendance sheets

Social Aspect	Objective	Proposed Mitigation Measures	Action Plan		
			Monitoring Indicator	Responsible Party	How
Pit and site safety	Prevent injuries to people and animals	Fence open pits and excavations; install warning signage; maintain safe benches; restrict access to unstable areas; rescue trapped animals	Inspection and incident reports	Mining Supervisor / Security	Conduct and record regular safety inspections.
Traffic and access safety	Reduce traffic-related accidents	Enforce speed limits; maintain access roads; trained and licensed drivers only; install speed limit signage	Traffic incident records	Site Supervisor	Log incidents and patrols; maintain road condition reports.
Community relations	Maintain positive relations with communities	Appoint community liaison officer; regular meetings with community leaders; establish grievance mechanism; ensure transparent communication	Meeting minutes; complaints register	Mine Manager	Keep records of meetings, grievances and resolutions.
Heritage and archaeology	Protect cultural and archaeological resources	Implement chance find procedure; stop work immediately upon discovery; notify National Heritage Council; fence off site; worker awareness training	Incident reports	All Personnel	Record and report chance-find incidents per procedure.

Social Aspect	Objective	Proposed Mitigation Measures	Action Plan		
			Monitoring Indicator	**Responsible Party**	**How**
Illegal mining prevention	Protect site security and safety	Fence site; employ security personnel; monitor old pits; report illegal mining to authorities; engage community	Security reports	Security Supervisor	Maintain security logs and incident reports
Grazing land access	Minimise conflict with land users	Maintain livestock access routes; consult farmers on water access; compensate where required	Consultation records	Mine Manager	Document consultations and any compensation agreements

7 7 REHABILITATION AND DECOMMISSIONING PLAN

7.1 7.1 Rehabilitation Plan

Rehabilitation is a core component of this EMP and will be implemented progressively to minimise long-term environmental disturbance. Progressive rehabilitation will ensure that disturbed areas are stabilised and restored as soon as they are no longer required for operational purposes, thereby reducing erosion, visual impacts, and land degradation.

Topsoil will be stripped and stockpiled separately prior to disturbance and protected from erosion to preserve its biological value. Following completion of mining activities in each area, disturbed surfaces will be re-contoured to blend with the surrounding natural landscape, compacted areas will be ripped where necessary, and topsoil will be replaced. Natural re-vegetation will be encouraged through the retention of indigenous seed material and natural recovery processes suited to the arid environment.

Rehabilitation success will be monitored through visual inspections, erosion assessments, and evaluation of vegetation recovery. Any areas showing signs of instability or poor recovery will be addressed through corrective actions. The rehabilitation strategy ensures that land is returned to a stable condition compatible with surrounding land uses, particularly livestock grazing.

7.2 Decommissioning Plan

Mine closure and decommissioning will be planned and implemented in a manner that ensures long-term environmental stability and public safety. Upon cessation of mining activities, all non-essential infrastructure, equipment, and temporary structures will be removed from the site unless otherwise agreed with the relevant authorities.

Open pits and excavations will be secured and rehabilitated to prevent safety hazards to people and livestock. Disturbed areas will be stabilised, re-contoured, and rehabilitated in accordance with the rehabilitation plan. Waste materials will be removed and disposed of at licensed facilities, and no contaminated materials will be left on site.

The proponent commits to engaging with regulatory authorities during closure planning to ensure that decommissioning activities meet all legal and environmental requirements. Closure will be undertaken in a phased and controlled manner to ensure that residual environmental impacts are minimized and that the site remains safe and stable in the long term.

8 CONCLUSION AND RECOMMENDATION

8.1 8.1 Conclusion

This Environmental Management Plan demonstrates that the proposed mining activities under Mining Licence 186 can be undertaken in an environmentally responsible and legally compliant manner. The absence of mining activities since the initial issuance of the ECC in 2014 means that no new environmental impacts have occurred and that baseline conditions remain intact.

The EMP provides a comprehensive framework for impact mitigation, environmental monitoring, rehabilitation, and closure. Clear roles and responsibilities, together with detailed mitigation measures and a structured rehabilitation and decommissioning plan, provide assurance that potential impacts will be effectively managed.

8.2 Recommendation

Based on the information presented, it is concluded that the EMP is adequate to support the renewal of the Environmental Clearance Certificate for Mining Licence 186. It is therefore recommended that the Environmental Commissioner approves the ECC renewal, subject to ongoing compliance with this EMP and all applicable legislative requirements.