

GECKO SALT – CAPE CROSS SALT PROJECT

UPDATED ENVIRONMENTAL MANAGEMENT PLAN

PROPOSED PROSPECTING ACTIVITIES FOR INDUSTRIAL MINERALS, WITHIN
EXCLUSIVE PROSPECTING LICENCE (EPL) 4426

ERONGO REGION



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1. Introduction & Project Description

Gecko Salt (Pty) Ltd (Gecko Salt) is the license holder of EPL 4426, which covers approximately 2280.5755 hectares. The license stretches across the saltpan at Mile 68, northwest of Henties Bay, along the coastline. An overview of the locality and extent of the license is given in **Figure 1**. The project was granted an environmental clearance certificate (ECC) for prospecting and mining industrial minerals (Salt), by the Department of Environmental Affairs (DEA), which is valid until 26 October 2024.

The project involves the establishment of salt crystallization pans for salt production by solar evaporation (including the mining of natural rock-salt). Salt production would be phased, up to a maximum of 1.5 million tons per annum. Accessory project components include the crushing and washing of the raw salt to various product specifications, iodization and stockpiling of salt, bagging and loading of salt product and the development of support infrastructure (water and power supply).

Activities during the exploration phase include sampling, testing and exploratory drilling. The activities are temporary and are conducted at a small scale than those at the drilling/development, production, and decommissioning/reclamation phases. The impacts described for each resource would occur from typical exploration activities, such as vehicular traffic exploration drilling and bulk sampling.

As EPL 4426 falls within the Dorob National Park, Gecko Salt is submitting this updated Environmental Management Plan (EMP) and other prescribed documentation in application for an Environmental Clearance Certificate under the Environmental Management Act of 2007. Management and exterior control on the adherence of the proposed mitigation actions contained herein are considered important tools in preventing negative environmental impacts from the operations.



Figure 1: EPL 4426 Locality Map

2. EMP Objectives

The main purpose of the Environmental Management Plan (“EMP”) is to provide a strategy for the identified socio-economic and biophysical impacts in order to provide measures that mitigate, as far as practicably possible, the effects of significant adverse impacts while providing strategies for maintaining or enhancing positive impact effects.

This mode of environmental protection is implemented in all the activities associated with the Proponent operations, ensuring that time and national resources are not wasted and that problems occurring during all operations are identified and rectified to prevent damage to the environment.

If any issues were overlooked, the plan must be amended in consultation with the Proponent and regulatory authorities. The aim of this document is to provide management measures to address the environmental effects that have been identified in the Environmental Scoping and Impact Assessment report and to give possible mitigation measures/recommendations to address these effects. It is essential for personnel involved to fully be aware of the possible environmental issues and the means to avoid or minimize the potential impacts of activities on site.

Furthermore, the proponent fully understands the legal and policy requirements as a holder of the EPL. Impacts identified in the EIA form the basis of a set of environmental specifications that will be implemented on-site. These environmental specifications act as an agreement between the company and the Ministry of Environment, Forestry, and Tourism (MEFT).

The Environmental Management Act and Regulations require that an EMP for the proposed project be developed (see Legal Section of EIA Scoping Report). The Management Programmes within this EMP have therefore been compiled to satisfy requirements based on the regulations for all developmental projects in Namibia.

3. Administrative and Legal Framework

There are a number of laws in accordance with the national legal framework which are applicable to the proposed site. **Table 1** below contains laws and policies, which are relevant to the proposed activities on the EPL.

Table 1: Laws, policies and standards relevant to mineral exploration activities on EPL 4426

Year	Name	Natural Resource Use (energy & water)	Emission to air (fumes, dust & odours)	Emission to land (non-hazardous & hazardous)	Emission to water (industrial & domestic)	Noise	Visual	Land use	Biodiversity	Archaeology	Socio-economic	Safety & Health
2015	Draft Dorob National Park Tourism Development Plan	X	X	X	X	X	X	X	X	X	X	
1990	The Constitution of the Republic of Namibia of 1990	X	X	X	X	X	X	X	X	X	X	X
1997	Namibian Water Corporation Act, 12 of 1997	X									X	
2001	The Forestry Act 12 of 2001	X						X	X			
2009	Management and Development Plan for the Central Coast Park of the Namib-Skeleton Coast National Park	X	X	X	X	X	X	X	X	X	X	
2013	Water Resources Management Act 11 of 2013	X			X						X	
2012	Strategic Environmental Assessment (SEA) for the Erongo and Kunene coastal regions	X	X	X	X	X	X	X	X	X	X	
2004	National Heritage Act 27 of 2004									X		X

2007	Environmental Management, Act 7 of 2007	X	X	X	X	X	X	X	X	X	X	X
2012	Regulations promulgated in terms of the Environmental Management, Act 7 of 2007											
1995	Nature Conservation Amendment Act 5	X			X				X	X		
1990	Nature Conservation General Amendment Act 1990	X			X				X	X		
1975	Nature Conservation Ordinance 14 of 1975	X			X				X	X		
1976	Atmospheric Pollution Prevention Ordinance 11 of 1976		X									
1993	Convention on International Trade in Endangered Species (CITES)	X			X				X			
1992	United Nations Convention on Biological Diversity (CBD)	X			X				X			

1995	Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation	X	X	X	X	X	X	X	X	X		X
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4. Roles and Responsibilities

The main parties responsible for specific aspects of the EMP's implementation or to whom the responsibility reports are presented in **Table 2** below, with a description of their responsibilities towards environmental compliance and EMP implementation.

Table 2: Roles and responsibilities for EMP implementation

RESPONSIBLE PARTY	RESPONSIBILITY
Proponent	Bears the ultimate responsibility for all operations and is thus responsible for environmental performance. Must be informed of environmental issues and impacts of all operations (existing and future) and the resultant effect that such activities have on the environment.
Environmental Assessment Practitioner	Undertakes Environmental Impact Assessment ("EIA") and generates a draft Environmental Management Plan, completes EIA and EMP reports, ensures overall compliance of the EMP and undertakes periodic external environmental audits if appointed by the proponent.
Environmental Control Officer	<p>A representative that monitors the implementation of the EMP as well as identifies potentially detrimental impacts not identified in the EMP so that the EMP can be reviewed and updated. The following list outlines the ECO's responsibilities:</p> <ul style="list-style-type: none"> ➤ Responsible for maintaining compliance to the EMP and any other relevant legal requirements e.g., permits and authorisations. ➤ Implementation of the Environmental Management System ("EMS"). ➤ Coordination, monitoring and consultation with stakeholders and personnel, including the promotion of environmental management competence and providing risk assessment expertise. ➤ Undertake Environmental Risk Assessments (ERAs). ➤ Set environmental objectives and targets. ➤ Monitoring of systems to ensure compliance to legislation and company policies. ➤ To facilitate updating of the environmental management process and ascertaining the state of environmental risk and performance. ➤ Compile biannual reports for MEFT. ➤ Ensuring that all personnel undergo environmental awareness training as per company environmental standards on an ad hoc basis. ➤ Coordinate internal and external environmental audits. ➤ Submit required information to relevant authorities such as reporting related to monitoring and with regard to compliance with the EMP, permit and relevant authorisations.

5. Mitigation Measures and Plan

The potential impacts resulting from the proposed operations were evaluated in the scoping report. The suggested mitigations for potentially negative impacts if implemented, will reduce the impacts on the biophysical and socio-economic environment, so that their significance is negligible. The mitigation measures are included in the EMP implementation guidelines below.

This document may need to be periodically reviewed and updated due to new insights or operational changes to ensure that all the environmental impact aspects are included.

The mitigation measures outlined in **Table 3** below are applicable to all the relevant activities and facilities of the proposed mineral exploration activities on EPL 4426.

5.1 Environmental Management Plan for Gecko Salt (Pty) Ltd at EPL 4426

Table 3: Environmental Management Programme for EPL 4426

Activity	Aspect	Affected environment	Potential impact	Mitigation measure/recommendations/explanation
Exploration initiation	To establish a strong Environmental Awareness Protocol from the beginning of the exploration programme in order to ensure the least possible damage to the environment.	General EPL area	General behaviour of exploration team in the EPL area.	<ul style="list-style-type: none"> Provision in the budget is made for Environmental Awareness and training and for internal and external Environmental Monitoring Costs as well as for rehabilitation. Appointment of a senior person to assume responsibility for environmental issues (Environmental Officer). All individuals who work on, or visit, the sites are aware of the contents of the EMP. The EMP should be included in all Tender Documents. Field visit should take place during which main access tracks should be discussed in co-operation with the Ministry of Environment and Tourism staff members or representatives.
Implementation of the EMP	To define roles and responsibilities in terms of the EMP. To make all persons aware of these roles and responsibilities to ensure that exploration activities are conducted in compliance with the EMP. To implement environmental management that is preventative and proactive.	General EPL area	General behaviour of exploration team in the EPL area.	<ul style="list-style-type: none"> Senior exploration staff and all senior contractors are aware of, and implementing, EMP requirements. These people shall be expected to know and understand the objectives of the EMP and will, by example, encourage suitable environmentally aware behaviour to be adopted on all sites. Immediate recognition should be given to appropriate environmentally acceptable behaviour. Any inappropriate behaviour should be immediately corrected. An explanation as to why the behaviour is unacceptable must be given, and, if necessary, the person should be disciplined.

Activity	Aspect	Affected environment	Potential impact	Mitigation measure/recommendations/explanation
Environmental awareness briefings	To implement environmental awareness briefings for all individuals who visit, or work, on site.	General EPL area	General behaviour of exploration team in the EPL area.	<ul style="list-style-type: none"> • Every senior/supervisory member of the team is to familiarise themselves with the contents of the EMP and to understand their roles and responsibilities in 'walking the talk' and ensuring compliance with the EMP. • If agreed upon the Environmental Officer will hold an Environmental Awareness Briefing meeting which has to be attended by all exploration and drill contractors before the start of the drilling operation. The meeting should discuss the potential dangers to the environment of the following activities: littering, off-road driving, waste disposal, poaching & plant theft etc. The need to conserve water and implement water saving measures should also be presented. • The need for soil / substrate preservation should be explained.
Public relations	To maintain sound relationships with the landowner (MEFT)			<ul style="list-style-type: none"> • Inform the relevant person at MEFT regarding movement. • No littering occurs.
Management of hazardous substances	<p>To minimise the risk of pollution through the implementation of all reasonable measures to prevent leakage, spillage or inappropriate disposal of hazardous substances.</p> <p>To minimise the risk of hazardous substances affecting the health of all individuals and plant and animal life.</p>	General environment		<ul style="list-style-type: none"> • The Project Manager / Geologist and Contractor have identified all activities that involve the handling of potentially hazardous substances and protocols for the handling of these substances have been put in place and their implementation supervised. Hazardous substances are handled in accordance with the manufacturer's specifications and existing legal requirements. • The Project Manager / Geologist encourages the use of the least polluting, most rapidly biodegradable cleaning product, solvent, etc. • The Project Manager / Geologist and Contractor will ensure that all individuals, who could be exposed to hazardous substances, are adequately protected and educated about the safe and proper methods for handling of these substances. • Procedures for the containment and clean up of accidental hazardous accidents are developed by the Project Manager / Geologist in accordance to the manufacturer's specifications.

Activity	Aspect	Affected environment	Potential impact	Mitigation measure/recommendations/explanation
	To use biodegradable products as far as is reasonably possible.			<ul style="list-style-type: none"> • The Project Manager / Geologist or Contractor should immediately implement actions to stop or reduce and contain any spills. • The Project Manager / Geologist arranges and supervises implementation of the necessary clean up procedures and proper disposal of contaminated soil, water and other materials at an approved facility. • Clean up, and dispose of contaminated soil at an official waste site.
Waste management	To maintain a clean and tidy site / area.	Fauna, general environment, visual impact	Disturbance to fauna. Visual impact	<ul style="list-style-type: none"> • The following waste management procedures shall be implemented: <ul style="list-style-type: none"> ▪ Minimisation of waste production; ▪ Where possible, compact waste to reduce its bulk; ▪ What is taken in has to be taken out and disposed of at an official waste site; ▪ Waste containers with suitable lids are provided on site; ▪ Illegal dumping and littering is not to be tolerated.
Accommodation (during exploration drilling only)	Provision for environmental camp standards, waste management and rehabilitation; Disturbance of general environment	Camp area and surroundings; Fauna, Flora	General behaviour of exploration team in the EPL. Disturbance to fauna & flora. Visual impact	<ul style="list-style-type: none"> • The geological / geophysical team is accommodated a small camp near Cape Cross. • A long drop or chemical toilet must be established at the camp. Gecko / the contractor is responsible for the maintenance of this toilet. After programme completion the long drop will be decommissioned.
Development of access roads and tracks	Disturbance of general environment	General environment	Visual impact. Destruction of flora	<ul style="list-style-type: none"> • The old tracks which were pre-existing to exploration activities shall be used to access the target area. • No additional new tracks shall be made or otherwise be rehabilitated. If practically possible areas will be entered on foot. To enter the drill sites as much as possible along previously established tracks. • All newly created tracks shall be rehabilitated after the drilling program has been finalized.

Activity	Aspect	Affected environment	Potential impact	Mitigation measure/recommendations/explanation
Management of drill sites	To undertake and rehabilitate the respective drilling programmes in such a manner that it will be difficult to determine where these activities took place in 3 years time.	Disturbance of natural environment	Loss of indigenous vegetation Disturbance of fauna	<ul style="list-style-type: none"> • Impervious rubber or plastic sheeting is to be used to prevent pollution by diesel, oil and other related sources of pollution. • All litter is placed in a container with a lid that is secured against wind. The rubbish is taken to an official waste site. • Soil contaminated by oil or diesel is removed and dumped on an approved dumpsite and the area treated to neutralize hydrocarbon contamination. • The area of disturbance around the borehole site is kept as small as possible. • Boreholes (not drilled at an angle) that intersect water have the casing left in them, the top of the hole around the casing is grouted and the borehole capped before rehabilitating the area. • Holes / site are rehabilitated before moving to the next site to minimise vehicle movement to the area. • Open water should be fenced off and preferably covered during night to avoid attraction of bees and wildlife. • Sumps are fenced in to avoid fatalities of animals attracted by the water.
Surface & groundwater management	<p>To conserve water. To avoid the pollution of any water and prevent polluted water from entering stream channels or underground aquifers.</p> <p>To monitor the rest water levels and quality of production boreholes, if water is encountered.</p>	General environment	Visual Groundwater / stream pollution	<ul style="list-style-type: none"> • Borehole rest water levels and quality are recorded. • Working areas, where hazardous substances are handled or stored, are designed to collect and contain hazardous substances. Impervious materials are provided, e.g. drip trays, or sumps to collect and contain liquid pollutants.
Site rehabilitation	To rehabilitate the drill sites and camp to as	General environment	Visual impact Tourism activities	<ul style="list-style-type: none"> • The following rehabilitation actions are recommended: <ul style="list-style-type: none"> ▪ All drill mud and cores are removed from site to avoid additional scars in the landscape;

Activity	Aspect	Affected environment	Potential impact	Mitigation measure/recommendations/explanation
	close an approximation of the original state as is financially and reasonably viable.			<ul style="list-style-type: none"> ▪ All litter from the site i.e. bottles, tins, piping, etc are taken to an appropriate disposal site. ▪ All debris, scrap metal, etc is removed before moving to a new drill site. ▪ All drilling mud is either disposed of in the open borehole or taken off site and disposed of at an official waste site. ▪ All water tanks are dismantled and removed. ▪ All sumps are covered and contoured. The stored top soil / substrate is distributed and raked over the disturbed site. ▪ All pits and trenches as well as boreholes sites will be adequately rehabilitated. • 2 years after rehabilitation the drill sites are not visible from 500m.
Management of the natural habitat	To avoid, or reduce, the potential negative impact on the bio-physical environment, including the scenic value thereof.			<ul style="list-style-type: none"> • Disturbed areas are kept to a minimum. • No incidents of poaching or illegal plant or reptile collection are reported. Offenders will be handed over to the authorities. • No permanent infrastructure will be developed at the exploration camp; • No domestic or other animals are brought to the exploration site. • Any person who causes wilful or malicious damage to the environment will be held responsible for repairing the damage immediately and handed over to the authorities.
Visual quality Management	To preserve the scenic aspects of the target area and surroundings. To minimise visual impacts created by exploration as far as reasonably possible.		Tourism activities	<ul style="list-style-type: none"> • The movement and use of vehicles be limited to prevent unnecessary damage to vegetation. • could be potential sites of scientific interest are not defaced. • No new tracks are created as far as practically possible. • The exploration camp and any other area disturbed by exploration activities are rehabilitated.
Establishment of pits	To keep the disturbance of flora at a minimum Try to minimize the visual	Flora	Loss of (indigenous) vegetation	<ul style="list-style-type: none"> • Locate pits at sites suitable for sampling purpose and where the least floral disturbance is encountered. • Locate pits at sites suitable for sampling purpose and where

Activity	Aspect	Affected environment	Potential impact	Mitigation measure/recommendations/explanation
	impact as much as possible.		Visual impact Tourism activities	they are least visible to the public.

Permits Required

Environmental Impacts	Mitigation Measures	Monitoring Action & Methods	Responsibilities	Resources required for Implementation
Safety of fauna	<ul style="list-style-type: none"> No killing of animals No fishing in nature conservation area All waste and scrap to be removed 	<ul style="list-style-type: none"> Awareness training Periodic inspections by supervisor and Staff of DEA / Sustainable Development Commission 	Team leaders and workers foreman	None
Water consumption	<ul style="list-style-type: none"> Minimize use and loss Check container piping and taps regularly for leakage 	<ul style="list-style-type: none"> Awareness training Periodic inspections by superiors Monitor expenses 	All workforce and management	None

Tourism	<ul style="list-style-type: none"> . Awareness of proximity to major tourist attraction of the country . Minimize visual blemish . Kindliness of the workers 	<ul style="list-style-type: none"> . Awareness training . Periodic inspections by superiors 	All workforce and management	Funds to conduct a cleaning up program in the area
Pollution	<ul style="list-style-type: none"> . Removal of litter . Careful use and storage of chemicals . Oil adsorbing materials available in workshop and all vehicles at all times 	<ul style="list-style-type: none"> . Awareness training . Periodic inspections by superiors . Implementation of cleaning up program 	All workforce and management	Funds set up and implement training courses Funds to conduct a cleaning up program in the area
Fuel storage and potential pollution	<ul style="list-style-type: none"> . Fuel storage facility erected on site shall comply with specification for storage and handling 	<ul style="list-style-type: none"> . Awareness training . Periodic inspections by superiors 	Site manager	Gecko will fund the construction of a safe fuel storage and handling site

	<p>of petroleum products;</p> <p>. Tanks shall be placed on a concrete slab, allowing sumps for containment of spillage</p>			
Workers conduct	<p>. Training</p> <p>. Fines/penalties for lack of compliance</p>	<p>. Constant monitoring to ensure compliance</p>	<p>Team leaders and workers foreman</p>	<p>Training manual and time set aside for training</p>