ENVIRONMENTAL IMPACT ASSESSMENT

SCOPING REPORT

FOR THE EXPLORATION ACTIVITIES OF PRECIOUS STONES ON THE EXCLUSIVE PROSPECTING LICENCE (EPL) 8627 VISTORINA N NAMA

AT MOEB BAY, OFFSHORE, !KARAS REGION.

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ABBREVIATION

AIDS	Acquired Immune Deficiency Syndrome
BOD	Biological Oxygen Demand
CC	Close Corporation
Covid19	Coronavirus disease
DEA	Directorate of Environmental Affairs
DESR	Draft Environmental Scoping Report
DMS	Dense Media Separation
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
CEGEOR	Centre for Geosciences Research
EEZ	Exclusive Economic Zones
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
FESR	Final Environmental Scoping Report
GDP	Gross Domestic Product
GPS	Global Positioning System
Ha	Hectare
HIV	Human Immune Virus
I&APs	Interested and Affected Parties
IMO	International Maritime Organisation
IUCN	International Union for the Conservation of Nature
KM	Kilometres

MEFT	Ministry of Environment, Forestry and Tourism
MFMR	Ministry of Fisheries and Marine Resources
MGO	Marine Gas Oil
MM	Millimetres
MME	Ministry of Mine and Energy
MPAs	Marine Protect Areas
NHC	National Heritage Council
NIMPA	Namibia Islands Marine Protect Area
PPEs	Personal Protective Equipment's
PPP	Public Participation Process
RAP	Restricted Area Permit
SME	Small Medium Enterprise
TAC	Total Allowable Catch
USAID	United States Agency for International Development
WHO	World Health Organization

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EXECUTIVE SUMMARY

GENERAL INTRODUCTION

Vistorina N Nama is a Namibian that ad applied for EPL 8627 for prospecting of diamonds offshore in the !Karas Region. Vistorina N Nama aims is to explore for diamond as an attribute to the economic enhancement of the country as wells to benefit the community of !Karas Region. The proposed exploration project will have a positive significance social impact and infuse significant economic intervention such as direct and indirect employment opportunities and the prospect of the project to contribute to the national economy through loyalties, taxes and foreign currency earnings. The exploration phase is envisaged to last for a period of about 36 months (three years) and approximately 1,5 million Namibian Dollars (NAD) will be invested in the project. About 10 unskilled local people and 3 skilled personnel will be employed during the exploration phase.

Vistorina N Nama will employ a ship-based sampling method and it will outsource a sampling vessel from its associated company Coastal Diamond Mining Pty (Ltd). The vessel will be used to sample and delineate diamondiferous gravel targets or areas. The exploration targets will be determined based on historical mineral occurrence within and around the EPL and will involve geophysical remote sensing. The geophysical methods will entail echo-sounding for bathmetry, high resolution side scan sonar for determining the seabed and sediment surface texture, depth sounding to identify soft mud and low energy seismic profiling to determine sediment thickness and bedrock morphology. The sampling vessel and method that will be employed will be congruent to the existing offshore diamond exploration currently taking place offshore in Namibia.

SCOPE OF THIS WORK AND ASSESSMENT APPROACH

In line with the environmental regulatory requirements and project registration, Centre for Geosciences Research cc (CEGEOR) was appointed by Vistorina N Nama to carry out an environmental scoping assessment for the planned offshore diamond exploration at Moeb Bay offshore in the !Karas Region. The following is the summary of the activities associated with the exploration and rehabilitation stages of the planned diamond exploration that have been considered in the impact assessment as potentialimpacts:

Release of toxic chemicals (including heavy metals and PCB) from bottom sediments into the water column:

- Short term increases in turbidity, transparency and impact on seabed roughness, which can affect marine species metabolism and interfere with spawning.
- Tertiary impacts to the marine birds which may prey upon contaminated organisms.
- Secondary impacts to the marine and benthic organisms' metabolism and mortality.
- Possible contamination of dredge spoil site
- Changes to topography by creation of "spoil islands" from accumulated silt.
- Decommissioning / Upgrade of exploration.

The primary objective of this assessment is to identify the likely impacts associated with the different phases of the intended exploration project.

NEED AND DESIRABILITY ASSESSMENT

Vistorina N Nama is 100% Namibian citizen. Vistorina N Nama's aim is to explore the diamond industry for the benefit of the country and by becoming the premier provider of diamond dealership services in Namibia. The planned minerals exploration will be focusing on diamonds. Vistorina N Nama as the project proponent has planned to employ a ship-based sampling method and will outsource a sampling vessel from its associated company Coastal Diamond Mining Pty (Ltd). The vessel will be used to sample and delineate

diamondiferous gravel targets or areas. The exploration targets will be determined based on historical mineral occurrence within and around the EPL8627 and will involve geophysical remote sensing. The geophysical methods will entail echo-sounding for bathmetry, high resolution side scan sonar for determining the seabed and sediment surface texture, depth sounding to identify soft mud and low energy seismic profiling to determine sediment thickness and bedrock morphology. This system is environmentally friendly, as no species or damage to earth or water shall occur.

SITE SELECTION PROCESS AND ALTERNATIVE SITES

The site for the establishment of the exploration was selected through the acquisition of the EPL 8627 from the Ministry of Mine and Energy (MME). Moreover, the area has diamond prospect and this is evident from the past exploration conducted in the adjacent EPLs by reputable companies. Currently offshore diamond mining in Namibia is mainly mined by SAMICOR and De Beers Marine Namibia with very few companies involves in exploration. Therefore, the introduction of Vistorina N Nama in the diamond mining exploration will see the divergence and participation of other local player in the market. Other considerations taken into account during the selection process are; the area is known to have high grade diamond and the region have numerous diamond mining prospects, which emanated in employment opportunities for the local people. From the desktop studies and investigation, it was eminent that the targeted EPL 8627 has immense prospect for diamond. According to the proponent, any other location is deemed not viable in terms of mineral viability to establish the offshore diamond exploration project.

SUMMARY OF THE IMPACT ASSESSMENT RESULTS

The envisaged minerals exploration is mainly focusing on diamonds. Vistorina N Nama as the project proponent has planned to employ a ship-based sampling method which will be outsourced from its associated company Coastal Diamond Mining Pty (Ltd). The vessel will be used to sample and delineate diamondiferous gravel targets or areas. The exploration targets will be determined based on historical mineral occurrence within and around the EPL8627 and will involve geophysical remote sensing. The geophysical remote sensing methods will entail echo-sounding for bathmetry, high resolution side scan sonar for determining the

seabed and sediment surface texture, depth sounding to identify soft mud and low energy seismic profiling to determine sediment thickness and bedrock morphology. This system is environmentally friendly, as minimal damage on the marine species or damage to earth or water shall occur. The following is a summary of the likely positive impacts that have been assessed for the different phases of the proposed diamond exploration project:

- Increasing awareness about the benefits of ecologically sustainable natural resource use (Likely impacts are high).
- Supporting government in alleviation of unemployment efforts and contribute to job security in !Karas Region and Namibia at large and attribute to the GDP of Namibia as a whole (Likely impacts are high for !Karas Region and high for Namibia).
- Improved mineral exploration and health infrastructure (Likely impacts are high).
- Socio-economic development and capacity building through mineral exploration skills transfer and training (Likely impacts are high).

The following is a summary of the likely negative impacts that have been assessed for the different phases of the proposed diamond exploration project:

- Biological Impact (Likely impacts are medium to low the exploration activity will be localized within the designated EPL).
- Physical Impacts (Likely impacts are medium to low with correct vessel manufacturing specifications).
- Chemical impacts (Likely impacts are low, with correct mitigation measures and adherence to the EMP).
- Waste generation and management (Likely impacts are low with a solid waste management plan).

The activity of dredging can create the following principal impacts to the environment:

- Release of toxic chemicals (including heavy metals and PCB) from bottom sediments into the water column.
- Short term increases in turbidity, which can affect aquatic species metabolism and interfere with spawning.
- Secondary impacts to marsh productivity from sedimentation.
- Tertiary impacts to avifauna which may prey upon contaminated aquatic organisms.
- Secondary impacts to aquatic and benthic organisms' metabolism and mortality.
- Possible contaminations of dredge spoil sites.
- Changes to the topography by the creation of "spoil islands" from the accumulated silt. The nature of dredging operations and possible environmental impacts cause the industry to be closely regulated and a requirement for a comprehensive strategic environmental impact assessment in the region with continuous monitoring. The National Marine Pollution Contingency Plan (NMPCP) of the Republic of Namibia requires that the project proponent ensures the following:
- Have in place mechanisms to prevent, and respond to, pollutions including mutual assistance arrangements; Initiate immediate response to any pollution within their area of responsibility;
- Facilitate the provision of manpower for clean-up operations; mobilize industry response equipment
- Report all chemical pollutions within the marine environment to the relevant authorities;
- Procure the necessary liability insurance to cover the costs of responding to pollutions as well as compensation, where applicable;
- Assist with any other aspect of the response as requested by the Control Agency;
- As a result of the potential impacts to the environment, dredging is restricted to the licensed areas only with vessel activity monitored closely in house and remotely using automatic GPS systems.
- Reduce the impacts and vulnerability of community to the effects of climate change (Likely impacts are low). Though the initial costs are high during the

exploration phases of the diamond, it does offer direct and indirect employment opportunities and capacity building in the receiving community of !Karas Region and Namibia at large. However, minor negative impacts in the form of visual intrusion, marine and noise pollution especially during the active exploration, operation and rehabilitation phases will be experienced. Marine water pollution risk (Likely impacts are low with a marine mitigation regime as prescribed in the marine pollution contingency plan and no interference with the sea water during any diamond exploration activity).

CONCLUSION AND RECOMMENDATIONS

The information available at the project planning phases, the confidence in the environmental assessment undertaken is regarded as being acceptable for the decision making, specifically in terms of the environmental impacts and risks. The Environmental Assessment Practitioner believes that the information contained within this Environmental Scoping Report is adequate to allow MEFT: DEA to be able to determine the environmental acceptability of the proposed project. If all environmental guidelines, and appropriate mitigation measures recommended in this report, are implemented, there is no reason why the proposed offshore diamond exploration project should not proceed. Previous studies suggested that some of the migratory species are now present year-round off the Namibian coast. Data collected by independent onboard observers should form part of a survey close– out report to be forwarded to the necessary authorities, and any incidence data and arising from on board avifauna surveys should be made available for analyses of survey impacts in the Namibian waters. The assessments of impacts of the offshore diamond exploration project provided in the report consider short-term responses at the level of individual animals only, as our understanding of how such short-term effects relate to adverse residual effects at the population level are limited. Data on behavioural reactions acquired over the short-term could, however, easily be misinterpreted as being less significant than the cumulative effects over the long-term, i.e. what is initially interpreted as an impact not having a detrimental effect and thus being of low significance, may turn out to manifest in a long-term decline in the population. A significant adverse residual environmental effect is considered one that affects marine biota by causing a decline in abundance or change in distribution of a population(s) over more than one generation within an area.

Natural recruitment may not re-establish the population(s) to its original level within several generations or avoidance of the area becomes permanent. However, the southern right whale population has been documented to be increasing by 7% per annum (Best 2000). While the humpback whale is escalating by 5% per annum over a time when there is an increase in seismic surveying frequency. This highlighted that, for the southern right population at least, there is no evidence of long-term negative change to population size as a direct result of offshore diamond exploration project activities. Reactions to sound from the vacuuming of the sea floor by marine fauna depend on a multitude of factors including species, state of maturity, experience, current activity, reproductive state, time of day (Wartzok *et al* 2004; South all *et al* 2007). If a marine animal does react briefly to an underwater sound by changing its behaviour or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the population as a whole (NRC 2005). However, if a sound source displaces a species from an important feeding or breeding area for a prolonged period, impacts at the population level could be significant. It is acknowledged that the project details will evolve during the detailed design and operational phases. However, these are unlikely to change the overall environmental acceptability of the proposed offshore diamond exploration project and any significant deviation from what was assessed in this Final Environmental Scoping Report (FESR) for Vistorina N Nama – EPL8627 be subject to further assessment. If this was to occur, an amendment to the Environmental Clearance Certificate may be required in which case the prescribed process would be followed. The significance of the impacts both before and after mitigation are summarised in the generic Environmental Management Plan (EMP).

1. PROJECT BACKGROUND

1.1 INTRODUCTION

Vistorina N Nama, hereafter referred to as the proponent intend to carry out exploration activities for precious stones on the Exclusive Prospecting Licence (EPL) 8627. Vistorina N Nama is a Namibian citizen with strong interest in mining. The proponent Vistorina N Nama had been conditionally granted the Exclusive Prospecting Licence in 2022 by the Ministry of Mine and Energy (MME), and has been given a 12 months period to undertake EIA studies in the EPL area. The proposed activity is a listed activity as per Environmental Management Act 2007 (Act No. 7 of 2007) (EMA) and an Environmental Clearance Certificate (ECC) is therefore required to commission such a project. CEGEOR cc was therefore appointed by Vistorina N Nama to carry out an Environmental Impact Assessment (EIA) and formulate an Environmental Management Plan (EMP) for the planned exploration project.

1.2 PROJECT LOCATION

EPL8627 is situated at Moeb Bay offshore, approximately 150 Km north of Lüderitz !Karas Region, (see **Figure 1,2 & 3**). The EPL is located over an area with a water depth of 0-100 meters offshore and it covers an area of 4978,4464 Ha and is accessible via sea.

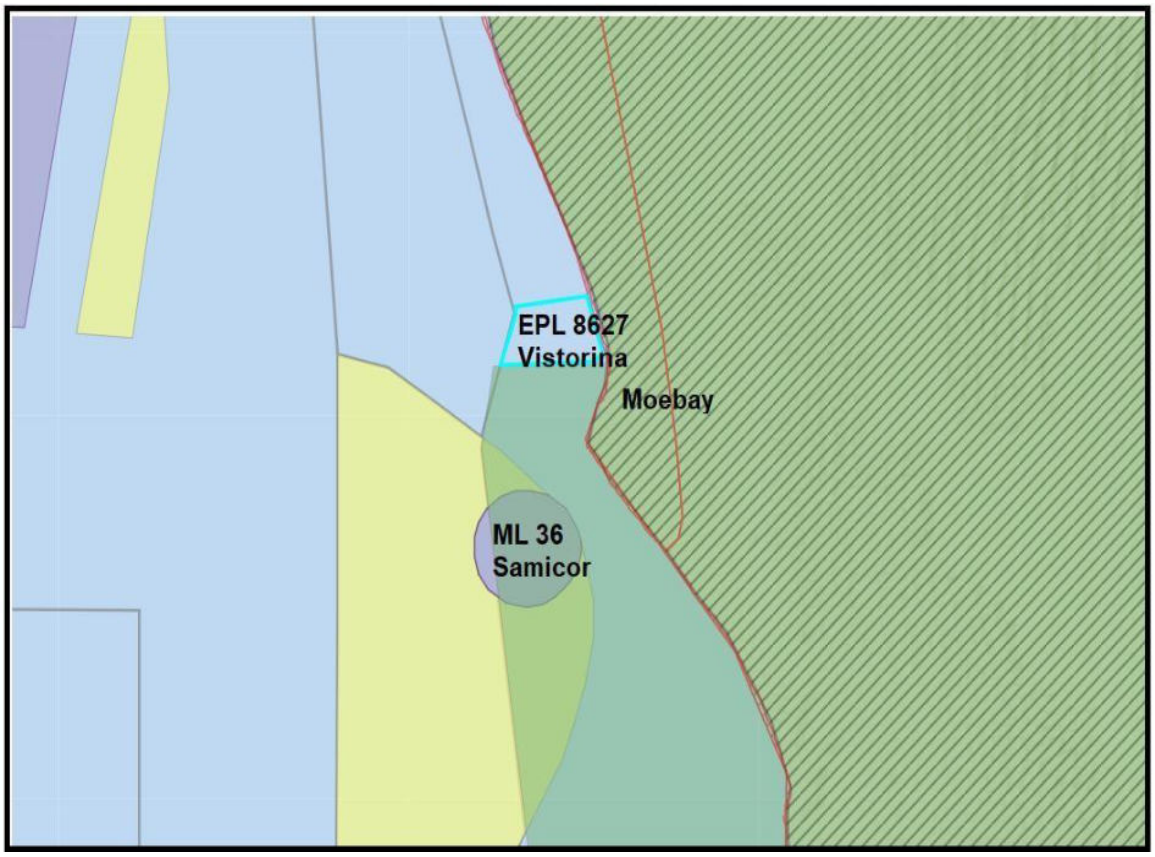

Figure 1: Location of EPL8627 at Moeb Bay offshore north of Lüderitz, Lüderitz District,!Karas Region (GPS coordinates **-24.457222 S, 14.5575 E**).

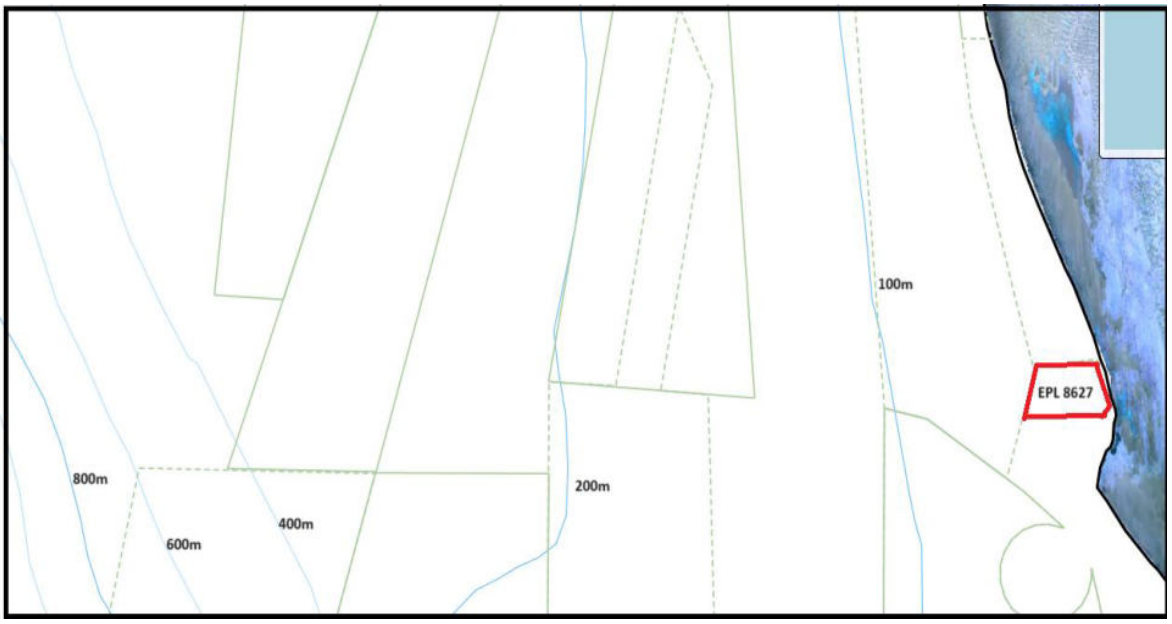

Figure 2: Bathymetry of EPL8627 at Moeb Bay offshore north of Lüderitz, Lüderitz District,!Karas Region (GPS coordinates **-24.457222 S, 14.5575 E**).

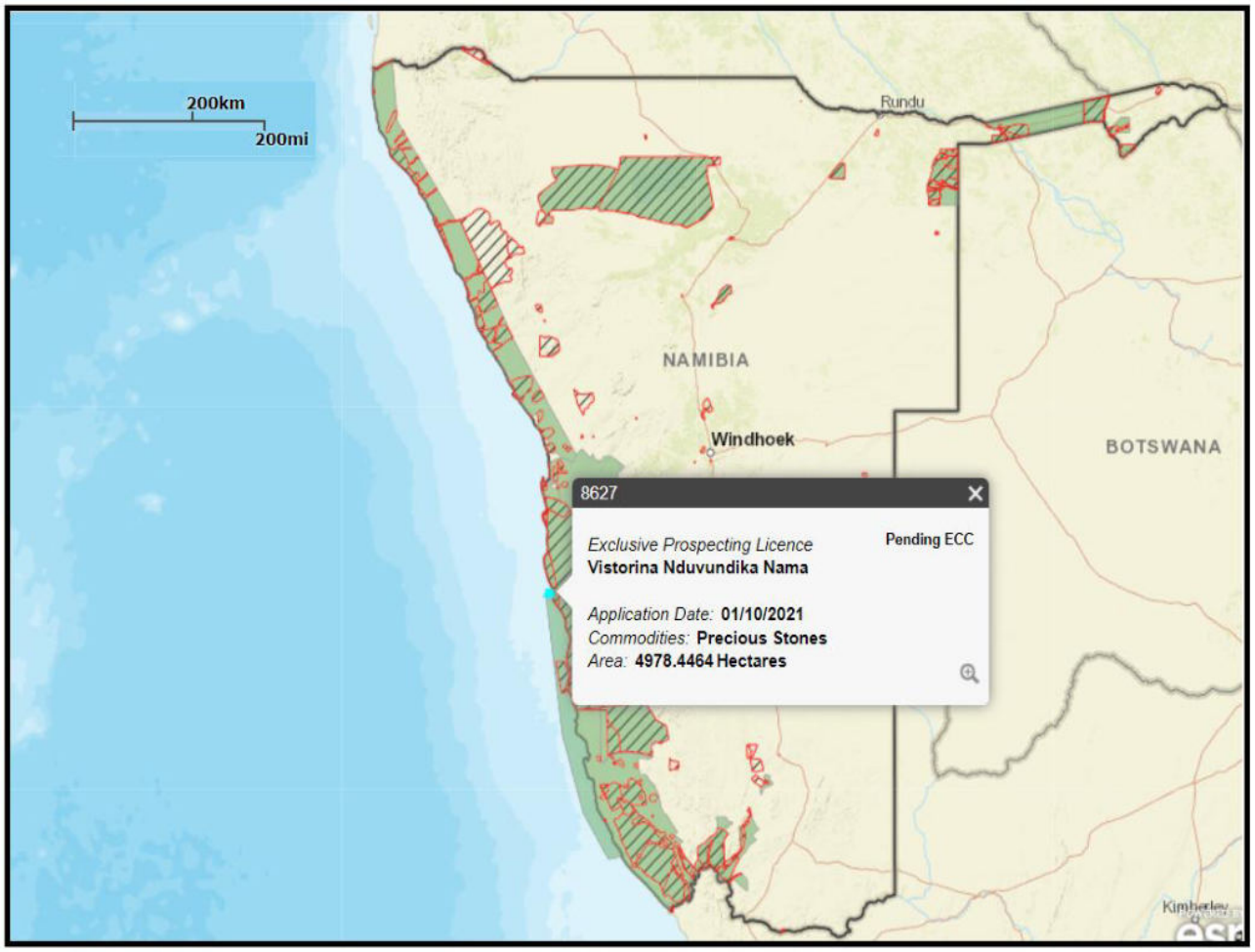

Figure 3: Location of EPL 8627 at Moeb bayoffshore north-west of Lüderitz,Karas Region.

1.3 TERMS OF REFERENCES

The Environmental Impact Assessment (EIA) was carried out in accordance with Namibia Environmental Management Legislations (Environmental Management Act, No 7 of 2007) and its Regulation (Government Notice No. 30 of 2012). The essence of the EIA is to provide significant information to the Office of the Environmental Commissioner to make an informed decision about whether or not an Environmental Clearance Certificate (ECC) should be issued. The process as defined by the Environmental Regulation (2012) enclosed the following steps, which are described in this document as follows;

- Provide an in-depth description of the proposed activity;
- Identifying all legislation and guidelines that have reference to the proposed activity;
- Identify existing environmental (physical, biological and social) conditions of the area in order to determine their environmental sensitivity;
- Inform Interested and Affected Parties (I&APs) and relevant authorities of the details of the proposed activity and provide them with a reasonable opportunity to participate during the process;
- Consider the potential environmental and social impacts of the proposed activity and assess the significance of the identified impacts and;
- Outline management and mitigation measures in an Environmental Management Plan (EMP) to minimise and/or mitigate potentially negative impacts and assist in formulating a decommissioning plan for the proposed exploration activity.

1.4 ENVIRONMENTAL IMPACT ASSESSMENT REQUIREMENT

The Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012) stipulate that no mining or exploration activities should be undertaken without a valid Environmental Clearance Certificate (ECC). Therefore, an ECC shall be applied for in accordance with regulation 6 of the 2012 environmental regulations. It is imperious that the proponent must carry out a public consultation process in accordance with regulation 21 of the 2012 environmental procedure and prepare and submit an environmental scoping report and an environmental management plan for the proposed exploration activity.

1.5 THE PURPOSE OF THE SCOPING REPORT

This report is prepared for the purpose of the Environmental Impact Assessment for the planned exploration activities for precious stones on the Exclusive Prospecting Licence (EPL) 8627. The scoping process identifies the likely impacts allied with the planned activity during the EIA and eliminate issues which are of diminutive concern. The purpose of this report is thus to;

- Identify any critical environmental impacts that need to be taken into account prior starting with the proposed mineral exploration activity within the EPL.
- Identify information required for decision making purpose
- Inform the public about the proposed exploration activities
- Identify the key stakeholders, their comments and concerns
- Define reasonable and practical alternative to the proposed project
- Establish the terms of references for the envisaged EIA.

1.6 PROJECT ALTERNATIVES

1.6.1 Alternatives

Different EPLs in the proximity of the proposed areas were initially considered by the proponent and appropriate consideration where taken for the most accessible, feasible and economic viable in term of prospect for precious stones based on historical geological data and existing diamond mining in the area.

1.6.2 No - Go Alternatives

The no-go alternative is basically the baseline against which all alternatives are elucidated. The no-go alternative would essentially include maintaining the existing status quo, whereby the exploration of precious stones will not proceed at all. In addition, if the exploration activity of precious stones on EPL8627 will not take place this will result in a serious negative social and economic impacts of !Karas Region and national economy at large. Moreover, if the project does not take-off the inhabitants will not be in position to secure employment opportunities, emanating from the proposed exploration project. The project will further improve significantly the livelihood of the surrounding communities. The planned project has the potential to contribute enormously to the economy of the country through loyalties, taxes and foreign currency exchange.

2. SUMMARY OF LEGAL AND POLICY FRAMEWORK APPLICABLE TO THE PROJECT

All mineral rights related to mining activities are regulated by the Ministry of Mines and Energy (MME), whereas the environmental regulations are regulated by the Ministry of Environment, Forestry and Tourism (MEFT). The proposed project shall be established and operated under the provision of the relevant statutory framework of Namibian and international laws of which Namibia is signatory.

2.1 Relevant statutory framework of Namibian

Table 1. Legal requirements relevant for the proposed project

Legislation	Summary	Applicability
The Namibian Constitution	The Namibian constitution is the supreme law of the country which is committed to sustainable development. Article 95(1) of the Constitution of Namibia states that: - "The State shall actively promote and maintain the welfare of the people by adopting policies aimed at … The maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future".	To undertake the EIA in order to maintain the ecological process and diversity of ecosystem
The Environmental Management Act	The Environmental Management Act No 7 of 2007 aims to promote the sustainable management of the environment and the use of natural resources and to provides for a process of assessment and control of activities which may have significant effects on the environment; and	Legal requirement to undertake an EIA

Legislation	Summary	Applicability
	to provide for incidental matters. The acts provide a list of activities that may not be undertake without an environmental clearance certificate. Further, the Act ensures that; (a) Potential threats are considered timeously (b) A comprehensive stakeholder's consultation is conducted, and all Interested and affected parties are given an opportunity to comment on the project (c) Decision are robust by considering the above-mentioned activities	
Atmospheric Pollution Prevention Ordinance Act No.11 of 1976)	This Ordinance serves to control air pollution from point sources, but it does not consider ambient air quality. This ordinance is being repealed by the proposed Pollution Control and Waste Management Bill. Any person carrying out a 'scheduled process' which are processes resulting in noxious or offensive gases typically pertaining to point source emissions have to obtain a registration certificate from the Department of Health.	Generation of Greenhouse Gases from fuel used by the vessel.
Draft Pollution Control and Waste Management Bill	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. The Bill will repeal the Atmospheric Pollution Prevention Ordinance (11 of 1976) when it comes into force. The Bill also provides for noise, dust	Possible fuel spill and leakages may pollute sea water.

Legislation	Summary	Applicability
	or odour control that may be considered a nuisance. Further, the Bill advocates for duty of care with respect to waste management affecting humans and the environment and calls for a waste management licence for any activity relating to waste or hazardous waste management.	
Environmental Policy framework (1995)	This policy subjects all developments and project to environmental assessment and provides guideline for the Environmental Assessment. Its provision mandate that Environmental Assessment take due consideration of all possible impacts and incorporate them in the development or planning stages.	Provision of the EIA and guidelines
The Occupational Safety and Health Act No. 11 of 2007;	Safety: A safety risk is a statistical concept representing the potential of an accident occurring, owing to unsafe operation and/or environment. In the working context "SAFETY" is regarded as "free from danger" to the health injury and to properties. Health: Occupational Health is aimed at the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in	Operating exploration equipment has the potential risk of injuries. Provision of a clean vessel facility, routine health check-ups for employees, COVID-10 and HIV/AIDS awareness etc.

Legislation	Summary	Applicability
	all occupations. This is done by ensuring that all work-related hazards are prevented and where they occur, managed.	
Public Health Act No. 36 of 1919	The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him/her or of which he/she is in charge of any nuisance or other condition liable to be injurious or dangerous to health.	Ensure employees safety from noise pollution.
Marine Resource Act No 27 of 2000	To provide for the conservation of the marine ecosystem and the responsible utilisation, conservation, protection and promotion of marine resources on a sustainable basis; for that purpose, to provide for the exercise of control over marine resources; and to provide for matter connected therewith.	Ensure that the marine ecosystems are protected and used in a sustainable manner.
Water Resources Management Act (2004)	This Act provides a framework for managing water resources based on the principles of integrated water resources management. It provides for the management, development, protection, conservation, and use of water resources. Furthermore, any watercourse on/or in close proximity to the site and associated ecosystems should be protected in alignment with the listed principles.	Ensure that the sea systems are not polluted and implement pollution control mechanism to avoid water pollution.

Legislation	Summary	Applicability
Water Act No, 54 of 1956	This act states that, all water resources belong to the State. It prevents pollution and promotes the sustainable utilization of the resource. To protect these resources, this act requires that permits are obtained when activities involve the following; • Discharge of contaminated into water sources such as pipe, sewer, canal, sea outfall and • Disposal of water in a manner that may cause detrimental impact on the water resources.	Contaminated water, such as sewage sludge must not be dumped into the sea.
Petroleum Product and Energy Act No, 13 of 1990	This Act provides a framework for handling and distribution of petroleum products which may include purchase, sale, supply, acquisition, possession, disposal, storage or transportation thereof.	Safe handling of the petroleum products such as fuel and lubricants.
Diamond Act 13 of 1999	This Act deals with the regulation of unpolished diamond in Namibia.	Registration in respect of unpolished diamond and security check of person employed or engaged in activity related to unpolished diamond.
Labour Act No. 11 of 2007	This Act aims to regulate labour in general and includes the protection of the health, safety and welfare of employees. The 1997 regulations relating to the Health and Safety of employees at work sets out the duties of the employer, welfare and facilities at the workplace, safety of	Follow legal labour requirements such as safety, remuneration etc

Legislation	Summary	Applicability
	machinery, hazardous substances, physical hazards, medical provisions, construction safety and electrical safety.	
Regional Council Act, 1992 (Act No. 22 of 1992)	The Regional Councils Act legislates the establishment of Regional Councils that are responsible for the planning and coordination of regional policies and development. The main objective of this Act is to initiate, supervise, manage and evaluate development at regional level.	Observe the regional by laws
Hazardous Substances Ordinance No. 14 of 1974	This ordinance gives provision to control the handling of hazardous substance in all circumstances, such as manufacturing, imports and exporting of these to ensure human and environmental safety.	Handling of fuel, fire and explosion risks
National Heritage Act No. 27 of 2004	The Act makes provision for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains, while Section 48 sets out the procedure for application and granting of permits such as	Exploration activities such as dredging may unearth archaeological material.
Word's Best Practises	***Precautionary Approach Principle*** This principle is worldwide accepted when there is a lack of sufficient knowledge and information about the possible threats to the environment. Hence if the anticipated impacts are greater, then	Offshore diamond exploration particularly in the marine environment can be detrimental to the marine ecosystem. Therefore, precaution must

Legislation	Summary	Applicability
	precautionary approach is applied. In this project, there are no eminent uncertainty however in cases when they arise, this approach should be applied. ***Polluter Pays Principle*** This principle ensures that proponents takes responsibility of their actions. Hence in cases of pollution, the proponent bears the full responsibility to clean up the environment.	be taken when diamond dredge pump is used. In the event of any pollution of marine ecosystem, the proponent must be responsible to clean up the environment.

2.2 Key Relevant International obligations

2.2.1 United Nations Law of the Sea Convention (UNCLOS) of 1982

Requires member states to adopt legislation to reduce marine pollution from the seabed activities in the Exclusive Economic Zones (EEZ) and on the continental shelf (Article 208 and 2014) and from land-based source (Articles 208 and 207). It also contains provision relating to marine pollution emanating from dumping of waste at sea (Article 210 and 216).

2.2.2 international Convention for the Prevention of Pollution from Ships (MARPOL) 1973

This convention was adopted in 1973 (MARPOL 73) and modified by the Protocol of 1978, hence its shortened MARPOL 73/78. The convention provides regulation covering various sources of ship generated pollution. Namibia is a party to Annex I, Annex II, Annex III, Annex IV and Annex V.

3. DESCRIPTION OF THE PROPOSED EXPLORATION PROJECT

3.1 Introduction

Diamond deposit are the most imperative mineral resources globally particular in terms of exploration since they are often economic viable. Diamond deposits can either be alluvial, offshore or marine and its characterised by a highly structured huddling of stones. This is caused by the formation in deposition and variation in unevenness of the bedrock (Caers & Rombouts 2000). The offshore diamond deposit along the Namibian coast occurs in a diamond-bearing gravel in a water depth of 40 metres to 90 metres at distance of 3 Km to 12 Km from the coastline. Diamond prefers to occur in gullies which are less than 100 metres wide, formed into hard-rock and in deeper channel which are about 300 metres wide. Diamond in natural form with some exception appears in octahedral and cubic shape. Places with diamonds deposits are often found by utilising different offshore exploration techniques such as side scan sonar seafloor imagery, high resolution chirp sub-bottom profiling, continuous bathymetric profiling and checks with vibrocore drilling. Sample for diamond recovery are frequently in a range of 4 metres to 10 metres and the fraction between 1.5 to 16 millimetres is retained for diamond recovery (Caers & Rombouts 2000).

3.2 Exploration Methods

The envisaged minerals exploration is mainly focusing on diamonds. Vistorina N Nama has planned to optimise the available historical mineral occurrence data within and around the EPL 8627. The proponent Vistorina N Nama will employ a ship-based sampling method, a sampling vessel will be outsourced from the associated company Coastal Diamond Mining Pty (Ltd). The vessel will be used to sample and delineate diamondiferous gravel targets or areas. The exploration targets will be determined based on historical mineral occurrence within and around the EPL and using geophysical remote sensing. The geophysical methods will entail echo- sounding for bathmetry, high resolution side scan sonar for determining the seabed and sediment surface texture, depth sounding to identify soft mud and low energy seismic profiling to determine sediment thickness and bedrock morphology. This exploration method is environmentally friendly, as minimal damage on the marine

species or damage to earth or water shall occur. The following is a detailed exploration method planned for the prospecting of diamond within the EPL 8627:

Geophysical remote sensing: Phase one of exploration; the remote sensing techniques that will be employed include:

Multi-beam bathymetry system will provide depth sounding information on either side of the vessel's track across a swath width of approximately twice the water depth. This will produce a digital terrain model of the seafloor.

Side-scan sonar produces acoustic intensity images of the seafloor and is used to map the different sediment textures of the seafloor. Side-scan sonar uses a sonar device, which can be towed or mounted on the ship's hull that emits conical or fan shaped pulses down toward the seafloor across a wide-angle perpendicular to the path of the sensor through the water.

Depth sounding – dual frequency depth/ echo sounding has the ability to identify layer of soft mud on top of a coarse and hard sediment and/ or rock. The anticipated pulse emitted would typically be for more than 0.025 seconds and produces sound levels in order of 180+ dB re 1 µPa at 1m.

Bottom profilers – this method uses powerful low frequency echo-sounders that provide profiles of the upper layers of the ocean floor. The data resulting from these prospecting methods will be used to produce high resolution maps of the seabed geomorphology, sediment and bedrock distribution, bathymetry and sediment type and thickness profiles. The areas of unconsolidated sediment suitable for sampling will be identified, and a sampling grid positioned over the area. Surveying activities are usually ongoing in order to develop geological models for further resource development.

Seabed sampling: phase two of the exploration - the seabed will be sampled via an airlift drill system. The sampling pattern and interval will start off with a 150 m × 100 m sampling grid or alternatively in lanes utilizing dredging and/ or crawler technology, which are standard industry methods. Both methods are depicted in **Figure 4** and **5**. The airlift drill technology generally uses a ±6.8 m diameter drill bit working in overlapping circles on the seabed, while the crawler technology uses a ±280 tonne

track-mounted crawler dredging on the seabed. During sampling, the unconsolidated sediments are removed and pump on-board the vessel for sorting and screening. The size fraction of interest would be retained and the rest of the course tailings discarded overboard, preferably in the excavated areas. The size fraction of interest is mixed with an additive (Ferrosilicon, FeSi) and fed to a Dense Media Separation (DMS) plant. In the plant, materials of low density separate and form a dense concentrate. The low-density materials are discarded overboard, while the FeSi is magnetically recovered continuously for further reuse. The remaining dense concentrate is subjected to X-ray sorting after being dried to screen the diamonds from the residue gravel. The residual gravel is discharge overboard, while the diamond containing fraction is processed further.

Figure 4: Depict the airlift drilling technology to be used for diamond exploration on the seabed at EPL 8627.

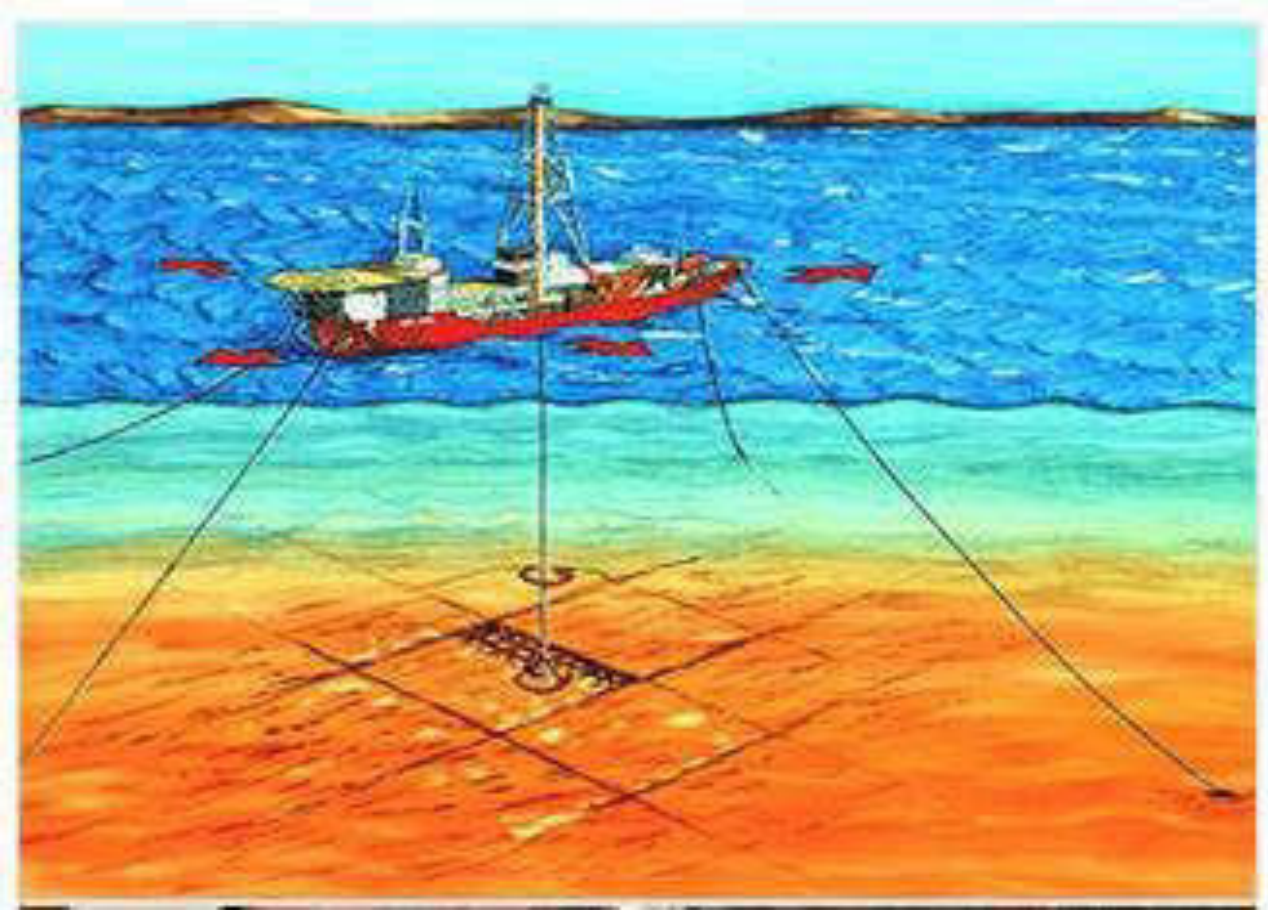

Figure 5: Depict the dredging and/ or crawler technology alternative method to be used for diamond exploration at EPL 8627.

3.3 Labour Requirements

The proposed exploration project will have a positive significance socio-economic impact and will infuse significant economic intervention such as direct and indirect employment opportunities. The project will contribute to the national economy through loyalties, taxes and foreign currency earnings. The diamond exploration project is envisioned to last for a period of about 36 months and all the required reporting will be made and submitted to the relevant authorities. Approximately 1,5 million Namibian Dollar (NAD) will be devoted to the project and about 10 unskilled local people and 3 skilled personnel will be employed during the exploration phase. All employees will undertake an extensive safety induction and first aid training courses. The company will adhere to the Labour Act of 2007 and all legal provision pertaining to employment. The proponent had been partially granted the Exclusive Prospecting Licence (EPL) and its pending ECC at the Ministry of Mine and Energy (MME)

(See **Annexure A**). If the exploration generated successful results, other mandatory permits and authorisation will be applied for and ultimately more job opportunities will be generated.

3.4 Logistical Arrangement and Support Services

3.4.1 Fuel Supply, Transfer, Storage and Usage

The exploration vessel will use the Marine Gas Oil (MGO) which is a rapidly evaporating light diesel engine fuel. The same type of fuel will be used by the onboard generator that will supply power to all electrical and electronic exploration equipment. Refuelling of the vessel will be done offshore from a tanker at a distance in excess of 12 nautical mile from the shore and this is done to prevent any risk associated with spillage. During the refuelling process the vessels are connected and the transfer of fuel is carried by the receiving vessel anchors on a single anchor and connects up with the tanker by means of anchorage ropes and the bunkering hose. The other available alternative is to have the receiving vessel on a four-anchor spread instead of using the single anchor and a haul utilised while stationary and it tow the tanker.

3.4.2 Water supply and utilisation

Water will mainly be required for domestic uses and cleaning of equipment's. The vessel will carry enough potable water at all time and if there is a need to refill, the topping up will be carried out at Lüderitz Port. Moreover, water will be purified onboard by using flash evaporation unit which are readily available on the vessel and optimising waste heat generated by the vessel to trigger evaporation. This will not require any additional source of energy from elsewhere. Furthermore, efforts will be made to ensure that water is used sparingly as possible.

3.4.3 Waste and sewerage management

The vessel that will be used for exploration has to comply with the International Convention for the Prevention of Pollution from Ship (MARPOL 73/78). Therefore, the vessel will be equipped with International Maritime Organisation (IMO) approved sewerage plant which consist of an approved sewerage comminuting and disinfecting system and a sewerage holding tank to control the discharge of sewerage into the sea.

The proponent will ensure that all relevant MARPOL annexures are being adhered too. The sewerage must be disposed of at Lüderitz Port in a manner that does not pollute the sea and the surrounding environment. The vessel will also have a garbage management plan which is a comprehensive guideline encompasses of written procedures for collecting, storing, processing and disposing of garbage generated onboard as per regulations provided in Annex V of MARPOL.

3.4.4 Security

As per the Diamond Act 13 of 1999 all person entering and embarking the vessel requires a Restricted Area Permit (RAP). A Certificate of Conduct or Police Clearance certificate is required to authenticate the individual identity and risk profile. All prospecting employees will be subjected to a polygraph test to be performed by the security personnel's that will be contracted by Vistorina N Nama. An induction course which will also cover issues pertaining to security will be given to all employees prior to their commencement of duties. The vessel will be equipped with a full scanner body low dosage x-ray search facility and all employees and visitors including their luggage's will be searched on boarding the vessel. Illegal substances and alcohol will not be permitted to enter the vessel. An electronic control system will be in place to monitor and track access to the vessel.

3.4.5 Rehabilitation and closure plan

The diamond exploration project is projected to be operational for a period of about 36 months and if there is diamond prospect, mining will be taking place in the area provided that all the requirements are fulfilled. However, if the diamond exploration does not yield the desired results, the exploration activity will be entirely decommissioned. The Environmental Management Act, 2007 has made a provision it is imperative to take into consideration the impact on the environment during the decommissioning phase of the project. The Namibian legislation considers decommissioning as a separate activity and an EIA should therefore be conducted prior to decommissioning. A rehabilitation and closure plan for the exploration project will be costed to ensure that the financial viability of the exploration project do incorporate the environmental damages. The decommissioning plan must identify the targets and objectives for decommissioning and exploration activities working towards

this end. The proponent should consult with specialists in order to ensure that decommissioning is in line with the current best practice trend, to diminish the probable risks and economic cost to carry out this process. Stakeholder engagement is critical during the decommissioning phase to ensure that the communities' interests are known and their requirements from the initial phase of the project are considered.

4. DESCRIPTION OF THE BIO-PHYSICAL ENVIRONMENT

4.1 Climate

The weather along the coast of Namibia is generally characterized by relatively cool temperatures as depicted in **Figure 6**, strong onshore winds and frequent cloudy skies. Precipitation is extremely rare, with fog occurring frequently throughout the year. The average number of fog days per year around Moeb Bay amounts to about 117 days. Hence, the climate along the Namibian coastline is classified as hyper-arid. The average precipitation around Moeb Bay is 16 mm per year. During winter, strong and hot Berg wind conditions prevail, although for a relatively short time period. During the Berg wind conditions, record temperatures around 40°C have been recorded, notably off Walvis Bay.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C	20.9 °C	21.3 °C	20.9 °C	19.3 °C	17.1 °C	15.4 °C	15.3 °C	14.8 °C	16.2 °C	17.7 °C	18.9 °C	20 °C
(°F)	(69.6) °F	(70.4) °F	(69.6) °F	(66.7) °F	(62.7) °F	(59.6) °F	(59.6) °F	(58.6) °F	(61.1) °F	(63.8) °F	(66) °F	(68.1) °F
Min. Temperature °C	17 °C	17.5 °C	17 °C	15 °C	12.5 °C	10.4 °C	10.5 °C	10 °C	11.5 °C	13.2 °C	14.5 °C	15.9 °C
(°F)	(62.5) °F	(63.4) °F	(62.5) °F	(59) °F	(54.6) °F	(50.8) °F	(50.8) °F	(50) °F	(52.7) °F	(55.7) °F	(58.1) °F	(60.6) °F
Max. Temperature °C	25.4 °C	25.7 °C	25.5 °C	24.2 °C	22.4 °C	21.1 °C	21 °C	20.1 °C	21.5 °C	22.7 °C	23.9 °C	24.7 °C
(°F)	(77.7) °F	(78.3) °F	(78) °F	(75.6) °F	(72.4) °F	(70) °F	(69.9) °F	(68.2) °F	(70.7) °F	(72.9) °F	(75) °F	(76.5) °F
Precipitation / Rainfall	2	1	2	5	6	3	3	3	2	1	2	0
mm (in)	(0.1)	(0)	(0.1)	(0.2)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)	(0)	(0.1)	(0)
Humidity(%)	64%	64%	62%	61%	60%	56%	52%	58%	57%	58%	59%	63%
Rainy days (d)	0	0	0	1	1	1	1	1	0	0	0	0
avg. Sun hours (hours)	11.2	10.7	10.4	9.8	9.0	8.7	9.0	9.1	9.8	10.6	11.2	11.5

Figure 6: Average weather for Moeb Bay (https://en.climate-data.org).

Generally, the sunshine hours recorded at the coast is relatively less compared to the inland areas due to the predominance of fog and cloudy conditions as indicated in **Figure 7**. Along the northern and southern coast, the number of sunshine hours range on average between 8-10 hours per day over a year (Robertson *et al*., 2012).

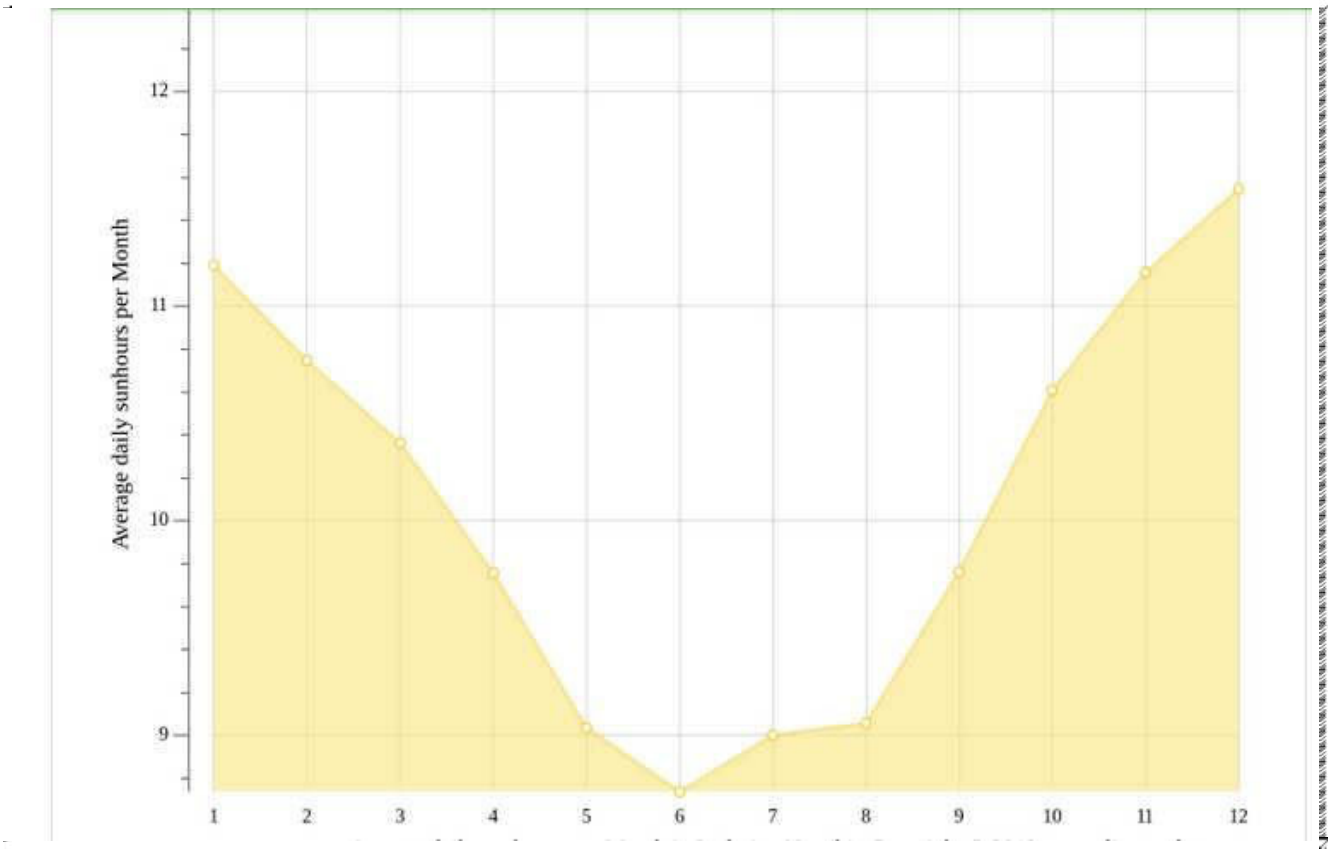

Figure 7: Average daily sunhours per Month in Moeb Bay (www.climate-data.org).

4.2 Winds

The South Atlantic high-pressure system is responsible for the prevailing southerly and south-easterly winds. The upwelling favourable longshore winds off Lüderitz show high seasonal, inter-annual and inter-decadal variability, reflecting the dynamic nature of the Benguela Current system. The strongest winds are observed where the coastline changes orientation, notably off Lüderitz and Cape Frio, whereas around concave coastlines, the winds are weaker, as observed between Walvis Bay and Mowe Bay (Shillington *et al*., 2006).

Due to the geomorphology of the Namibian coastline, the strong wind patterns result in major swells, notably the so-called “roaring forties” and significant waves (Robertson *et al.,* 2012). Hence, the southern Namibian coast experiences strong wave action.

The exploration activities within the EPL area thus may be affected by major swells, strong wave action and storms that occur frequently, especially during winter and spring.

4.3 Currents

The Benguela Current originates as a northward flowing current around the Cape of Good Hope. Off Lüderitz, the main geostrophic flow starts to deflect to the northwest, separating from the coast and beginning to widen. The current velocities in the continental shelf areas of the wider Benguela Current region range between 10-30 cm/s (Boyd and Oberholster, 1994). Surface currents around the Lüderitz area are variable, with wind patterns contributing to observed variability. Near bottom shelf flow is predominantly poleward with very low velocities (Nelson, 1989). The average water temperature at Lüderitz range between 12.5 -15.9℃ (see **Figure 8** below).

	January	February	March	April	May	June	July	August	September	October	November	December
Min. Water	15.3	15.7	14.8	14.2	13.6	13.2	12.5	12.5	12.2	12.4	13.1	13.9
Temperature °C (°F)	59.5	60.3	58.6	57.6	56.5	55.8	54.5	54.5	54	54.3	55.6	57
Avg. Water	15.7	15.9	15.2	14.5	14.1	13.5	12.9	12.6	12.5	12.8	13.7	15.1
Temperature °C (°F)	60.3	60.6	59.4	58.1	57.4	56.3	55.2	54.7	54.5	55	56.7	59.2
Max. Water tempera-	16.3	16.2	15.8	14.8	14.3	13.7	13.2	12.8	12.7	13.3	14.1	15.7
ture °C (°F)	61.3	61.2	60.4	58.6	57.7	56.7	55.8	55	54.9	55.9	57.4	60.3

Figure 8: Average water temperature (www.climate-data.org).

5. DESCRIPTION OF THE GEOLOGY

5.1 Geology

The new EPL8627 is located within the marine deposits of the offshore Namibia. The coast along Namibia in places are characteristic of reworked of fluviatile and aeolian action, that host the diamond deposits (Ward and Corbett, 1990). The post-Gondwana development of the area is given during this period, various stages of aggradation and incision of the Orange River led to the formation of fluviatile terraces. They are proof of major base level changes at the end of the Cretaceous and in Pliocene and Pleistocene times. The composition of these fluviatile terraces, which are diamondiferous, points to a catchment area of the Orange River in the cratonic provinces of central southern Africa. The diamonds are believed to have come from kimberlite pipes in this source area. Hence, during periods of relative uplift, the rejuvenated Orange River transported diamondiferous gravels onto its submarine delta forming intermediate offshore depositories for the diamonds. These gravels were reworked during several Cenozoic transgressions and regressions before being finally preserved in a series of raised diamondifeous beaches along the Namib coast (Kilham, 1992). In addition, reworking of exposed diamondiferous marine deposits by wind action produced aeolian diamond placer deposits, most of which are in elongate depressions aligned parallel to the prevailing south to south-easterly wind direction (Corbett, 1989).

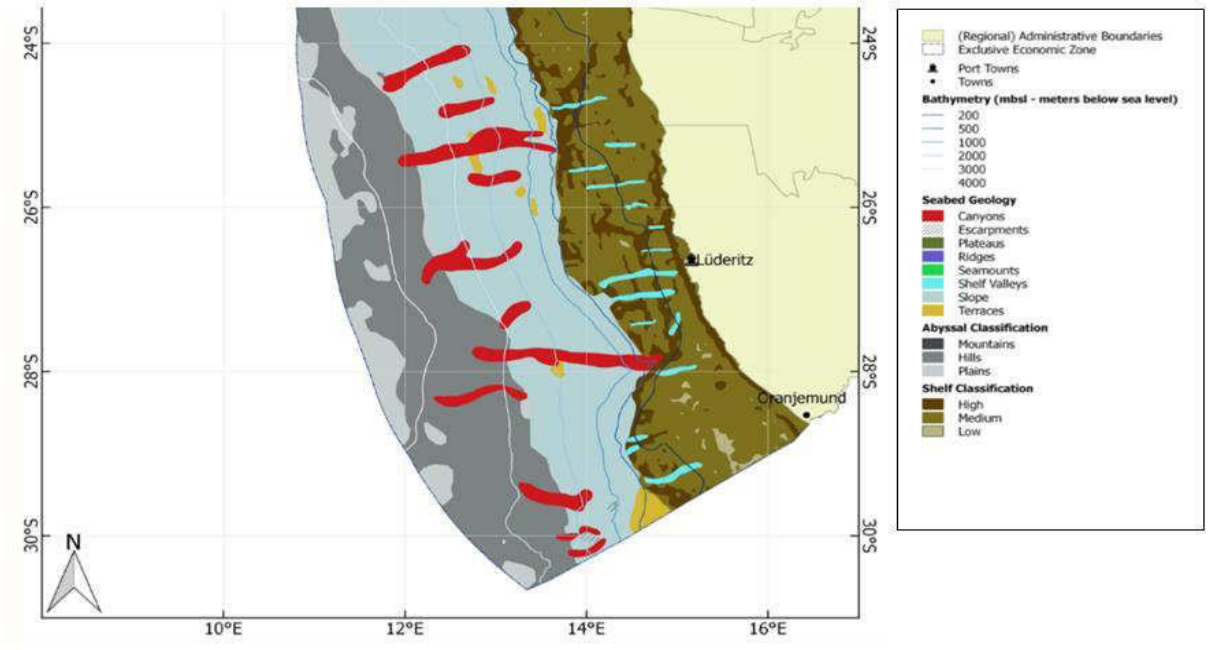

Figure 9: Map of seafloor geomorphic features in relation to EPL area (yellow polygon – not to scale)

6. DESCRIPTION OF THE ARCHAEOLOGICAL AND HERITAGE

6.1 Archaeology and Heritage

There are no declared heritage sites by the National Heritage Council of Namibia in the area of EPL8627, Moeb Bay in !Karas Region. However, an accidental find procedure at the subject area may be required.

7. DESCRIPTION OF THE MARINE BIODIVERSITY

This section will provide a synopsis of the marine biodiversity occurring within the area of the EPL 8627.

7.1 Marine Mammals

Under the class Mammalia, one resident seal species (Pinnipeds) and several species of whales and dolphins (Cetaceans) occur off the coast of Namibia.

7.1.1 Pinnipeds

The Cape fur seals (*Arctocephalus pusillus pusillus*) are one of the largest fur seal populations in the world and endemic to Angola, Namibia and South Africa (Wickens and York 1997). Around 60% of the seal population is found in Namibia on 26 colonies dispersed along the coast. Half of the seal population used to occur in southern Namibia, but recent studies indicated a northward shift and this is attributed to the abundance and availability of prey, particularly the pelagic fish stocks in the north. Cape fur seals have been observed to roam and forage over the continental shelf up to 200 m. Although they are not considered migratory, there is some dispersion of seals between different colonies. The breeding season is well-defined, occurring between November and January. The pregnancy rate of females is estimated to be over 71%, with a female giving birth to one pup (Kirkman *et al.,* 2007, 2012).

The fur seals are opportunistic predators, feeding on epi- and mesopelagic fauna, including anchovies, sardines, gobies, but also octopus, squid, mantis shrimps, rock lobsters etc. (Branch *et al*., 2010). The diet varies according to species distribution, abundance, recruitment and environmental variability, hence there is notable difference in the diet seasonally, annually and regionally along the Benguela Current

region coastline.

The harvesting of seals is restricted in Namibia through controlled annual quota and Total Allowable Catch (TAC) allocation by the Ministry of Fisheries and Marine Resources (MFMR). Overall, the seal population is considered to be in a healthy and stable state, often being labelled by the fishing industry as direct competitors.

The EPL is not located close to any of the seal colonies but seals may be encountered during the proposed exploration activities when they are roaming and foraging in the area.

7.1.2 Cetaceans

There are an estimated 84 species of whales and dolphins worldwide, and they are divided into two main distinct taxonomic groups, namely the Odontocetes and the Mysticetes. The anatomical characteristics of the two groups reflect their different lifestyles. The Odontocetes or tooth whales and dolphins are active predatory hunters with teeth, while in the Mysticetes or baleen whales, the teeth are replaced by long fibrous baleen plates. The two groups have evolved and adapted over aeons to changing food and habitat. The Benguela Current region have approximately 37 species of whales and dolphins sighted and recorded. About 31 species of cetaceans are known to occur in Namibian waters. Cetaceans are generally distributed both on the shelf and deeper oceanic waters, and often migrate between the two environments (Branch *et al.,* 2010).

7.1.3 Mysticetes (Baleen whales)

The majority of the baleen whales have been observed to show affinity for long-range migration between Antarctic feeding grounds and potential/ different breeding grounds, hence may be encountered during exploration and prospecting activities depending on the migration season for different species. The two species of mysticetes that are of relevance and likely to be encountered are the southern right whale, which uses coastal waters for breeding and the humpback whale, which use the coastal waters as a migratory route. Other whales likely to be encountered include the blue, fin, sei, Antarctic minke, dwarf minke, and bryde's whales.

7.1.4 Southern right whale (*Eubaleana australis*)

The southern right whale population extended historically from southern Mozambique to southern Angola. The right whales were heavily exploited by early 19th century whaling. The sighting of the southern right whales in recent years in Namibian waters have risen hope of the return of the whales, however, this has been observed to be the expansion of the South African stock. The whales utilize the coastal areas and bays between the coast of South Africa and Namibia for breeding during winter and migrate to the sub-Antarctic in late spring/ summer, although there have been sightings throughout the year. The population is estimated to be growing at the rate of 7% per annum. The right whales are usually sighted close inshore.

7.1.5 Humpback whale (*Megaptera noveagliae*)

Humpback whales have been exploited heavily around the world and faced near extinction until its protection since 1966. Their numbers have been increasing over the years and they have been listed as least concern by IUCN. Humpback whales have been observed to use Namibia's coastline as a migratory route to breeding grounds in West Africa between Angola and the Gulf of Guinea. They have been regularly sighted in the Lüderitz area during spring and summer months. During migration, the whales are spread out widely across the shelf and deeper waters, notably during southward migration.

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7.1.8 Odontocetes (Tooth whales)

In contrast to the migratory nature of the Mysticetes species, the Odontocetes are resident species in general, with the distributional range varying widely from near coastal to oceanic waters. Commonly encountered tooth whales, include the sperm whale, pygmy and dwarf sperm whales, and killer whales and common dolphins.

One of the most common Odontocete most likely to be encountered is the endemic Heaviside's dolphin (*Cephalorhynchus heavisidii*). The Heaviside's dolphin is relatively abundant but has a restricted distribution in the inshore waters from the Cape peninsula to Baia dos Tigress in southern Angola. They are listed as near-threatened by IUCN and some of the anthropogenic threats include pollution, by-catch and vessel disturbance. Individuals have been observed to show high site fidelity to small home ranges, thus vulnerable to anthropogenic threats within the home range.

8. Fish and Fisheries

The high primary productivity occurring through the processes of upwelling in the Benguela Current region supports an economically important fishing industry. The species diversity is generally low in upwelling regions; however, the associate biomass is high. Namibia is one of the leading marine capture fisheries nations. In Namibia, fishing industry is a significant earner of foreign currency and ranked third highest contributor to the Gross Domestic Product (GDP).

The fisheries sector in Namibia is divided into commercial, recreational and subsistence fisheries. The commercial sector includes: demersal, mid-water, deep sea trawl fisheries; small pelagic purse seine, large pelagic long-line, demersal long-line, tuna pole, line fish, deep sea crab and rock lobster fisheries as reflected in the **Table**

2 below.

Table 2. The target species, fishing method and the number of fishing vessels operating in Namibian waters in 2017 (MFMR, 2018).

Target Species	Fishing Method	Number
Hake	Bottom trawl	53
Hake	Long line	14
Monk	Bottom trawl	14
Hake/ Monk	Bottom trawl	4
Horse mackerel	Midwater trawlers	11
Crab	Bottom trawl	2
Large pelagics	Long line	14
Albacore tuna	Pole and line	4
Sardine/ juvenile horse mackerel	Purse seine	4
Snoek	Pole and hook	23

The fact that the majority of the commercial fisheries activities operate beyond the 200m depth restriction and the proposed exploration activities will be operating below 150 m depth, no direct interaction is anticipated between the exploration and fishing activities.

9. Turtles

Five species of marine turtles have been recorded to occur in the Benguela Current region (Bianchi *et al*., 1999). The leatherback turtle is the most commonly sighted turtle in the region, including in Namibia. There is evidence that the leatherbacks use Namibian waters as an important foraging ground, primarily due to the abundance of its prey, the jellyfish (Lynam *et al*., 2006; Branch *et al.,* 2010).

Table 3. Turtle species recorded in Benguela Current (BC) region.

Common name	Scientific name
Leatherback turtle	*Dermochelys coriacea*
Hawksbill turtle	*Eremochelys imbricate*
Green turtle	*Chelonia mydas*
Loggerhead turtle	*Caretta caretta*
Olive ridley	*Lepidochelys oliviacea*

All the turtle species occurring in the Benguela Current region are of conservation concern and face increasing threat of extinction. Some of the anthropogenic factors

contributing to the decline of turtles include vessel strikes, incidental by-catches in fisheries, pollution (ingestion of plastic debris), entanglements and habitat loss. The knowledge of the abundance of turtles, especially leatherbacks in the exploration area is unknown, thus their numbers are anticipated to be low.

10. Seabirds

The Benguela Current region is utilized by approximately 82 seabird species, of which seven are endemic to the region (Makhado *et.al.,* 2021). The Namibian coastline sustains a large number of breeding and foraging seabirds but their declining numbers have been a cause for concern (see **Table 4**) (Crawford *et. al.,* 2007*)*. The islands of southern Namibia provide important breeding and roosting sites for 11 of the 14 seabird species that breed in Namibia. The Ichaboe, Mercury and Possession Islands are particularly important roosting and breeding sites, especially for Bank Cormorant, Crowned Cormorant, Cape Cormorant, African Penguin, Cape Gannet, African Black Oyster- catcher and Hartlaub's Gull.

Other important seabird species that breed on the southern Island include, White-breasted Cormorant, Kelp Gull, Swift Tern and Caspian Tern.

The majority of the seabirds breeding in southern Namibia forage close to nearshore and inshore areas, although Cape Gannets and African Penguins have been recorded to forage more than 140 and 60 km respectively (Ludynia *et al,* 2007). The EPL is not located close to any of the islands, thus the exploration and prospecting activities are considered to have a minimum disturbance on the breeding and roosting seabirds on the islands. The major threats to seabirds and contributing to their declining numbers is the lack of suitable prey and interaction of certain seabirds with fishing vessel operations.

The collapse of the sardine (*Sardinops sagax*) has had a major impact on the seabirds such as African Penguins, Cape Gannet and Cape Cormorants as sardine was their main prey (Crawford *et. al., 2007;* Erasmus *et al*., 2021). The Namibian hake fishery

was considered to be the deadliest fishery in the world in terms of incidental by-catch of seabirds (Paterson *et al.,* 2017), however, with the introduction of bird scaring devices, seabird mortality has been significantly reduced.

Table 4. Breeding seabird species and other species encountered on Namibian islands and coastline, with the latest IUCN classification status.

Common name	Scientific name	IUCN status
Cape Cormorant	*Phalacrocorax capensis*	Endangered
Bank Cormorant	*Phalacrocorax neglectus*	Endangered
Crowned Cormorant	*Microcarbo coronatus*	Near threatened
White-breasted cormorant	*Phalacrocorax carbo*	Least Concern
African Penguin	*Spheniscus demersus*	Endangered
Cape Gannet	*Morus capensis*	Endangered
Kelp Gull	*Larus dominicanus*	Least Concern
Hartlaub's Gull	*Larus hartlaubii*	Least Concern
African Black Oystercatcher	*Haematopus moquini*	Least concern
Damara Tern	*Sterna balaenarum*	Near Threatened
Swift Tern	*Thalasseus bergii*	Least Concern
Caspian Tern	*hydroprogne caspia*	Vulnerable
Northern Giant-Petrel	*Macronectes halli*	Least concern
White-chinned Petrel	*Procellaria aequinoctialis*	Vulnerable
Shy Albatross	*Thalassarche cauta*	Near Threatened
Atlantic Yellow-nosed Albatross	*Thalassarche chlororhynchos*	Endangered
Black-browed Albatross	*Thalassarche melanophris*	Least concern
Lesser Flamingo	*Phoenicopterus minor*	Near Threatened
Greater Flamingo	*Phoenicopterus roseus*	Least concern
Chestnut-banded Plover	*Charadrius pallidus*	Near threatened

11. Important Biodiversity Areas

Important areas which harbour biodiversity within the EPL are as follows;

11.1 Namibian Islands' Marine Protected Area (NIMPA)

The Marine Protected Areas (MPAs) have been increasingly designed worldwide to protect local marine resources, habitats and conserve biodiversity, thus it is a very important tool in the ecosystem approach to fisheries management in general.

Namibia's first MPA, the Namibia Islands Marine Protect Area (NIMPA) was proclaimed in 2009, with the primary aim of protecting the foraging areas of top predators, including a number of globally threatened seabirds, and to protect the spawning and nursery grounds of the commercially exploited rock lobster and other marine resources to promote stock recovery.

The NIMPA stretches 400 km along the southern coastline, extending from Hollamsbird Island (24° 57'S) in the north to Chamais Bay (27° 57'S) (see **Figure 10** below). The MPA extends on average approximately 30km offshore, covering almost 10 000 km^2. The MPA includes 16 specified offshore islands, islets and rocks. The combined surface area of the islands, islets and rocks is approximately only 2.35 km^2 but play a significant role, thus have been given high protection status (Currie *et al*., 2008).

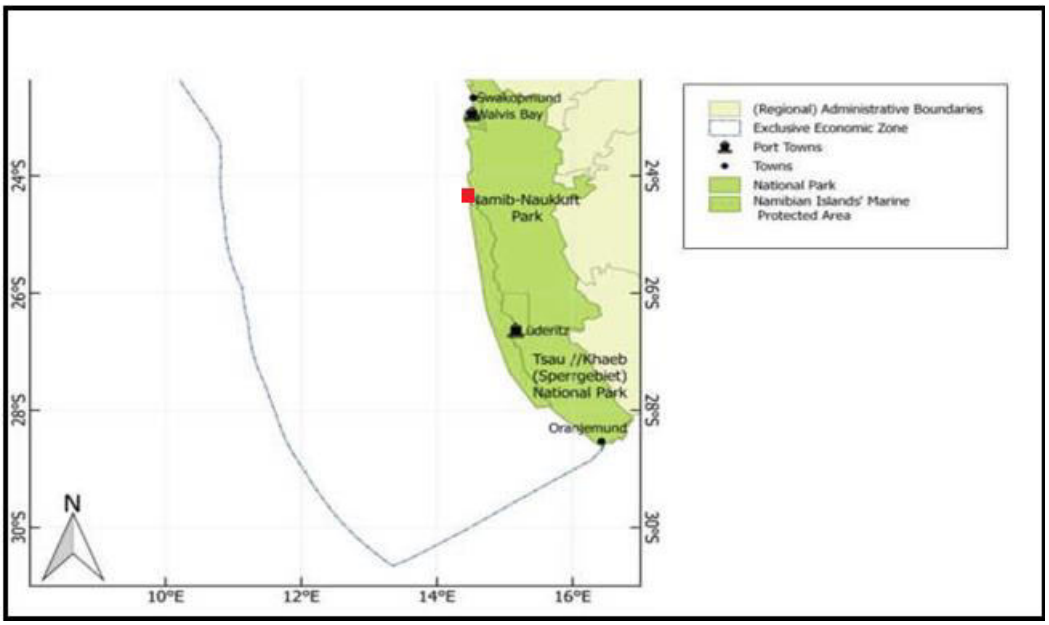

Figure 10: The Namibia Islands Marine Protected Area (NIMPA) relative to EPL location (red polygon – note to scale)- MFMR, 2018.

12. DESCRIPTION OF THE SOCIO-ECONOMIC

!Karas Region has a population size of approximately 77 421 inhabitants, and it is the second least populated region in the country (Namibia 2011 Population and Housing Census Report). The region comprises of seven constituencies namely; !NamiCNûs (Lüderitz),Oranjemund, Keetmanshoop Urban, Keetmanshoop Rural, Berseba, Karasburg West and Karasburg East. The main economic activity in the region is predominantly small stock farming mainly; sheep and goats farming. Major irrigation farming activities in the region are mainly confined along the Orange River and Naute Dam focusing on agricultural plantation such as grapes and palm dates. Fishing and

diamond are the most imperative economic sectors in the region with most of the economic activities centred around the harbour town of Lüderitz which is considered to be the economic hub. The other town in the region which have major diamond mining activities is Oranjemund, while the town of Rosh Pinah is known for Zinc mining. Tourism is another critical and crucial industry in the region with Fish River Canyon which is the second largest canyon in the world the main tourism beacon. Other tourism attractions include the Ai-Ais Hot Spring at Ai-Ais, Quiver Tree forest near Keetmanshop and Brukaros Mountain near Berseba. Numerous game farms and guest farms which offer different tourism activities can be found in the region. The region has two airports in Lüderitz and Oranjemund and well-maintained road networks, of which some links Namibia to neighbouring country such as South Africa. In addition, the region has an operational railway -line connecting the harbour town of Lüderitz with the major towns and the capital city Windhoek.

13. DESCRIPTION OF THE PUBLIC PARTICIPATION

13.1 Public Participation Requirement

In term of Section 21 of the EIA Regulations a call for open consultation with all I&APs at definite stage of the EIA process is mandatory. This includes participatory consultation with members of the public by affording an opportunity to comment on the proposed project. The public was given a considerable time to provides their comments and make suggestions on the proposed project and a public participation meeting was only necessary if there are comments and suggestions from the public. Activity carried out as part of the public participation process has been provided in **Table 5** below. The advertisements for the public participation meeting was placed in the **Confidente local news paper for: 15t September 2023 on page 2, The Village local news paper on dates (15, 20 & 22 September 2023) on pages respectively 25, 5 & 18. The New Era local daily paper advertisement for** (See **Annexure C**) The I&A parties were notified via email correspondence (See **Annexure C**).

Table 5. Public Participation Activities

Activity	Remarks
Placement of Advertisements in the Newspaper **–New Era daily Newspaper** **--The Villager** **--Confidente weekly news paper**	**See Annexure C**
Emails Correspondence with the I&A Parties	**See Annexure B**

13.2 Environmental Assessment Phase 2

The second phase of the Public Participation Process (PPP) entails lodging of the Draft Environmental Scoping Report (DESR). An Executive Summary of the DESR was prepared and the public was given until the **30th October 2023** to submit their comments, suggestion or opinions towards the project.

14. ASSESSMENT METHODOLOGY

The aim of this section is to explain the assessment methodology applied to determine the significance, management, location and operational impacts of the exploration of diamond and where attainable the probable alternatives on the bio-physical and socio-economic environment.

The assessment of the predicted significance of impact of the diamond exploration that is not functioning at this phase by its nature, inherently indefinite environmental assessment is therefore an imprecise discipline. To ensure that uncertainty is dealt with a standardised and internationally accepted approach has been established. Therefore, this assessment uses the recognised approach to determine the significance of the potential environmental impacts of the planned diamond exploration project as provided in the subsequent **Table 6**.

Table 6: standardised and internationally recognised approach in determining the significance of the potential environmental impacts.

CRITERIA	CATEGORY
Impact	**Description of the potential impact**
Nature Describe type of effect	**Positive**: The activity will have a social / economical / environmental benefit. **Neutral**: The activity will have a no effect. **Negative**: The activity will have a social / economical / environmental harmful effect.
Extent Describe the scale of the impact	**Site Specific**: Expanding only as far as the activity itself (onsite). **Small**: Restricted to the site's immediate environment within 1km of the site (limited). **Medium**: Within 5 km of the site (local). **Large**: Beyond 5 km of the site (regional).
Duration Predicts the lifetime of the impact	**Temporary**: <1 year (not included in the construction). **Short-term**: 1-5 years. **Medium**: 5-15 years. **Long-term**: > 15 years (Impact will stop after the exploration or running life of the of the project, either due to natural course or by human interferences). **Permanent**: Impact will be where mitigation or moderation by natural course or by human interference will not occur in a particular time period that the impact can be considered temporary.

Intensity Describe the magnitude (scale/size) of the impact	**Zero**: Social and/ or natural function and/ or process remain unaltered. **Very low**: Affect the environment in such a way that natural and/ or social functions/ processes are not affected. **Low**: Natural and/ or social functions/ processes are slightly altered. **Medium**: Natural and/ or social functions/ processes are notably altered in a modified way. **High**: Natural and/ or social functions/ processes are severely altered and may temporarily or permanently cease.
Probability of occurrence Describe the probability of the impact **actually** occurring	**Improbable**: Not at all likely. **Probable**: Distinctive possibility. **Highly probable**: Most likely to happen **Definite**: Impact will occur regardless of any prevention measures.
Degree of Confidence in predictions State the degrees of confidence in predictions based on availability of information and specialist knowledge.	**Unsure/Low**: Little confidence regarding information available (<40%). **Probable/Med**: Moderate confidence regarding available (40% -80%). **Definite/High**: Great confidence regarding available (>80%).
Significance Rating The impact on each component is determined by a combination of the above criteria.	**Neutral**: A potential concern which was found to have no impact when evaluated. **Very low**: Impacts will be site specific and temporary with no mitigation necessary. **Low**: The impact will have a minor influence on the proposed project and/ or environment. These impacts require some though to adjustment of the project design where achievable or alternative mitigation measures. **Medium**: Impacts will be experienced in the local and surrounding areas for the life span of the project and may

	result in long term changes. The impact can be reduced or improved by amendment in the project design or implementation of effective mitigation measures. **High**: Impacts have high magnitude and will be experienced regionally for at least the life span of the project or will be irreversible. The impacts could have the no -go proposition on portions of the project in spite of any mitigation measures that could be implemented.

It is out-most important to understand that the magnitude of the impact must be related to the relevant standard (threshold value specified and source reference). The magnitude of impact is based on specialist knowledge of the specific field.

For each impact, the **EXTENT** (spatial scale), **MAGNITITUDE** (size or degree scale) and duration (time scale) are explained. These criteria are used to ascertain significance of the impact, commencing with the event where there is limited mitigation measure needed and then with the most effective mitigation measures in place. The assertion as to which mitigation measure can be valuable remain the prerogative of the proponent in this case; Vistorina N Nama and er acceptance and ultimately her endorsement by the relevant environmental authority.

The significance of the impact is consequential by captivating the temporal and spatial scales and magnitude. Such significance is rated and assigned based on the nature of the impact and the receiving environment.

15. MITIGATION MEASURES

There is a mitigation hierarchy of action that can be used to retort to any proposed project or activity. The mitigation hierarchy includes; avoidance, minimization, restoration and compensation as depicted in **Figure 12** below. It is assumed and essential to give prioritise constructive benefits manifesting from the proposed project or activity towards the environment and if negative impacts are occurring then the hierarchy had made provision for the actions to be taken.

Figure 12: The mitigation hierarchy of action used to retort to any proposed project or activity.

16. ASSESSMENT OF POTENTIAL IMPACTS AND MITIGATION

This section explains the bio-physical and socio-economic environments, which may hypothetically occur as result of the planned diamond exploration activity as highlighted in **Section 3** of this report. This includes long-term likely impact linked to the proposed diamond exploration activity and potential short terms impacts associated with the project. The assessment of potential impacts related to the project will provide the necessary information needed by the MEFT: DEA about the management of the impacts which have been identified during the assessment process. The decision on the environmental acceptance of the diamond exploration activity at EPL 8627 and setting of conditions provided that exploration project is authorised will be made based on this section and taking cognisant of the information provided in this environmental assessment report.

The baseline and potential impacts that are likely to occur as a result of the proposed diamond exploration at EPL 8627 are explicated and assessed with recommendation of potential mitigation measures highlighted. Further recommendations have been made on the likely cumulative impacts associated with the planned diamond exploration project.

16.1 Impacts During Exploration Phase

The exploration activities which includes the dredging may pose a significant impact on the sea-bed particularly at the targeted sites within the EPL. Therefore, it is essential to manage the sediment plumes to avoid the loss of sea floor habitats and ultimately the marine biodiversity.

16.1.1 Impacts on biodiversity

Marine biodiversity plays a pivotal role in maintaining the marine ecosystem. The exploration of diamond offshore at EPL 8627 will have a considerable impact on the marine ecosystem, particularly the sea-bed. It is clearly that marine seismic survey may pose danger to the marine biodiversity, because they emit high concentration of acoustic with low frequency sounds. The emitted sound may result in numerous impacts to different

species which may include physical injuries, behavioural changes and physiological effect. However, since the marine seismic survey will only be confined to the targeted exploration sites within the EPL and the exploration will only be carried out for a short period this impact may considered to be minimal.

16.1.1.1 Impacts on marine mammals

The seismic sound emitted by the geophysical equipment may potentially cause disturbance to the marine mammals, if they are within the exploration range or enter the path of the beam range. The exploration vessel and equipment may potentially contaminate water if there is any leakage or spillage. Therefore, the vessel and equipment should be carefully checked at all time for any leakage and if refuelling is taking place offshore the tank must be mounted on stilts to prevent any leakage or spillage.

16.1.1.2 Impacts on benthic communities

During the exploration the sediment will be removed from the seabed and this will result in the disturbance and displacement of the benthic species and ultimately poses a threat to the benthic communities. It noted that “the benthic biota inhabits the first few centimetres of the sediment and play an important role in providing ecosystems services such as nutrient cycling and aeration of sediments. They are also an important food source for the demersal fish and other predators”. The disturbance of the benthic communities will definitely have an impact of the food and nutrient supply and impact on the food-chain of the benthic communities.

16.1.1.3 Impacts on rock lobsters

The diamond exploration project may expose the rock lobster to the new environment because they might be removed with sediment during exploration. Although rock lobster prefers shallow water, their abundance may be affected indirectly, due to the disturbance of the benthic communities which is the primary source of food. Therefore, its recommended in the that the preferred habitats for rock lobsters such as rocky areas and crevices should be avoided.

16.1.1.4 Impacts on marine turtles

It is documented that marine turtle has been recorded in the Benguela Current region of which the EPL 8627 is located. The leatherback turtle is known to occur in the Namibian water and may potentially be affected by the project. The turtle occurring in the Benguela Current are subjected to a number of threats such as vessel strike, pollution, incidental by- catches in fisheries and habitant loss. Although the leatherback turtle is not known to occur in the vicinity of the EPL, appropriate consideration should be given to this species to ensure that threat such as vessel strikes and others does not take place.

16.1.1.5 Impacts on seabirds

Although the EPL is not located in close proximity of any of the islands, the exploration will have a minimal impact on the breeding and roosting seabirds on the islands, induced by the presence of the vessel. Another major concern to seabirds is that there will be a decline in the numbers of available prey because the presence of the vessel will drive them away to seek refuge elsewhere. There will be interaction of certain seabirds with the vessel operating in the areas. Therefore, the breeding and roosting sites of sea-birds should be avoided as possible.

16.1.1.6 Impacts on fishes

Generally, the species diversity is low in the upwelling regions, but the total biomass is high due to the high primary productivity taking place during the upwelling in the Benguela Current region and it sustain the fishing industry. The fishing industry is imperative and contribute enormously to the country Gross Domestic Product (GDP). Fishing activities are carried out at water depth of 200m. The envisaged diamond exploration activities will be undertaken below 150m depth, hence there will be no direct interference expected to take place. However, the fishes can be affected due to some potential cumulative impacts associated with the proposed diamond exploration. The exploration should therefore not be carried out during the peak of breeding season offishes.

16.1.7 Generation of sediment plumes

During of the sampling process, the sampled seabed sediments are pumped to the surface and discharged onto sorting screens on the vessel for screening. The undesirable material is discarded overboard where they form a suspended sediment plume in the water column which disperses with time. Furthermore, fine sediment re-suspension by the sampling tools will generate suspended sediment plumes near the seabed. The major impact of sediment plumes is an increase in water column turbidity, leading to a reduction in light penetration with potential adverse effects on the photosynthetic capability of phytoplankton. Other possible impacts include hindering pelagic visual predators due to poor visibility, egg and/or larval development impairment and reduction of benthic bivalve filter-feeding efficiencies. Other negative impacts may also take place when heavy metals or contaminants allied with fine sediments are re-mobilised.

16.1.8 Vessel accidents and emergencies

Most of shipping traffic is found on the periphery of the continental shelf, which is situated well to the west of the EPL. The onshore traffic of the continental shelf is mainly constituted of the mining and fishing vessels. It is highly improbable that shipping transport routes would be affected by the proposed diamond exploration activities, and results in vessel accidents. The impact on shipping traffic is considered to be localised, of low intensity in a short-term. However, potential accidents or emergencies arising from grounding or sinking of vessels and associated accidental oil spills cannot be ruled out. These accidents may pose a significant threat to the marine environment. Accidental oil pollution is a great concern in the marine environment. Hence a comprehensive oil spill management system and plan should be developed and enforced.

16.1.9 Waste Management Impacts

Marine littering particularly by single use plastic is a major concern around the globe which is receiving considerable international attention due to the fact that it is transboundary. Marine mammals, turtles, seals and seabirds have fallen victim of marine littering which includes; entanglements. Marine littering particularly by the

single use plastic has a long-term impact and can persist for longer in the marine environment. Other types of waste such as biodegradable food waste has the potential of causing oxygen depletion in the water column due to the upsurge of biological oxygen demand (BOD) as result of aerobic degradation of such organic waste.

16.1.10 Storage and Utilisation of Hazardous Substance

Hazardous substances are considered by the Hazardous Substance Ordinance (No: 14 of 1974) as those substance which may cause injury or ill-health to or death of a human being due to their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances. It entails manufactures, sales, use, disposal, and dumping as well as import and export. During exploration the use, storage and disposal of such hazardous substance is imminent and can potentially cause serious negative impacts on the environment if such substance spill or enter the marine environment. Therefore, such substance should be kept safe in a lockable storage container.

16.1.11 Social Impacts

The number of unemployed people in Lüderitz and the entire country is on the increase due to the prevailing Covid19 which forced many people to be retrenched and some companies to closed down. The planned diamond exploration project will employ a considerable number of people from the town on permanent and casual basis and further create cumulative jobs. This make a positive impact to the economy of the town and the region at large. Furthermore, the proposed project will contribute immensely to the national economy through loyalties, taxes and foreign currency exchanges.

16.1.12 Archaeological and Heritage Impacts

There are no declared heritage sites by the NHC within the subject area, however, an accidental find procedure may be required.

16.1.13 Health, Safety and Security Impacts

A project of this magnitude will attract many people to the town of Lüderitz to seeks for employment opportunities. The migration of people may result in the interaction with the local community and a significant risk is created for the development of social

conditions and sexual behaviours which contribute to the spread of HIV and AIDS. MEFT have in recent years developed a policy on HIV/AIDS. This policy was developed in-conjunction with international agency such as USAID, GTZ, and Germany Development Fund, providing a non-discriminatory work-environment and for workplace programs managed by the Ministry committee. The MEFT thus, initiated a programme aimed at mainstreaming HIV and gender issues into the environmental impact assessment.

It's against this background that workers should be provided with Personal Protective Equipment's (PPEs). A fully stocked first kit with unexpired medicines must always be on the vessel. Due to the prevailing Covid19 pandemic employees should adhere to all Covid19 regulations and protocols; ensuring social distances and wearing mask where feasible. Employees should also be encouraged to take available Covid19 vaccinations of their choice as a measure to suppress the spread of the virus. All employees must be monitored for Covid19 symptoms and enforce proper hygiene and as stipulated by the WHO guidelines. This should complement the conditions compiled and outline in the EMP additional to this report.

17. AN ENVIRONMENTAL MANAGEMNT PLAN

An Environmental Management Plan (EMP) is contained to this report.
The aim of the EMP is to outline the sort of mitigation measures that should be applied during the diamond exploration project and decommissioning/closure phase of the project to ensure that the negative impacts associated with the diamond exploration project are avoided or mitigated.

18. SUMMARY OF POTENTIAL IMPACTS

A summary of the significance of the potential impacts from the diamond exploration project is defined in the environmental impact assessment matrix (See **Table 7** below) and the summary of the mitigation measures proposed for the impacts have been provided. Although some distinction in the magnitude of the potential impact would results from the planned alternatives such difference was not considered to be significant for any conceivable impacts, therefore the table below is applicable to all the planned alternatives.

Table 7: Environmental impact assessment matrix for the exploration of diamond at EPL 8627

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
IMPACTS DURING DIAMOND EXPLORATION										
Impacts on biodiversity	Exploration of diamond	No mitigation	Local	Medium-Low	Short term	Medium	Probable	Certain	Reversible	Medium-Low (-ve)
		Mitigation	Local	Low	Short term	Medium -Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
Impacts on marine mammals	Exploration of diamond	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Medium - Low	Medium term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Impacts on benthic communities	Exploration of diamond	No mitigation	Local	Low	long term	Medium	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Very low	Medium term	Medium-Low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
Impacts on rock lobsters	Exploration of diamond	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Medium - Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Impacts on marine turtles	Exploration of diamond	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium – low (-ve)
		Mitigation	Local	Low	Short term	Medium-Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Impacts on seabirds	Exploration of diamond	No mitigation	Local	Very low	Short term	Medium	Probable	Certain	Irreversible	Very low(-ve)
		Mitigation	Local	Negligible	Short term	Medium -Low	Probable	Certain	Irreversible	Negligible (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	**Probable**	Certain	Reversible	Neutral
	Exploration of diamond	No mitigation	Local	Medium-Low	Short term	Medium	Probable	Certain	Reversible	Medium-Low (-ve)

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
Impacts on fishes		Mitigation	Local	Low	Short term	Medium -Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Generation of sediment plumes	Exploration of diamond	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Very low	Short term	Medium-Low	Probable	Certain	Reversible	Very low
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Vessel accidents and emergencies	Exploration of diamond	No mitigation	Local	Medium	Short term	Medium - Low	Probable	Certain	Reversible	Medium - Low (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Waste Management Impacts	Exploration of diamond	No mitigation	Local	Medium	Short term	Medium -Low	Probable	Certain	Reversible	Medium - Low (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
Storage and Utilisation of Hazardous Substances	Exploration of diamond	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Very low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Social Impacts	Exploration of diamond	No mitigation	Local	Neutral	Short term	High++	Probable	Certain	Reversible	Medium-Low
		Mitigation	Local	Neutral	Short term	High++	Probable	Certain	Reversible	Low
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Archaeological and Heritage Impacts	Exploration of diamond	No mitigation	Local	Neutral	Short term	Low	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Low	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
Health, Safety and Security Impacts	Exploration of diamond	No mitigation	Local	Neutral	Short term	Medium -Low	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Low	Probable	Certain	Reversible	Neutral
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral

19. CONCLUSION AND RECOMMEDATIONS

The essence of this segment is to summarise and complete the assessment report with reference to **Table 5** above and provide the way forward. Most of the negative impacts from the diamond exploration at EPL 8627 are considered to have **medium to low** significance, contrary some negative impacts have medium significance which can be mitigated to negligibly **low** with the application of the mitigation measures. By implementing the mitigation measures the complemented EMP contained in this report in **Annexure D** the significance of the negative impacts emanating from the proposed diamond exploration will be reduced to **low**.

There will be a considerable impact on the marine biodiversity which will impact different biota. The impacts on different biota can be rated medium-low, if the provided mitigation measures in this report are implemented together with the EMP (**Annexure D**). Furthermore, the potential impact associated with this project will be localized to the targeted exploration sites only. The proponent should be cognisant that the generation of sediment plumes has a serious ecological impact on the marine ecosystem because it can potentially affect primary production on the benthic environment.

The proposed diamond exploration has a **high** significance in terms of the social impact which is **positive**. The positive significance in the social impact has been credited as a result of potential direct and cumulative economic impacts allied with the proposed project. The project will also contribute immensely to national economy through loyalties, taxes and foreign currency earnings.

Based on the existing information at the project definition and planning phases, the confidence level in the environmental assessment undertaken is satisfactory and sufficient for the decision making particularly in terms of the environmental impacts associated with the project. Consequently, this project must be approved and issued with an Environmental Clearance Certificate (ECC) by MEFT: DEA. Nevertheless, due to the unremitting alteration of the environment, unvarying monitoring must be in undertaken and the proponent must appoint a qualified Independent Environmental

Consultant to incessantly conduct an environmental audit for submission to the office of the Environmental Commissioner.

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Annexure A: Proof of notice of award EPL8627

REPUBLIC OF NAMIBIA

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NOTICE TO APPLICANT OF PREPAREDNESS TO GRANT APPLICATION FOR EXCLUSIVE PROSPECTING LICENCE No. 8627.

In terms of Section 48(4) of the Minerals (Prospecting and Mining) Act, No. 33 of 1992, notice is hereby given that the Minister is prepared to grant your new application, lodged on **01 October 2021**, for an exclusive prospecting licence in respect of **Precious Stones**, Groups of Minerals over an area of land as shown in the attached diagrams, subject to the terms and conditions contained in the attached schedule, which terms and conditions supplement the terms, conditions and provisions of the said Act.

Your attention is drawn to the provisions of Section 48(5) of the said Act, which require that within one (1) month from the date of this notice, written acceptance of such terms and conditions must be received by the Commissioner, failing which the application will be deemed to have lapsed.

Kindly acknowledge your acceptance of such terms and conditions by-

(a) completing the section at the bottom of this notice;

(b) initialing each page of the schedule and the diagrams; and

(c) returning such signed and initialed documents to the Commissioner.

11.10.2022

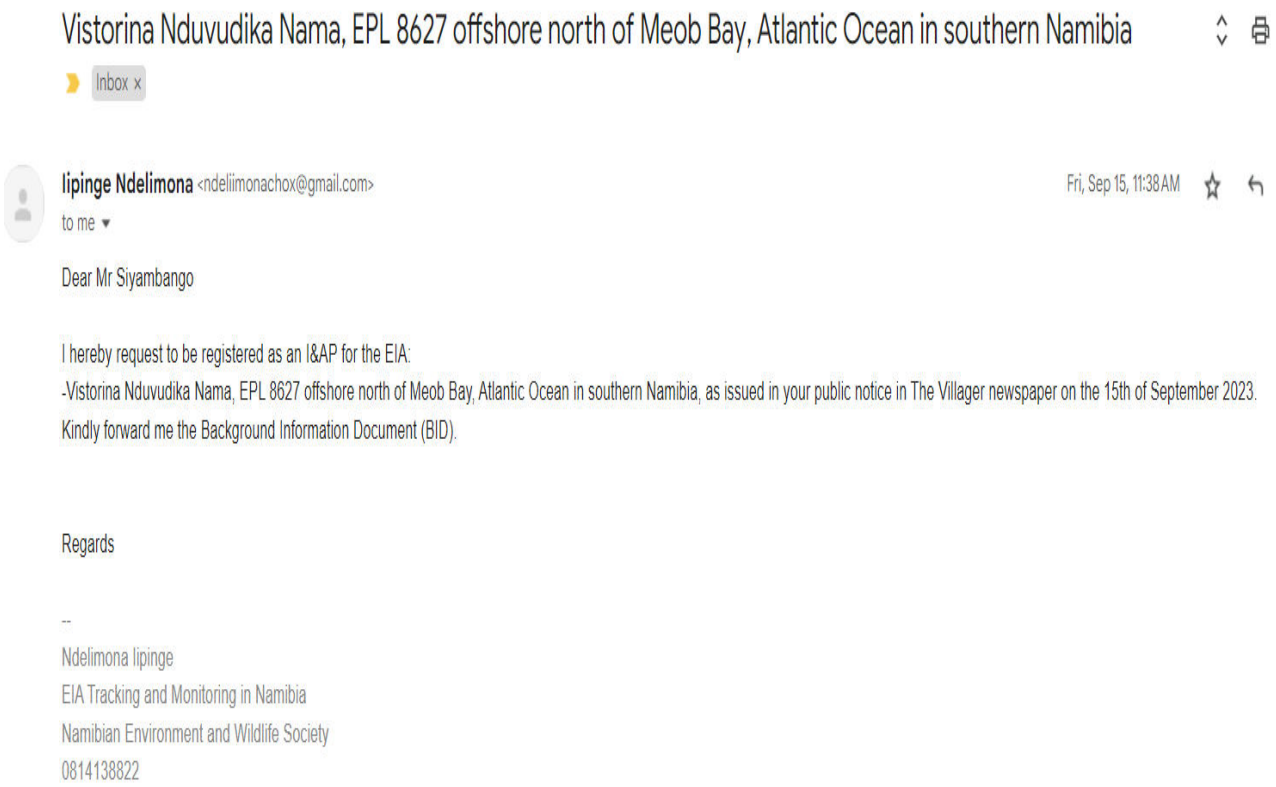
MR. E. I. SHIVOLO
MINING COMMISSIONER

MINISTRY OF MINES AND ENERGY
MINING COMMISSIONER
11 OCT 2022
PRIVATE BAG 13297
9000, WINDHOEK
OFFICIAL

VN

All official correspondence must be addressed to the Executive Director

Proof of email communication



Vistorina Nduvudika Nama, EPL 8627 offshore north of Meob Bay, Atlantic Ocean in southern Namibia

Inbox x

Iipinge Ndelimona <ndeliimonachox@gmail.com> Fri, Sep 15, 11:38 AM

to me

Dear Mr Siyambango

I hereby request to be registered as an I&AP for the EIA:
-Vistorina Nduvudika Nama, EPL 8627 offshore north of Meob Bay, Atlantic Ocean in southern Namibia, as issued in your public notice in The Villager newspaper on the 15th of September 2023.
Kindly forward me the Background Information Document (BID).

Regards

--
Ndelimona Iipinge
EIA Tracking and Monitoring in Namibia
Namibian Environment and Wildlife Society
0814138822

Annexure B: Proof of Newspaper Advertisements in the The NewEra, The Village and cofidente weekly newspaper.

Annexure C: Curriculum Vitae for the Environmental Assessment Practitioner

Annexure D: Environmental Management Plan (EMP).