ENVIRONMENTAL SCOPING AND ASSESSMENT REPORT FOR THE PROPOSED MINING ACTIVITIES OF DIMENSION STONE ON MINING LICENSE NO. 271 KARIBIB DISTRICT, ERONGO REGION - NAMIBIA

ECC APPLICATION NO: 005724

2025

COMPILED BY

SS CONSULTANTS

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EXECUTIVE SUMMARY

SG Mining CC have successfully advanced its dimension stone project on Mining License 271 at Farm Okawayo No; 46, Karibib district, Erongo Region. The project is well-positioned to become a significant dimension stone producer in the Erongo Region, an area already known for its high-quality marble. The company had completed a magnificent robust exploration including continuous mining operation in the area. Existing data were optimised to establish the viability of the project and geological mapping were conducted to comprehend the extent and quality of dimension stone. A reverse circulation drilling and sampling method was employed to determine the depth, volume in terms of tonnage and grade of the dimension stone reserves. In order to precisely define the mining license area, the exploration results were used through a targeted delineation approach to establish the most economically viable area.

The Scoping Report for Mining License; 271 presents a balanced view, identifying both negative and positive impacts. Numerous negative environmental impacts are rated as medium to low significance. Some impacts are of medium significance, which is notable and requires attention. These medium-significance impacts can be reduced to a "marginally low" level**.** However, this is entirely conditional on the strict implementation of the mitigation measures detailed in Section 15 of the report. The social impact of the project is rated **as** high significance and is positive and the major benefit is the reduction of unemployment in the local area by creating new jobs.

Beyond local social benefits, the project will also contribute positively to the national economy through royalties which are payments made to the government for the right to extract the mineral resources. Various taxes and fees imposed by the government as levies will be another option the government will generate revenues from the proposed marble mining project as well as foreign currency earning, since the dimension stone will be exported and this will bring valuable foreign currency into the country.

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LIST OF ACRONYMS

CC	**Close Corporation**
DEA	**Directorate of Environmental Affairs**
DESR	**Draft Environmental Scoping Report**
EA	**Environmental Assessment**
EAP	**Environmental Assessment Practitioner**
ECC	**Environmental Clearance Certificate**
ECO	**Environmental Compliance Officer**
EIA	**Environmental Impact Assessment**
EMA	**Environmental Management Act**
EMP	**Environmental Management Plan**
GPS	**Global Positioning System**
Ha	**Hectare**
I&APs	**Interested and Affected Parties**
IT	**Information Technology**
KM	**Kilometres**
KW	**Kilowatts**
MEFT	**Ministry of Environment, Forestry and Tourism**
MM	**Millimetres**
MIME	**Ministry of Industries, Mines and Energy**
NAMPOWER	**Namibia Power Corporation**
NAMWATER	**Namibia Water Corporation**
NHC	**National Heritage Council**

PPEs	**Personal Protective Equipment's**
SME	**Small Medium Enterprise**

GLOSSARY OF TERMS

Alternatives	A possible course of action, in place of another, that would meet the same purpose and need but which would avoid or minimize negative impacts or enhance project benefits. These can include alternative locations/sites, routes, layouts, processes, designs, schedules and/or inputs. The "no-go" alternative constitutes the 'without project' option and provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid undesirable negative impacts.
Competent Authority	A body or person empowered under the local authorities act or Environmental Management Act to enforce the rule of law.
Environmental Assessment (EA)	The process of assessment of the effects of a development on the environment.
Environmental Management Plan (EMP)	A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.
Evaluation	The process of ascertaining the relative importance or significance of information, the light of people's values, preference and judgements to make a decision.
Hazard	Anything that has the potential to cause damage to life, property and/or the environment. The hazard of a particular material or installation is constant; that is, it would present the same hazard wherever it was present.
Interested and Affected Party (IAP)	Any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Mitigate	The implementation of practical measures to reduce adverse impacts.
Proponent (Applicant)	Any person who has submitted or intends to submit an application for an authorisation, as legislated by the Environmental Management Act No. 7 of 2007, to undertake an activity or activities identified as a listed activity or listed activities; or in any other notice published by the Minister or Ministry of Environment & Tourism.
Public	Citizens who have diverse cultural, educational, political and socio-economic characteristics. There are a number of publics, some of

	whom may emerge at any time during the process depending on their particular concerns and the issues involved.
Scoping Process	Process of identifying: issues that will be relevant for consideration of the application; the potential environmental impacts of the proposed activity; and alternatives to the proposed activity that are feasible and reasonable.
Significant Effect/Impact	An impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.
Stakeholder Engagement	The process of engagement between stakeholders (the Proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement varies depending on the nature of the proposal or activity as well as the level of commitment by stakeholders to the process.
Stakeholders	A sub-group of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences.

1. INTRODUCTION

This chapter outlines the report's purpose and provides a concise overview of the project. It also summarizes the Terms of Reference for the Scoping and Environmental Impact Assessment (S&EIA) process and outlines the rest of the reports structure.

1.1. Background

SG Mining CC, hereafter is an established wholly owned Namibian company with the intention to transition its current mining operations into a long-term, scale up dimension stone (white marble) mining project. The proponent has formally applied for a 20-year Mining License (ML 271) on the 30 May 2025 with the Ministry of Industries, Mines and Energy (MIME) with a reference number 14/2/3/2/271 (see Annexure A). Following the acquisition of an initial Environmental Clearance Certificate (ECC) the proponent undertook a comprehensive drilling program within the delineated Minin License (ML) No. 271 and the result firm a significant reserve of high-quality white marble. The initiated drilling program successfully completed six drilling holes at a depth of approximately 80 meters. The total estimated commercial recoverable white marble resource is pegged to be around 10 million cubic meters and the resource support a projected mine lifespan of approximately 20 years with prospect for further expansion. The proponent has both capital investment in excess of around 50 million Namibian dollars as well as the technical capacities that is required for the upscaling of the project into a Mining Licence. This investment will cover the procuring of new cutting-edge mining equipment, recruitment and training of additional workforce. This is a clear reflection that the proponent possesses financial and technical capacity to execute and manage the proposed upscale of the dimension stone mining project.

The proposed upscale of the current operation to a mining license is classified as a listed activity under Environmental Management Act 2007 (Act No. 7 of 2007) (EMA). An Environmental Clearance Certificate (ECC) is mandatory to commission the upscale of the project into a long-term operation under a full Mining License. SS Consultant cc was therefore appointed by SG Mining cc to conduct an Environmental Impact Assessment (EIA) and formulate a robust Environmental Management Plan for the proposed development.

1.2. Project Locality

The ML 271 is situated approximately 9 Km north-east of Karibib at Farm Okwayo No. 46, Karibib district, in Erongo region. Farm Okwayo No. 46 is situated approximately 9 Km north-east of Karibib and 3 Km east of the C33 road that stretches from Karibib to Omaruru. The ML can be accessed via the C33 road that stretches from Karibib to Omaruru and ultimately use the track that branch out of the main road on the right toward Okwayo mountain ridge (see Figure 1 & 2 below for the site). The ML covers an area of 17.7756 Ha and its bordering the Mining Licence 226 that belongs to Windust Investments (Pty) Ltd on the North, Mining Licence 247 of Africa Big Rhino Mining (Pty) Ltd on the North-West and Mining Licence 238 that belongs to Osino Gold Exploration and Mining (Pty) Ltd on the East.

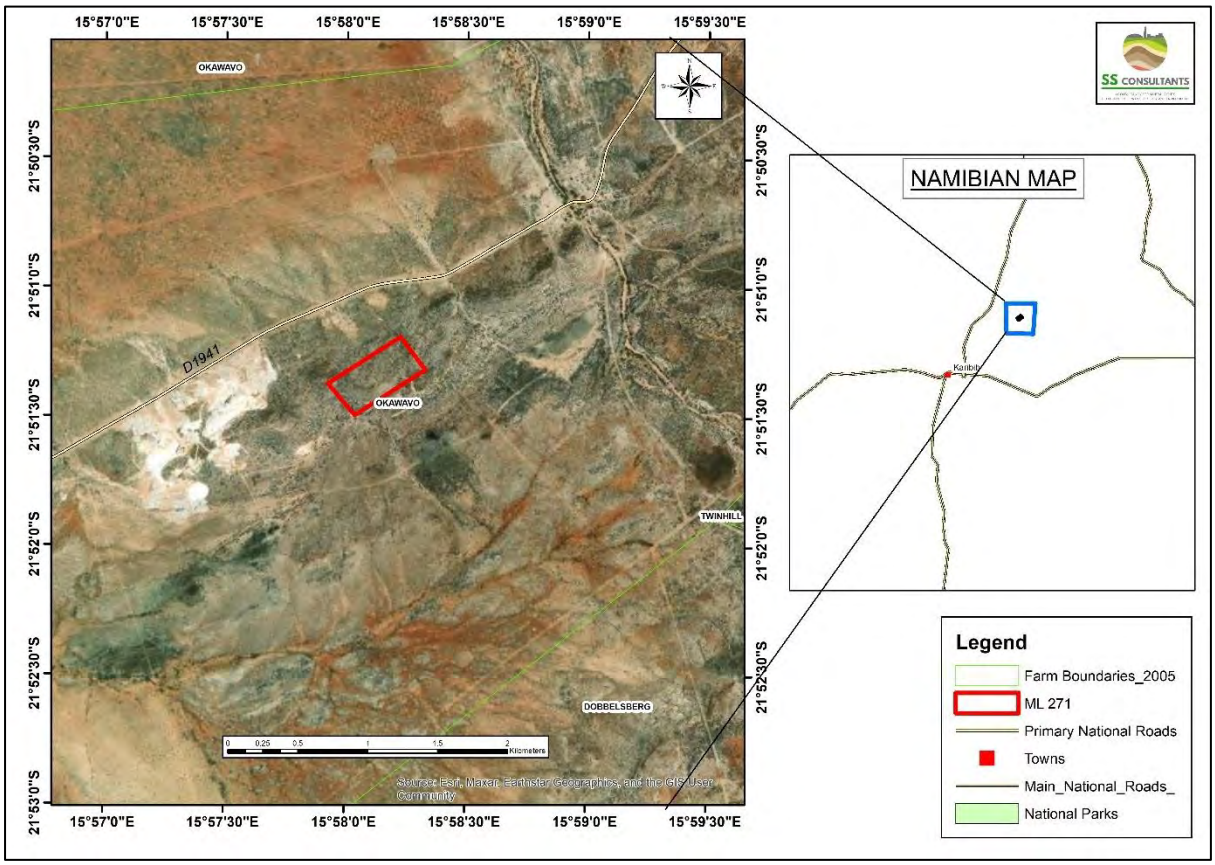

Figure 1-1: Satellite image showing the locality and farms covering the ML 271 project area.

Coordinates and Shape

Coordinates **Shape**

Official Area: 17.7756 Ha

Coordinate system: GCS Bessel 1841

Order	Latitude	Longitude
Part 1		
1	21° 51' 22.35" S	15° 57' 55.38" E
2	21° 51' 11.48" S	15° 58' 13.36" E
3	21° 51' 19.09" S	15° 58' 19.55" E
4	21° 51' 29.67" S	15° 58' 02.05" E

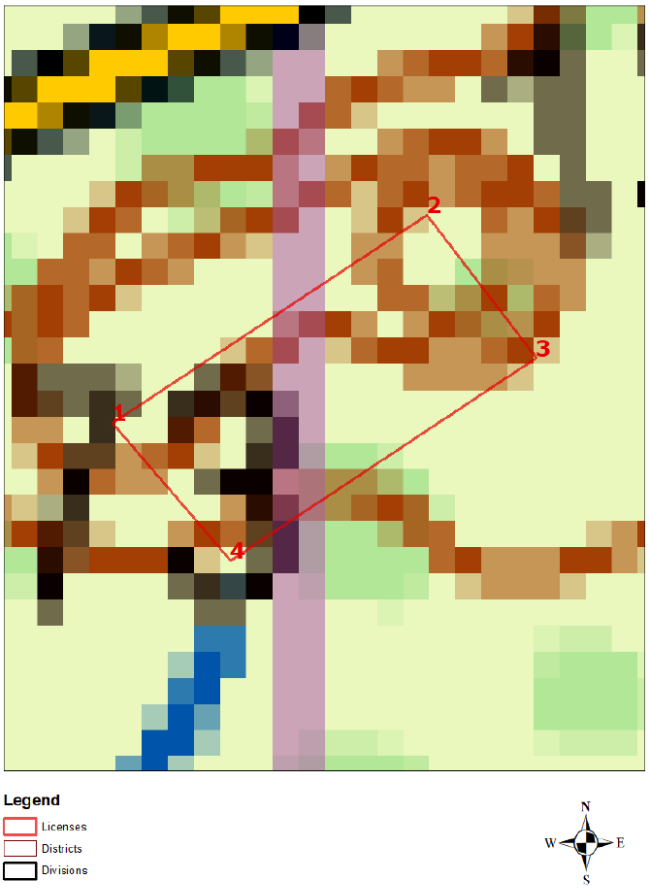

Figure 1-2: Image Depicting the corner coordinates for ML 271.

Table 1-1: Summary of ML271 location details.

Location	Approximately 10 km from Karibib town
Area size	17.7756hectares
Constituency	Erongo
Regional Administration	Erongo Region
Nearest Town/Village	Karibib and Omaruru towns

Table 1-2: Corner coordinates for ML 271.

Corner	*Longitude*	*Latitude*	*Corner*	*Longitude*	*Latitude*
1	*15.96538331*	*-21.8562082*	*3*	*15.9720971*	*-21.8553028*
2	*15.9672360*	*-21.8582416*	*4*	*15.9703778*	*-21.8531889*

1.3. Terms Of References

The Environmental Impact Assessment (EIA) for the upscale of white marble mining activities has been undertaken in strict compliance with Namibia Environmental Management Legislations primarily;

- Environmental Management Act, No 7 of 2007)
- Environmental Management Act Regulations (Government Notice No. 30 of 2012).

The explicit objective of this EIA is to furnish the Office of the Environmental Commissioner with comprehensive, reliable and significant information. This will enable a rigorous and evidence-based decision regarding the issuance of the Environmental Clearance Certificate (ECC) of the proposed development by the Office of the Environmental Commissioner.

The EIA has been conducted as a systematic process, following sequential steps that are mandated by Environmental Management Act Regulations (Government Notice No. 30 of 2012). Each step is detailed within the Scoping Environmental Impact Assessment Report and is summarised as follows;

- **Project description**:

A detailed description of the proposed mining development, including its design, scale, location, technologies to be used and phased development (construction, operation, and decommissioning).

- **Legislative and policy review**:

Identification and review of all relevant national and local legislation, policies, standards, and guideline applicable to the proposed dimension stone mining activity.

- **Baseline environmental assessment:**

An assessment of the existing environmental conditions within the project area to determine its sensitivity and establish a baseline against which impacts can be measured. This includes;

  - **Physical environment** – Geology, soils, hydrology, air quality and climate.
  - **Biological environment** – Flora, fauna and ecosystem
  - **Socio-economic** – Land use, demographics, cultural heritage and local economy

- **Public participation process**

Informing all Interested and Affected Parties (I&APs) and relevant authorities about the proposed project. This step provides a reasonable and structured opportunity for their input, concerns, and participation throughout the EIA process, ensuring transparency.

- **Impact identification and significance assessment**

A systematic evaluation of the potential positive and negative environmental and social impacts that may arise from the project. The significance of each identified impact is assessed based on intensity, duration, and context.

- Environmental management and mitigation

The development of a comprehensive Environmental Management Plan (EMP). The EMP outlines specific management, monitoring, and mitigation measures to avoid, minimize, or offset potentially negative impacts. This section also includes the formulation of a decommissioning and rehabilitation plan to guide the closure of the mine and restore the site post-operations.

1.4. Environmental Impact Assessment Requirement

Adherence to national environmental legal frameworks is mandatory for any mining operation. As mandated by the Environmental Impact Assessment Regulation (Government Notice No. 30 of 2012), the initiation of mining activities is expressly prohibited without first obtaining a valid Environmental Clearance Certificate (ECC). To advance the proposed dimension stone operation on ML 271, the proponent required to formally initiate the ECC application process as stipulated under regulation 6 of the aforementioned regulation. This procedural pathway includes a multi-faceted approach to environmental governance, ensuring that the project's development is balanced with ecological and social responsibilities. In accordance with regulation 21 of the 2012 an inclusive and comprehensive public consultation processes must be conducted. The consultation is critical in identifying and addressing the concerns of local communities and other stakeholders, thereby fostering transparency and social license to establish the intended mining project. The formulation and ultimately submission of two key documents namely; environmental scoping report and environmental management plan is not only a formality but a fundamental component of environmental stewardship and responsible development of the proposed mining project.

1.5. The Purpose Of The Scoping Report

This report constitutes the formal Scoping Report for the Environmental Impact Assessment (EIA) pertaining to the proposed establishment of the dimension stone mining operations on ML 271. The scoping phase is a critical, since it's a fundamental component of the EIA process, designed to systematically focus on subsequent assessment to aspect that have both environmental and socio-economic impacts. Significant impacts associated with the proposed upscaling of dimension stone mining at ML 271 have been identified including issues of minimal concerns. The specific objectives of this report are;

- **Identify key impacts**; determine the critical environment, social and economic impacts to be assessed prior to project initiation.
- **Inform Decision-Making**: Identify and outline the essential information required by regulatory authorities to make an informed decision regarding the project approval.
- **Guide the EIA Process**: Establish the Term of Reference (ToR) for subsequent phases of the EIA, ensuring a comprehensive and targeted study.

- **Evaluate Alternative**: Define reasonable and practical alternatives to the proposed development, including the no-project option, for comparative analysis.
- **Facilitate Public Participation**: inform the public and key stakeholders about the proposed mining activities and proactively identify, record, and address their comments and concerns.

1.6. Project Alternatives

1.6.1. Considered Alternatives

In the project planning phase, the proponent evaluated several potential sites for dimension stone mining operation. This site selection process was guided by a comprehensive analysis of geological data, including historical records and recent geological surveys to efficiently identify areas with viable marble resources. The selected site was determined to be the most suitable based on a multi-factorial assessment, which prioritized the concentration and quality of the resources, operation accessibility, and long-term commercial viability.

1.6.2. No - Go Alternatives

The no-go alternative which involves maintaining the status quo and not proceeding with the proposed mine, serve as the fundamental baseline for comparing all project options. Under this scenario, no mining would be initiated. The primary implication of selecting the No-Go alternative is the forfeiture of the projects significant socio-economic benefits includes;

- **Local Socio-Economic Impact**: The community of Karibib would be deprived of direct and indirect employment opportunities, leading to a loss of potential skills development and local income generation.
- **Regional and National Economy Impact:** The country will forgo substantial economic contributions, including government revenue ranging from royalties and taxes, as well as potential foreign currency earnings from mineral exports.

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

The development and operation of the envisaged dimension stone mine will be conducted under the comprehensive oversight of Namibia regulatory authorities. The project mandate is derived from the Ministry of Industries, Mines and Energy (MIME) for all mineral rights, while environmental stewardship and compliance are governed by the Ministry of Environment, Forestry and Tourism (MEFT). The project commitment to legal conformity extends both the national statutory framework and applicable international laws which Namibia endorsed.

Table 2-1: Legal requirements relevant for the proposed upscaling of the dimension stone mining 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 to	Legal requirement to undertake an EIA

Legislation	Summary	Applicability
	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 by the fuel

Legislation	Summary	Applicability
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 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.	Possible fuel spill and leakages may pollute ground and surface water.
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	Operating mining equipment has the potential risk of injuries.

Legislation	Summary	Applicability
	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 all occupations. This is done by ensuring that all work-related hazards are prevented and where they occur, managed.	Provision of clean ablution facility, routine health check-ups for employees, HIV/AIDS awareness etc.
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 public safety from noise, dusts, and air pollution.
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	Ensure that the river systems are not polluted and implement pollution control mechanism to avoid water pollution

Legislation	Summary	Applicability
	resources. Furthermore, any watercourse on/or in close proximity to the site and associated ecosystems should be protected in alignment with the listed principles.	
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 ephemeral river systems.
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.

Legislation	Summary	Applicability
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 machinery, hazardous substances, physical hazards, medical provisions, construction safety and electrical safety.	Follow legal labour requirements such as safety, remuneration etc
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
Soil Conservation Act No. 76 of 1969	This act promotes the conservation of soil, prevention of soil erosion.	Coordinate movement of mining equipment to prevent soil erosion. Ensure conservation of topsoil.
Hazardous Substances	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

Legislation	Summary	Applicability
Ordinance No. 14 of 1974		
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	Mining activities such as excavation may unearth archaeological material.

3. DESCRIPTION OF THE PROPOSED DIMENSION STONE MINING PROJECT

3.1 Introduction

Karibib is a mineral rich area in Namibia with significant mineral resources deposit and its renowned for its high-quality white marble. The demand for marble from Karibib is distinguished by its hardness and superior quality, making it a leading dimension stone product in major international markets, such a China, the USA and Europe. Its global appeal is demonstrated by its use in prestigious construction projects both locally and internationally. Besides marble, Karibib area is also known for its gold deposit and prominent gold mines such as Navachab Gold Mine, one of the oldest gold mines in the country is found few kilometres Southwest of the Karibib townland. Of recent, a new gold mine under the auspices of Osino Resources had been acquired by China Shanjin International Gold Co (formerly known as Yintai Gold) and mine development is currently on course with operation anticipated to commence in 2026.

Overall, the mining sector continues to make an immense economic impact through export, royalties and taxes while complementing government efforts to reduce unemployment and improve livelihoods. Specifically, mining of dimension stones is pivotal in reducing unemployment and heeding to the government's call for local processing and value additions, that involves transforming raw materials into more valuable products within the country rather than exporting them as raw materials.

3.2 Mining Methods

The mining operation will involve the use of marble block cutters equipped with large diamond saw blades. Cuts are made on all sides of the marble block, and a horizontal saw blade is then used to separate strips once the desired vertical thickness is achieved. In order to expedite the process, various supporting equipment will be deployed, including excavators, wheel loaders, forklifts, wire saw machines, drilling machines, trucks and air compressors. The dimension stone are cut to pre-programmed specifications and loaded onto flatbed trucks using heavy- duty front-end forklifts. The trucks will transport the marble block to a factory in Karibib, where the marble blocks are cut into slabs for export to international markets and further processing.

Figure 3-1: A stripped area within the ML 271 with exposed deposit of targeted white marble resources.

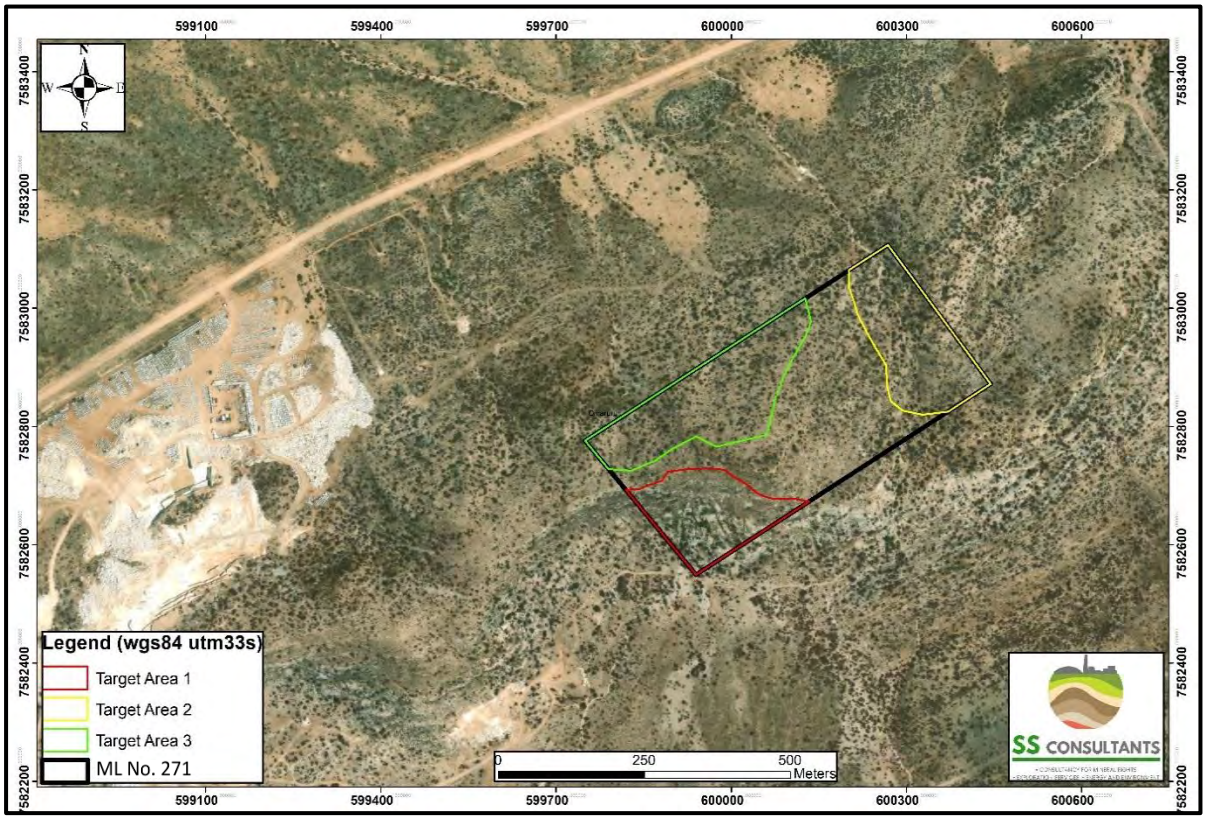

Figure 3-2: The primary targeted areas with high grade white marble resources within the ML 271.

3.3 Labour Requirements

The primary purpose of converting the marble project into a mining license is to mine high quality white marble blocks for both local and international markets. The project will be operated in full compliance with all national legislations. This includes adherence to the Labour Act of 2007. All required permits and authorisations will be secured upon the granting of an Environmental Clearance Certificate (ECC) from the Ministry of Environment, Forestry and Tourism (MEFT). The project is designed to have a long-term sustainability with an estimated operational lifespan of approximately 20 years and prospect for future expansion. The intended mining license is valid for 20 years, with potential for extension based on the results of ongoing geological exploration. Approximately 100 people will be directly employed by the project with an anticipated escalation in cumulative job creation through associated services. Additionally, the project will prioritise local enterprise development by outsourcing some of the services to Small and Medium Enterprises (SMEs).

3.4 Supporting Infrastructures

3.4.1 Energy Requirements

Although Karibib is connected to the national grid, the specific mine is not electrified. Currently, the primary source of power supply for operation at the site is through a 275 kVA generator. This solution is considered feasible at the moment, since the farm has restricted access and existing operation does not require high-voltage infrastructures. The proponent is exploring the option of connecting to existing NAMPOWER infrastructures in the area. The primary power demand at the mine will be for operating block cutting equipment featuring large diameter diamond saw blades, as well as for the daily administrative functions in the site office. In line with a commitment to environmental sustainability and the transition to a green economy, the proponent will install solar panel on the roofs of the containers-based site offices and storerooms. This solar system will

complement the generator, reducing the projects carbon footprint and minimise its contribution to climate change.

3.4.2 Water Sourcing and Supply

Water supply is available in Karibib through the existing water infrastructures that belongs to Namibia Water Corporation (NamWater) and supplies water to the town. There are plans to secure water supply by connecting to existing NamWater pipeline once the approval of the conversion of the current operation into a mining license.

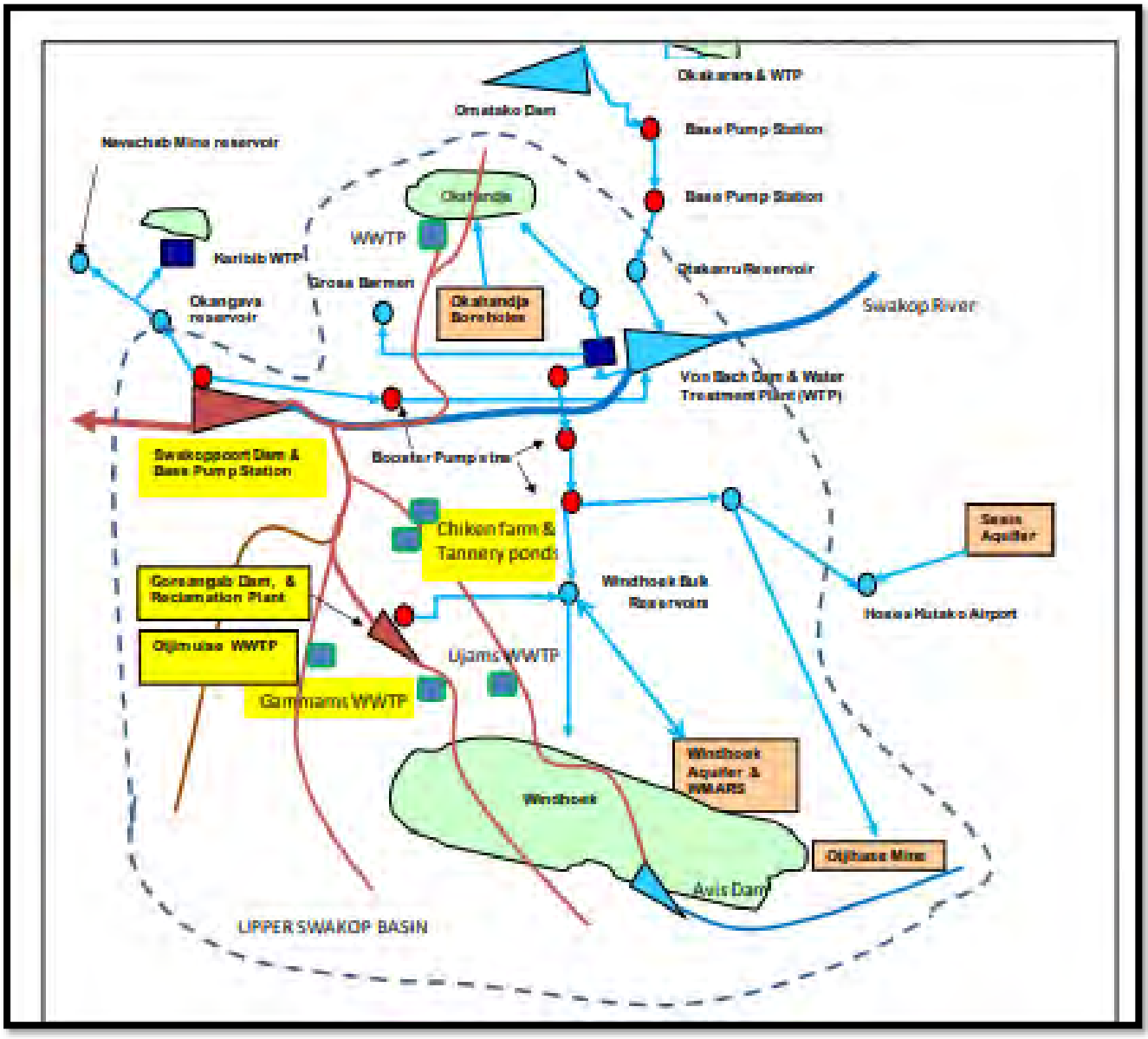

Figure 5: Water supply network in the Upper Swakop Basin that includes the ML 271

At present, water is exclusively sourced from an on-site borehole and transferred to the two storage containers. Each container has a capacity of 10 000 litres and water will be primarily used for domestic use and equipment cleaning. Since the project is situated in an arid environment, a stringent water conservation policy will be implemented. The use of storage tank is itself a key water-saving mechanism, allowing for controlled distribution. Furthermore, the project will be employing water recycling system to minimize waste and ensure the most efficient use of this critical resource.

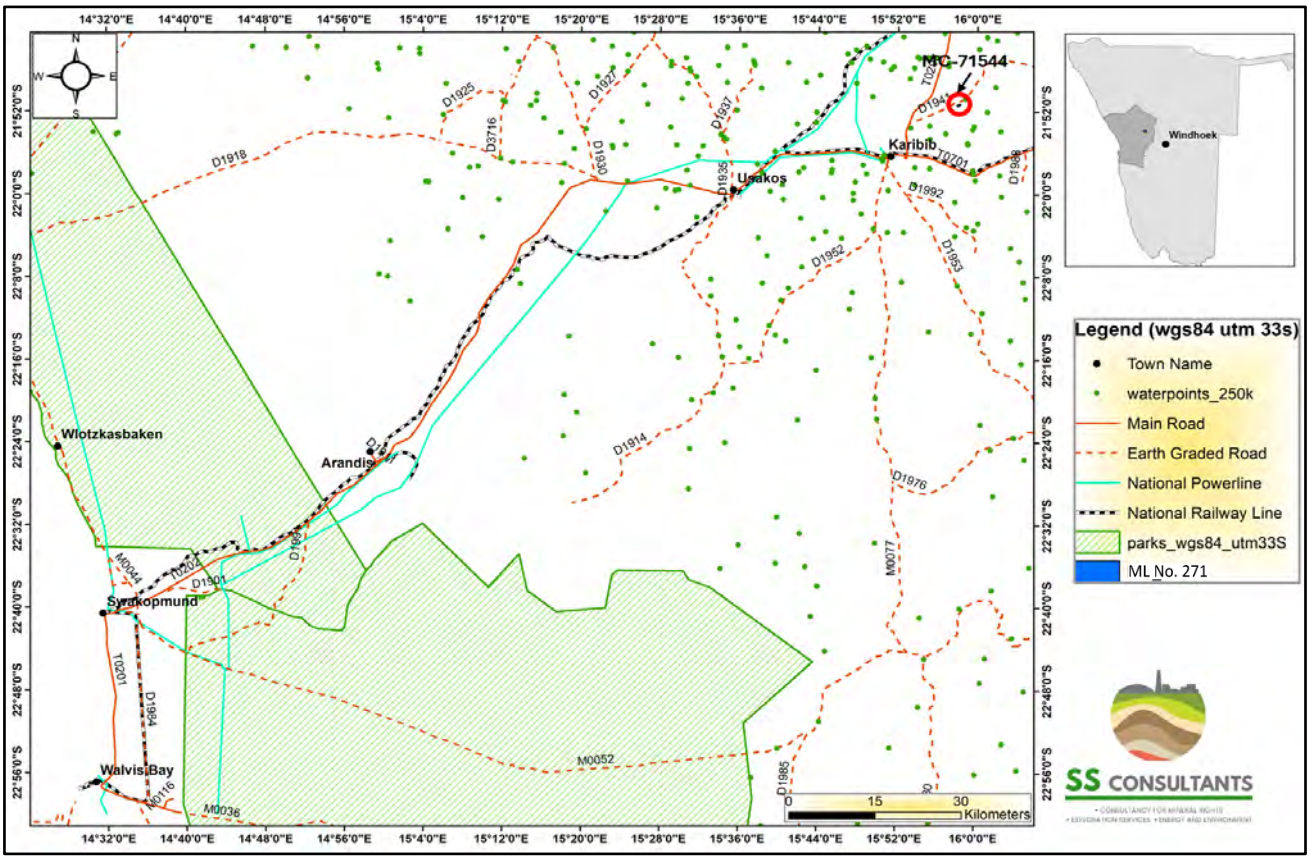

Figure 3-3: Infrastructures distribution in the area and surrounding vicinity of the ML 271.

3.4.3 Waste management

SG Mining cc is committed to responsible waste management and sanitation with focus on local empowerment and environmental protection. All solid waste generated during mine operations will be disposed of at the designated Karibib landfill. To empower local business, a reputable local SME will be outsourced to provide all cleaning and waste removal services from the site. Adequate pre-fabricated sanitary facilities will be provided on-site and maintained in a clean, hygienic condition. Sewage from these units will be

removed at regular intervals by the Karibib Town Council sewer removal truck and disposed of at the official Karibib sewage ponds. The proponent will work closely with suppliers of consumables such as greases and lubricants to implement a take-back program. This ensures that after use, these materials are collected and disposed of in an environmentally sound manner.

4. INFRASTRUCTURE SERVICES

4.1 Housing and Offices

Leveraging the site proximity to Karibib, the proponent will secure all necessary accommodation facilities within the town. Additionally, the company will enter into a commercial agreement to rent an office space in Karibib. Employees transportation to and from the site will be managed via a dedicated bus service. The daily pick up and drop off will be operate at designated municipal zones in Karibib on a standard schedule from Monday to Friday schedule. Working hours will conclude at 17h00.

4.2 Marble processing facility

In response to the government's mandate against exporting raw materials, the proponent plans to establish a marble processing facility in Karibib. A portion of industrially-zoned land will be leased on a long-term basis with the option of buying from the Karibib Town Council for this purpose. The facility will process marble into slabs which will be exported to international market such as China, thereby adding significant value to the marble. Furthermore, the project will benefit the local community by making marble products like tiles and kitchen tops available to direct purchase at the factory.

4.3 Storage of fuel, lubricant and consumables

Lubricants All lubricants and consumables, which will be non-hazardous and for mechanical uses only will be stored in sealed containers within a designated on-site area. For vehicle refuelling, vehicles will use local filling stations in Karibib. For on-site mining equipment, a customised gallon trailer with a capacity of approximately 2000 litres and mounted with an easy access fuel pipe will transport diesel to the site as required.

4.4 Access Roads

Access to the ML 271 is via the existing track that branch out of the C33 road into Farm Okwayo No. 46. Operation will be restricted to existing roads that had been initially used for the existing mining operation at the site. Any proposal for a new road requires formal landowner approval and must be routed to avoid any ecological sensitive areas.

4.5 Telecommunication and IT System

While the site has full telecommunication coverage, two-way radios are the required tool for operational communication to maximise efficiency. To ensure worker safety around mining equipment, the use of personal cell phones is strictly prohibited during work hours.

4.6 Security

A reputable local security company from Karibib will be contacted for daily site protection. Access to the mine will be strictly controlled via the main farm gate. All vehicle entering or leaving the site must be pre-registered, and no access will be permitted without prior authorisation from either the mine management or the farm owner.

5. DESCRIPTION OF THE PROPOSED DIMENSION STONE MINING PROJECT

5.1. Introduction

Karibib is a mineral rich area in Namibia with significant mineral resources deposit and its renowned for its high-quality white marble. The demand for marble from Karibib is distinguished by its hardness and superior quality, making it a leading dimension stone product in major international markets, such a China, the USA and Europe. Its global appeal is demonstrated by its use in prestigious construction projects both locally and internationally. Besides marble, Karibib area is also known for its gold deposit and prominent gold mines such as Navachab Gold Mine, one of the oldest gold mines in the country is found few kilometres Southwest of the Karibib townland. Of recent, a new gold mine under the auspices of Osino Resources had been acquired by China Shanjin International Gold Co (formerly known as Yintai Gold) and mine development is currently on course with operation anticipated to commence in 2026.

Overall, the mining sector continues to make an immense economic impact through export, royalties and taxes while complementing government efforts to reduce unemployment and improve livelihoods. Specifically, mining of dimension stones is pivotal in reducing unemployment and heeding to the government's call for local processing and value additions, that involves transforming raw materials into more valuable products within the country rather than exporting them as raw materials. Exploration Utilities

In addition to the planned exploration methods, the project's Environmentalist has considered the necessary infrastructure and services, including water, electricity, road networks, accommodation, transportation, domestic and hazardous wastes, human personnel and safety and rehabilitation. These components are vital for the project, especially during the advanced stages.

5.2. Mining Methods

The mining operation will involve the use of marble block cutters equipped with large diamond saw blades. Cuts are made on all sides of the marble block, and a horizontal saw blade is then used to separate strips once the desired vertical thickness is achieved. In order to expedite the process, various supporting equipment will be deployed, including excavators,

wheel loaders, forklifts, wire saw machines, drilling machines, trucks and air compressors. The dimension stone are cut to pre-programmed specifications and loaded onto flatbed trucks using heavy- duty front-end forklifts. The trucks will transport the marble block to a factory in Karibib, where the marble blocks are cut into slabs for export to international markets and further processing.

Figure 5-1: A stripped area within the ML 271 with exposed deposit of targeted white marble resources.

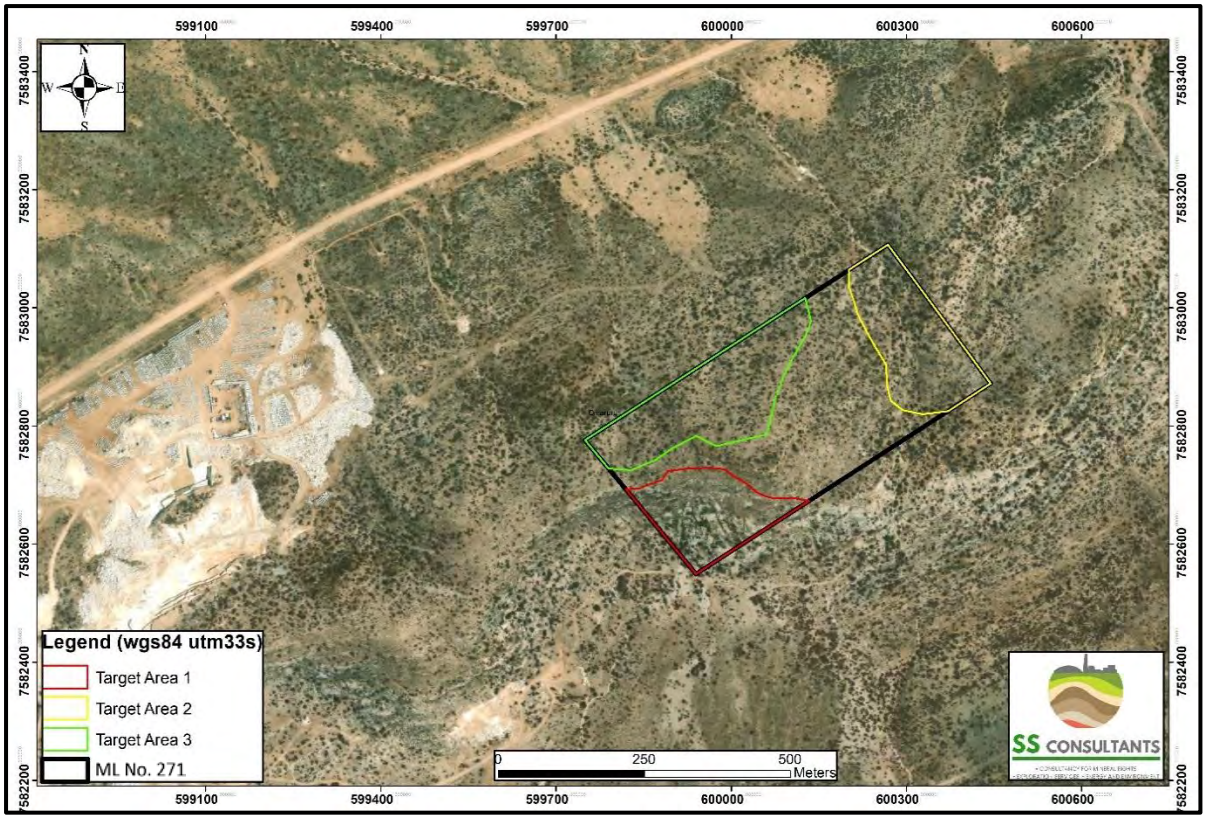

Figure 5-2: The primary targeted areas with high grade white marble resources within the ML 271.

5.3. Labour Requirements

The primary purpose of converting the marble project into a mining license is to mine high quality white marble blocks for both local and international markets. The project will be operated in full compliance with all national legislations. This includes adherence to the Labour Act of 2007. All required permits and authorisations will be secured upon the granting of an Environmental Clearance Certificate (ECC) from the Ministry of Environment, Forestry and Tourism (MEFT). The project is designed to have a long-term sustainability with an estimated operational lifespan of approximately 25 years and prospect for future expansion. The intended mining license is valid for 25 years, with potential for extension based on the results of ongoing geological exploration. Approximately 100 people will be directly employed by the project with an anticipated escalation in cumulative job creation through associated services. Additionally, the project will prioritise local enterprise development by outsourcing some of the services to Small and Medium Enterprises (SMEs).

5.4. Supporting Infrastructures

5.4.1. Energy Requirements

Although Karibib is connected to the national grid, the specific mine is not electrified. Currently, the primary source of power supply for operation at the site is through a 275 kVA generator. This solution is considered feasible at the moment, since the farm has restricted access and existing operation does not require high-voltage infrastructures. The proponent is exploring the option of connecting to existing NAMPOWER infrastructures in the area. The primary power demand at the mine will be for operating block cutting equipment featuring large diameter diamond saw blades, as well as for the daily administrative functions in the site office. In line with a commitment to environmental sustainability and the transition to a green economy, the proponent will install solar panel on the roofs of the containers-based site offices and storerooms. This solar system will complement the generator, reducing the projects carbon footprint and minimise its contribution to climate change.

5.4.2. Water Sourcing and Supply

Water supply is available in Karibib through the existing water infrastructures that belongs to Namibia Water Corporation (NamWater) and supplies water to the town. There are plans to secure water supply by connecting to existing NamWater pipeline once the approval of the conversion of the current operation into a mining license. At present, water is exclusively sourced from an on-site borehole and transferred to the two storage containers. Each container has a capacity of 10 000 litres and water will be primarily used for domestic use and equipment cleaning. Since the project is situated in an arid environment, a stringent water conservation policy will be implemented. The use of storage tank is itself a key water-saving mechanism, allowing for controlled distribution. Furthermore, the project will be employing water recycling system to minimize waste and ensure the most efficient use of this critical resource.

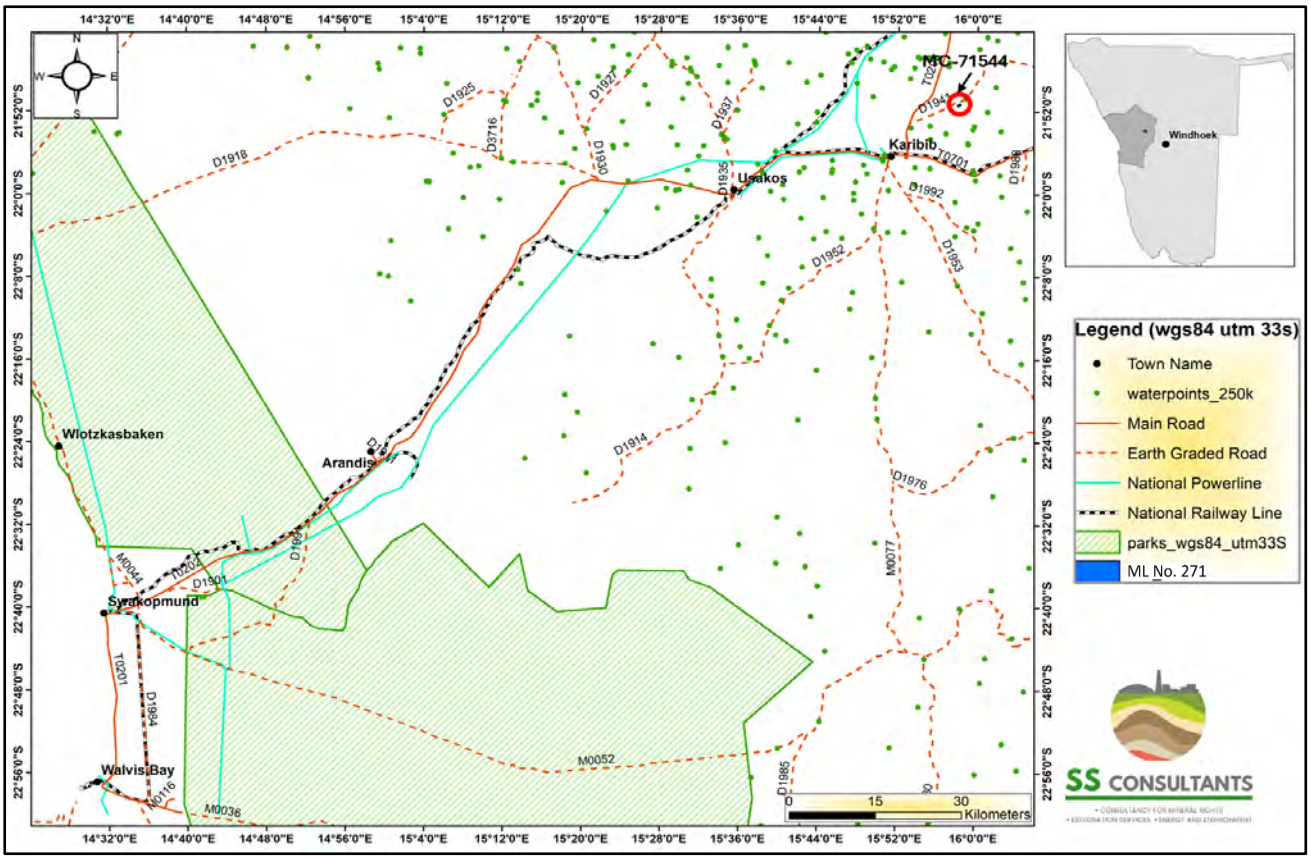

Figure 5-3: Infrastructures distribution in the area and surrounding vicinity of the ML 271.

5.4.3. Waste management

SG Mining cc is committed to responsible waste management and sanitation with focus on local empowerment and environmental protection. All solid waste generated during mine operations will be disposed of at the designated Karibib landfill. To empower local business, a reputable local SME will be outsourced to provide all cleaning and waste removal services from the site. Adequate pre-fabricated sanitary facilities will be provided on-site and maintained in a clean, hygienic condition. Sewage from these units will be removed at regular intervals by the Karibib Town Council sewer removal truck and disposed of at the official Karibib sewage ponds. The proponent will work closely with suppliers of consumables such as greases and lubricants to implement a take-back program. This ensures that after use, these materials are collected and disposed of in an environmentally sound manner.

5.5. Project Alternatives

5.5.1. Considered Alternatives

In the project planning phase, the proponent evaluated several potential sites for dimension stone mining operation. This site selection process was guided by a comprehensive analysis of geological data, including historical records and recent geological surveys to efficiently identify areas with viable marble resources. The selected site was determined to be the most suitable based on a multi-factorial assessment, which prioritized the concentration and quality of the resources, operation accessibility, and long-term commercial viability.

5.5.2. No - Go Alternatives

The no-go alternative which involves maintaining the status quo and not proceeding with the proposed mine, serve as the fundamental baseline for comparing all project options. Under this scenario, no mining would be initiated. The primary implication of selecting the No-Go alternative is the forfeiture of the projects significant socio-economic benefits includes;

- **Local Socio-Economic Impact**: The community of Karibib would be deprived of direct and indirect employment opportunities, leading to a loss of potential skills development and local income generation.
- **Regional and National Economy Impact:** The country will forgo substantial economic contributions, including government revenue ranging from royalties and taxes, as well as potential foreign currency earnings from mineral exports.

6. PROJECT ALTERNATIVES CONSIDERED

Alternatives are defined as "different means of meeting the general purpose and requirements of the activity" (Environmental Management Act 7 of 2007) of Namibia and its regulations (2012)). This chapter discussed different ways in which the project can be undertaken, as well as identify the alternatives that, in a practical way, can be applied to ensure minimal damage to the environment.

6.1. Project Alternatives

6.1.1. Considered Alternatives

In the project planning phase, the proponent evaluated several potential sites for dimension stone mining operation. This site selection process was guided by a comprehensive analysis of geological data, including historical records and recent geological surveys to efficiently identify areas with viable marble resources. The selected site was determined to be the most suitable based on a multi-factorial assessment, which prioritized the concentration and quality of the resources, operation accessibility, and long-term commercial viability.

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- **Regional and National Economy Impact:** The country will forgo substantial economic contributions, including government revenue ranging from royalties and taxes, as well as potential foreign currency earnings from mineral exports.

6.2. Alternative Project Location

No alternative sites were considered for this project because the decision to pursue mining activities in this area was primarily based on geological assessments, previous exploration data, and indication of reserves of marble in the area. It is worth noting that when selecting a site for mining activities, multiple factors are typically considered, such as geological characteristics, accessibility, existing infrastructure, and potential mineral resources.

6.3. Services Infrastructure

6.3.1. 4.1 Housing and Offices

Leveraging the site proximity to Karibib, the proponent will secure all necessary accommodation facilities within the town. Additionally, the company will enter into a commercial agreement to rent an office space in Karibib. Employees transportation to and from the site will be managed via a dedicated bus service. The daily pick up and drop off will be operate at designated municipal zones in Karibib on a standard schedule from Monday to Friday schedule. Working hours will conclude at 17h00.

6.3.2. Marble processing facility

In response to the government's mandate against exporting raw materials, the proponent plans to establish a marble processing facility in Karibib. A portion of industrially-zoned land will be leased on a long-term basis with the option of buying from the Karibib Town Council for this purpose. The facility will process marble into slabs which will be exported to international market such as China, thereby adding significant value to the marble. Furthermore, the project will benefit the local community by making marble products like tiles and kitchen tops available to direct purchase at the factory.

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7. DESCRIPTION OF THE BIO-PHYSICAL ENVIRONMENT

7.1. Climate

The ML 271 is located in the semi-desert and savanna transition zone of the escarpment, characterised by tree and shrub vegetation. This region climate is arid, with an average annual rainfall of 200-250 mm and a significant temperature range. As recorded by Mendelsonh (20023), average temperature swing from minimums of 4-6˚C to maximums exceeding 32˚C-34˚C. The following graphs further illustrate these climatic patterns.

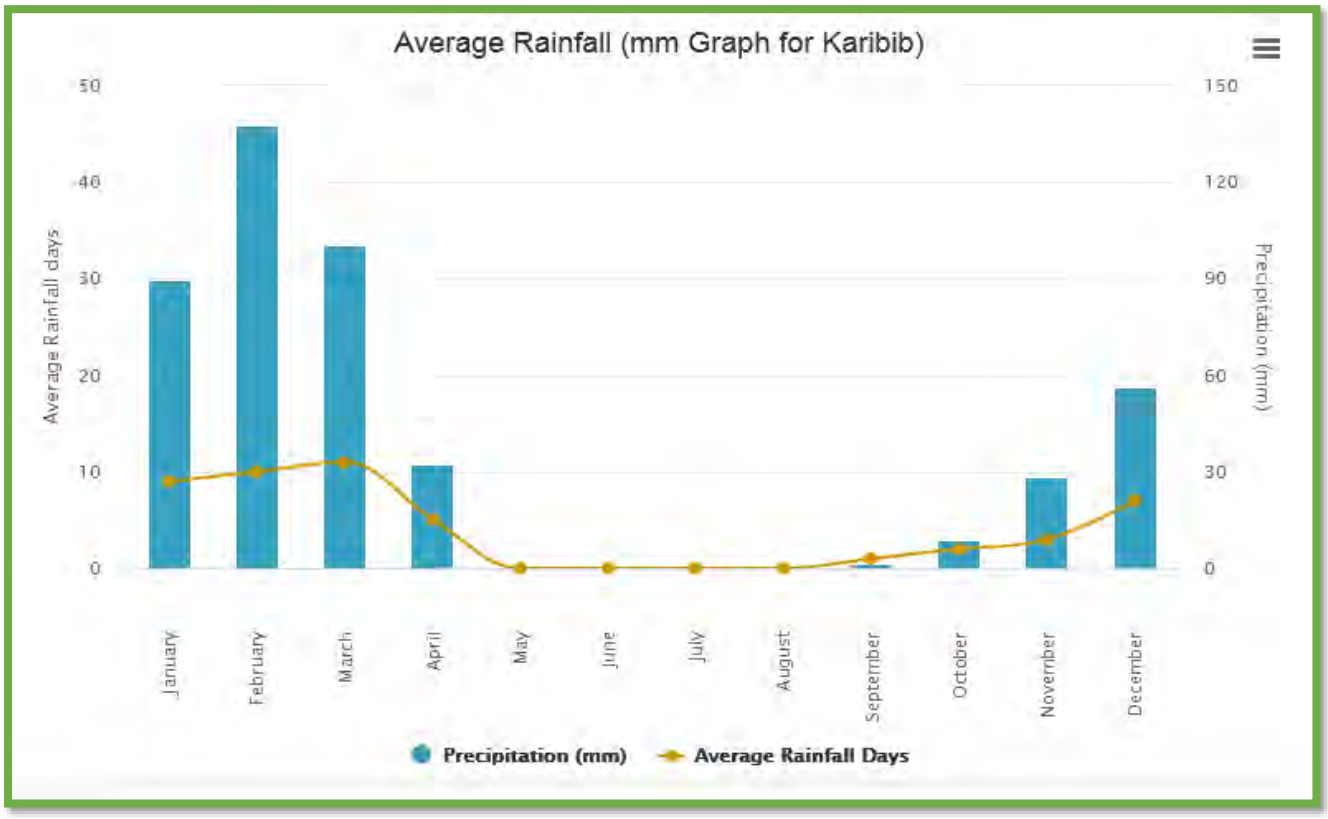


Figure 7-1: Average rainfall graph for Karibib (Worldweatheronline, 2025).

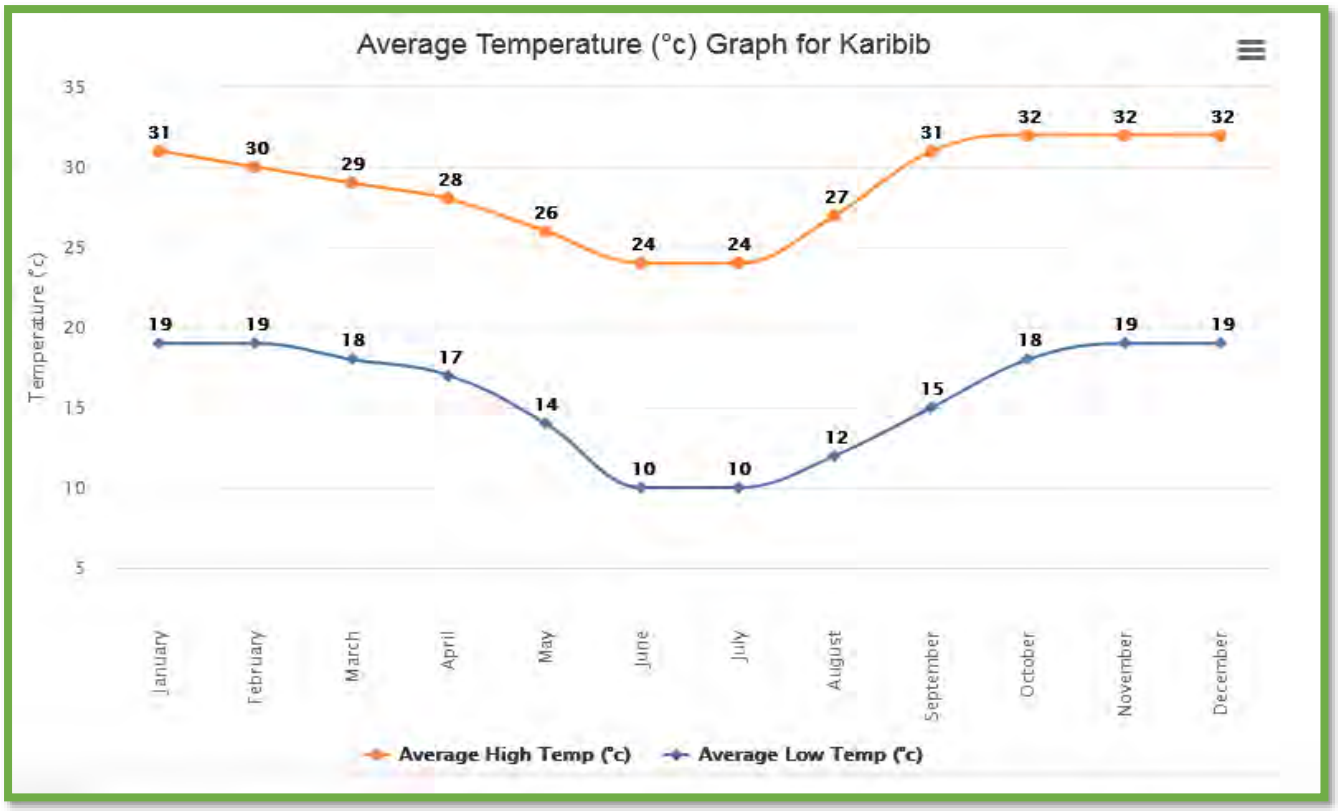


Figure 7-2: Average monthly temperature graph for Karibib (Worldweatheronline, 2025).

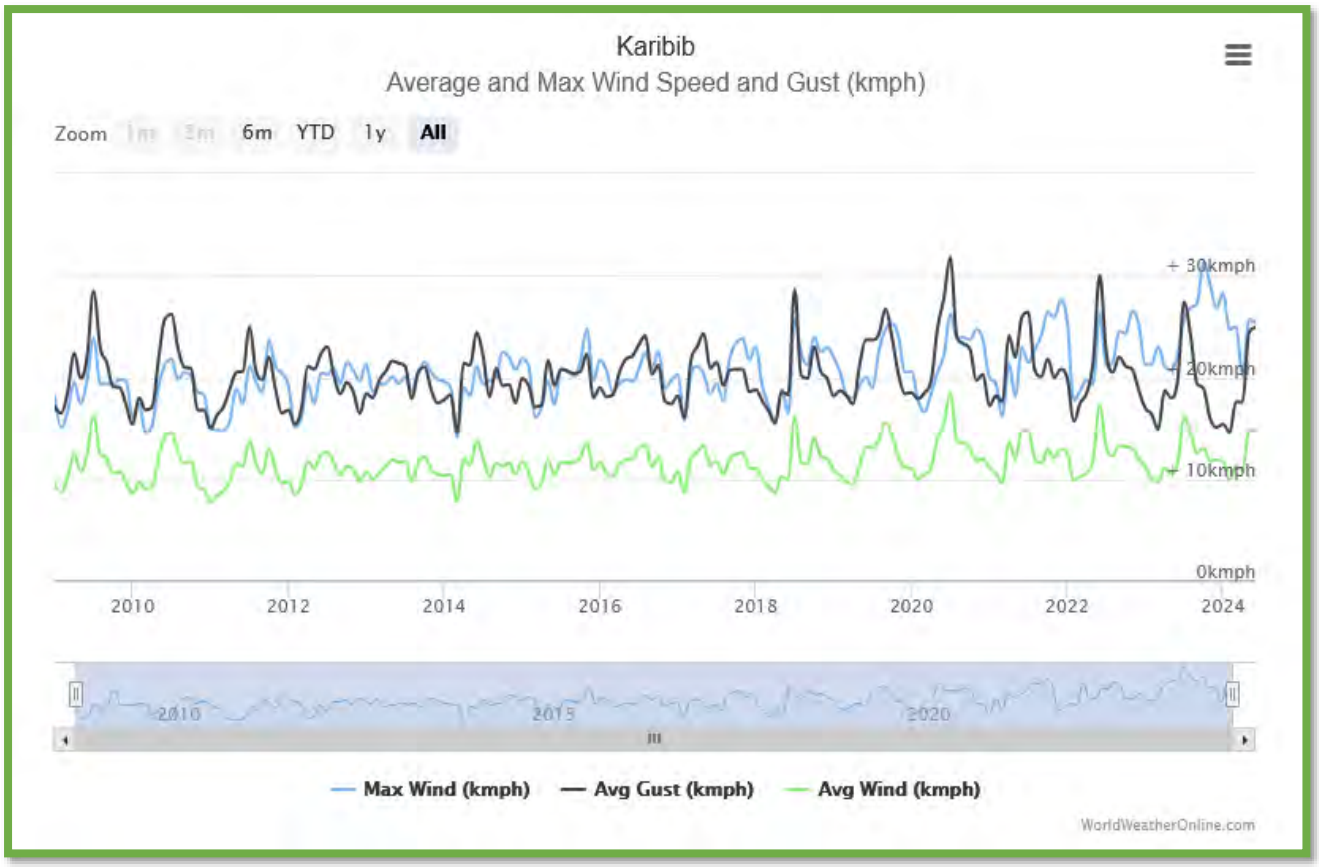


Figure 7-3: The maximum, minimum and average temperature graph for Karibib (Worldweatheronline, 2025).

The operational schedule and risk management for the mine are critically dependent on local climatic conditions. Key factors include rainfall, temperature, and wind speed, which can potentially cause operational disruption during extreme events. Mine operations are highly dependent on the local climate. A detailed analysis of rainfall (Figure 7), temperature (Figure 8), and wind speed (Figure 9) is essential for scheduling and risk management, as extremes in any of these conditions can force a temporary stoppage of work. The planned mining area experiences its primary rainy season from September to April (Figure 7), during which precipitation could halt operations. Temperature as reflected in Figure 8 demonstrates monthly variation in average, maximum, and minimum temperatures. Extreme heat is a key risk factor for worker safety and equipment performance. Historical data as depicted in Figure 9, illustrates fluctuating wind speeds. Periods of high winds present a safety hazard and can disrupt certain mining activities.

7.2. Regional Geology and Tectonostratigraphic

Geologically, the project is situated within the Damara Belt, a key component of the Pan-African orogenic mobile belts that contributed to the formation of the Gondwana Supercontinent. The Neoproterozoic Gondwana Supercontinent emerged from the amalgamation of various crustal fragments following the closure of multiple oceans during the Neoproterozoic Pan-African Orogeny (Trompette et al., 2000; Kröner and Stern, 2005). The Damara Belt is divided into several tectonostratigraphic zones (Figure 4-1; 4-2), each characterized by differences in crustal exposure, lithologies, metamorphic grade, structural geology (including the number and orientation of deformation events and their kinematics), and the type and volume of pre-, syn-, and post-tectonic magmatic products (Miller, 1983; Miller, 2008). These zones include the Northern Platform, Northern Zone, Central (Swakop) Zone, Okahandja Lineament Zone, Southern Zone, Southern Margin Zone, and the Southern Foreland (Miller, 1983a).

The focus is on the Central Zone (CZ; southern central Zone), which will be described in more detail below. The Central Zone, which is known for its high-temperature, low-pressure conditions (reaching up to ~825°C and ~4.9 kbar in the western part, according to Longridge et al., 2017), forms the central core of the Damara Belt and represents the exposed root of the orogeny. This zone is further divided into the Northern Central Zone, which exposes higher stratigraphic levels, and the Southern Central Zone, which exposes lower stratigraphic levels (Miller, 2008). The ML is situated in the Southern Central Zone (see Figure 4-1). The Omaruru Lineament, a primarily geophysical feature, separates the Northern and Southern Central Zones (Miller, 2008).

Stratigraphically, the Southern Central Zone comprises Palaeo- to Mesoproterozoic basement rocks that are mainly exposed in the cores of structural domes (Smith, 1965; Kröner, 1984). These basement rocks include variably deformed Palaeoproterozoic ortho- and paragneisses, metasedimentary rocks, and amphibolites of the Abbabis Metamorphic Complex, which are prominently developed along the Swakop and Khan Rivers where they form domes and anti-forms. Overlying these basement rocks, unconformably, are the Neoproterozoic sedimentary rocks of the Damara Supergroup, which dominate the ML area (see Figure 4-3 below). The base of the Damara Supergroup, known as the Nosib Group, is primarily composed of meta-

arkoses and calc-silicate rocks. The upper part of the sequence consists of alternating layers of marble, calc-silicate rock, and schists of the Swakop Group.

The Southern Central Zone is also intruded by various granite bodies, which were emplaced during or after the deformational and metamorphic events associated with the Damara Orogeny. These intrusions range from early syn-tectonic dioritic plutons of the Goas Suite to late, post-tectonic alaskites and pegmatites (Miller, 2008). The Goas Intrusive Suite is tentatively interpreted as the magmatic arc of the orogen, assuming the subduction model for the Damara Belt is accepted (Clemens and Kisters *et al*., 2021). Additionally, dolerite and felsic dykes of Cretaceous age intrude the older metasedimentary and intrusive units of the Damara Supergroup (S.C. Milner, pers. comm.) these were emplaced during the rifting and eventual breakup of the supercontinent Gondwana, approximately 132 million years ago.

Structurally, the Central Zone records complex poly-deformation, with NE-trending planar tectonic fabrics related to the continental collision of the Congo and Kalahari cratons, which parallel the main structural trend of the orogen (Smith, 1965; Kisters *et al*., 2004; Miller, 2008; Longridge, 2012; Goscombe *et al*., 2022). The primary target within project area is the white marble of the Otjongeama Member of the Karibib Formation, (Swakop Group), which was deposited in deep-water basins during the spreading stage and subsequently metamorphosed and deformed.

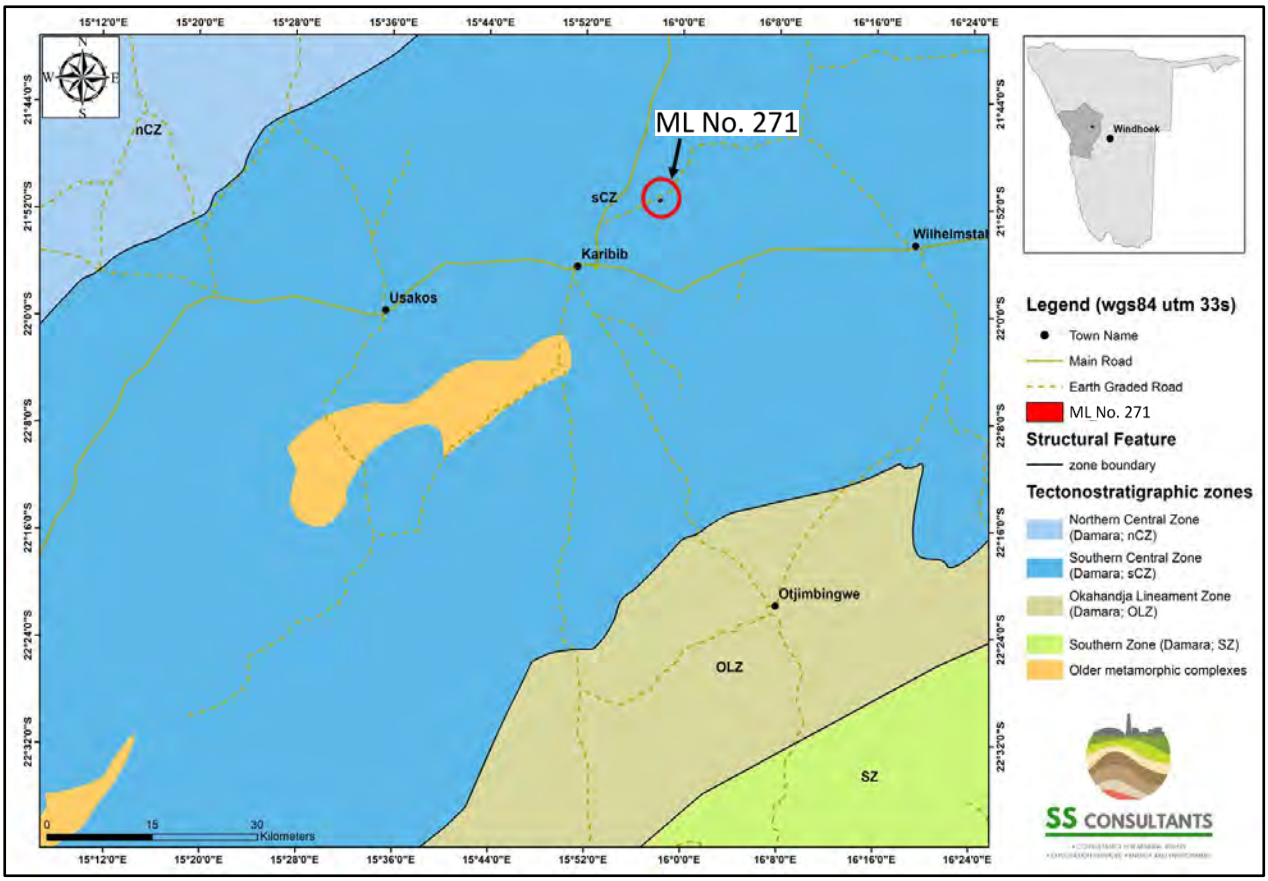


Figure 7-4: Tectonostratigraphic map of the project area indicating the ML 271 located within the Southern Central Zone.

7.3. Local Geology

The local geology of the area includes pre-Damara basement rocks, comprising augen gneisses, granite gneisses, biotite sillimanite gneiss, pegmatites, aplites and quartz-biotite schist of the Abbabis Metamorphic Complex, exposed south of area (as depicted in Figure 10). These basement rocks are overlain by metasedimentary rocks of the Damara Supergroup (Swakop Group), which entirely covered ML 271. The Swakop Group is subdivided into the basal Ugab, a middle Usakos and the top Navachab Subgroups, by two interbedded glaciogenic units (i.e. the Chuos and Ghaub Formations). Only the Navachab Subgroup, represented by the Karibib, Formation is exposed within the ML 271. The Karibib Formation is exposed throughout the ML and is subdivided into five members i.e. Oguati, Arisses River, Otjongeama and Harmonie members (Table 5-1). Only the Otjongeama Member comprising marble, marble breccia and oolitic marble is exposed.

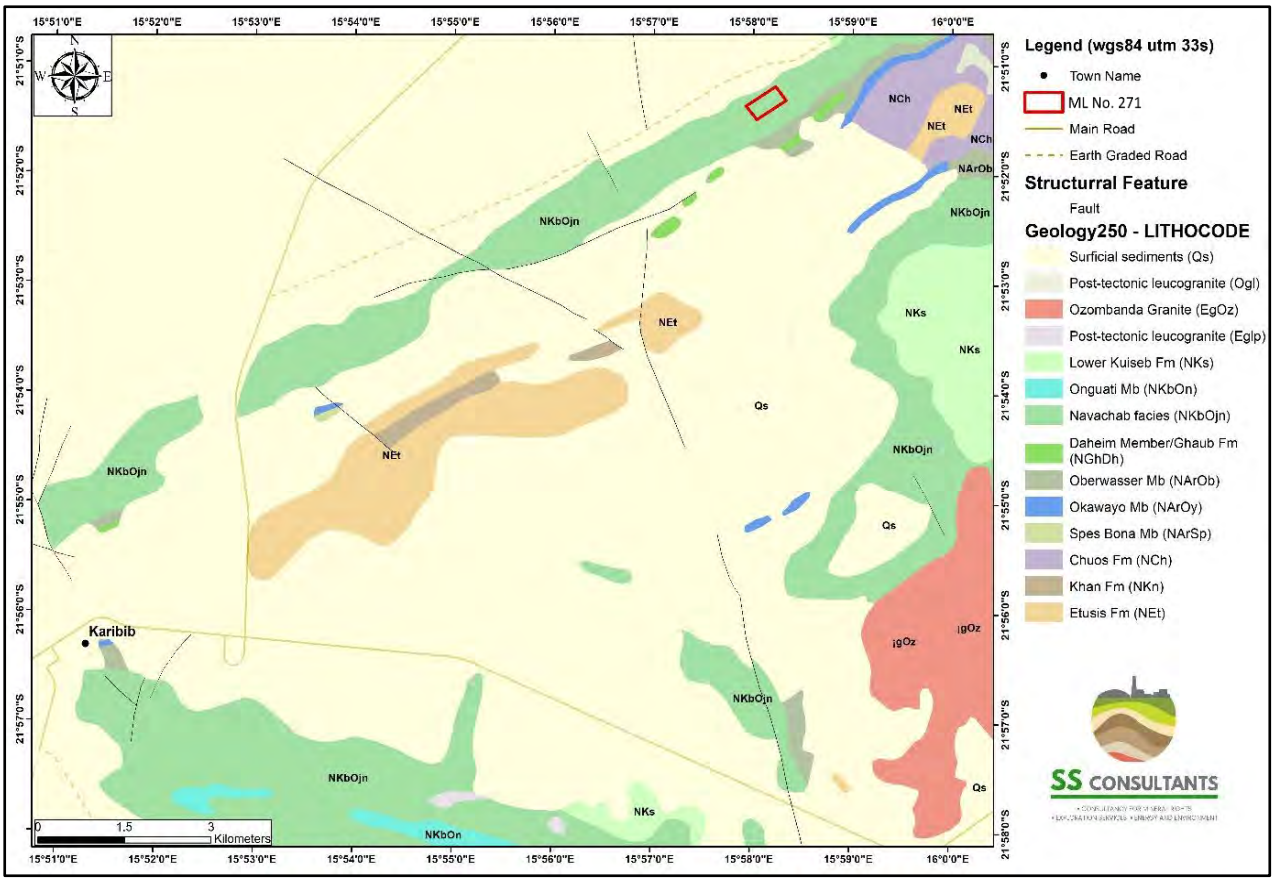


Figure 7-5: Map showing local geology, mineral occurrences, and structures associated with ML 271, Farm at Okawayo No; 46, Karibib, Erongo Region (Data source: GSN).

7.4. Geohydrology

Hydrogeological data from the Ministry of Agriculture and Water Affairs indicate that the Mining License (ML) is underlain by a fractured, fissured, and/or karstified aquifer system with moderate groundwater potential (Figure 7-7). The regional groundwater yield is generally characterized as low to moderate, particularly within lithologies such as pegmatites and dolomitic marble, which exhibit inherently low primary porosity and permeability due to their crystalline nature. However, secondary porosity associated with structural features such as fractures, faults, and zones of karstification in carbonate units can significantly enhance groundwater storage and transmissivity. Recharge potential is variable and largely governed by climatic inputs (e.g., rainfall) and the degree of metamorphism; higher-grade metamorphic rocks typically possess reduced water retention capacity. Localized recharge may occur along permeable alluvial channels and structurally disrupted zones, which facilitate vertical infiltration and enhance aquifer replenishment.

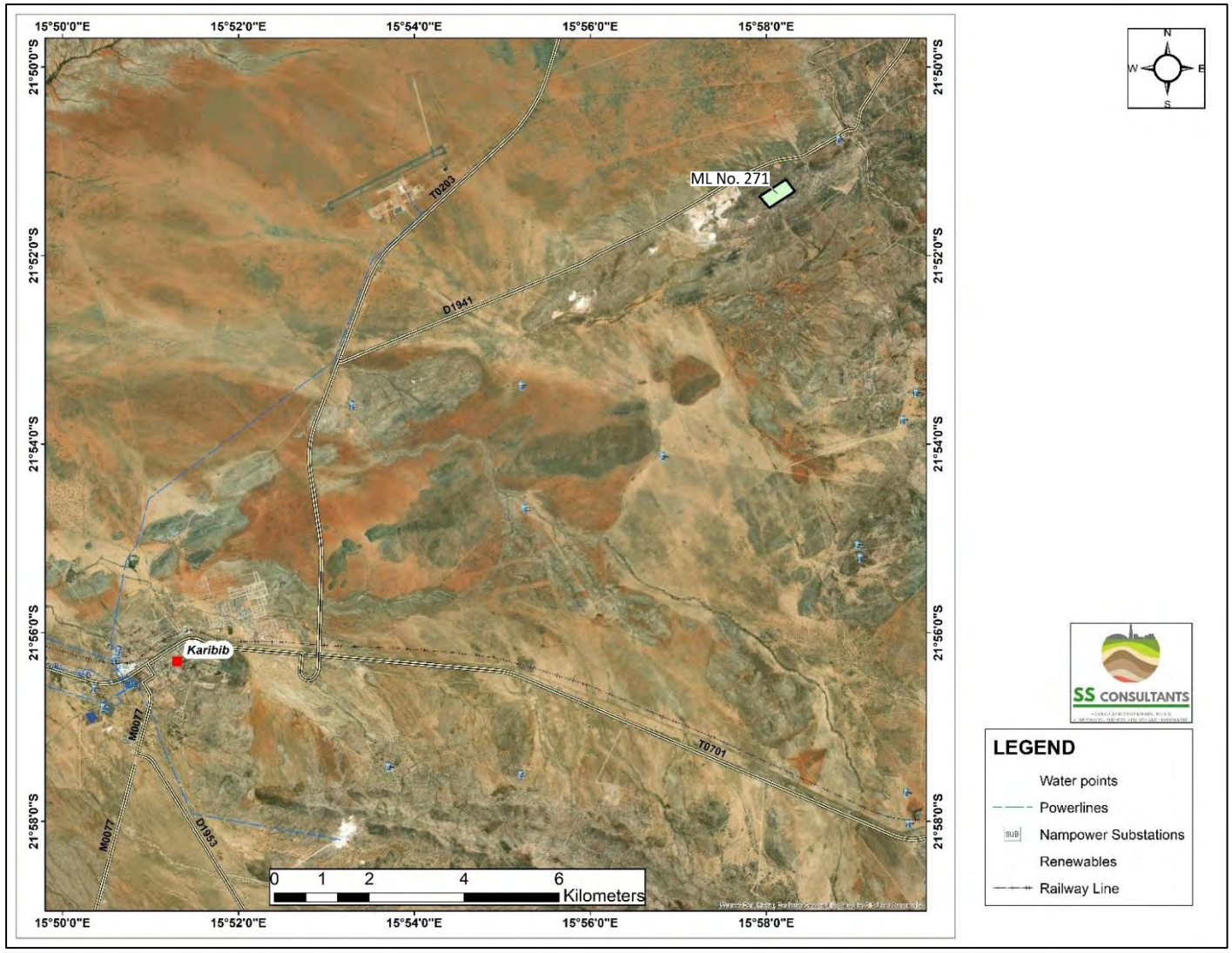


Figure 7-6: Local infrastructure surrounding the proposed ML area.

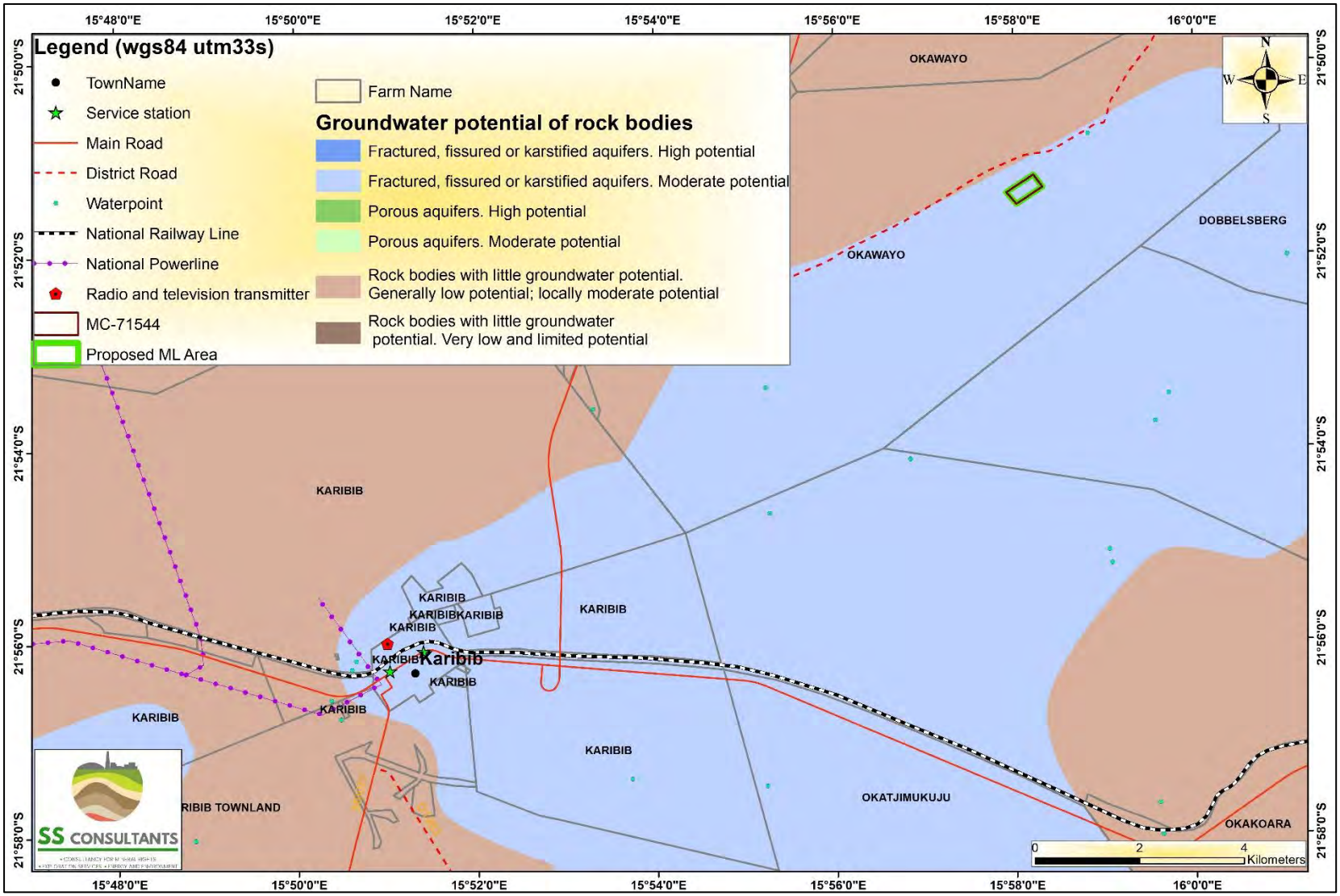


Figure 7-7: Local Hydrogeological Map of the Proposed ML Area.

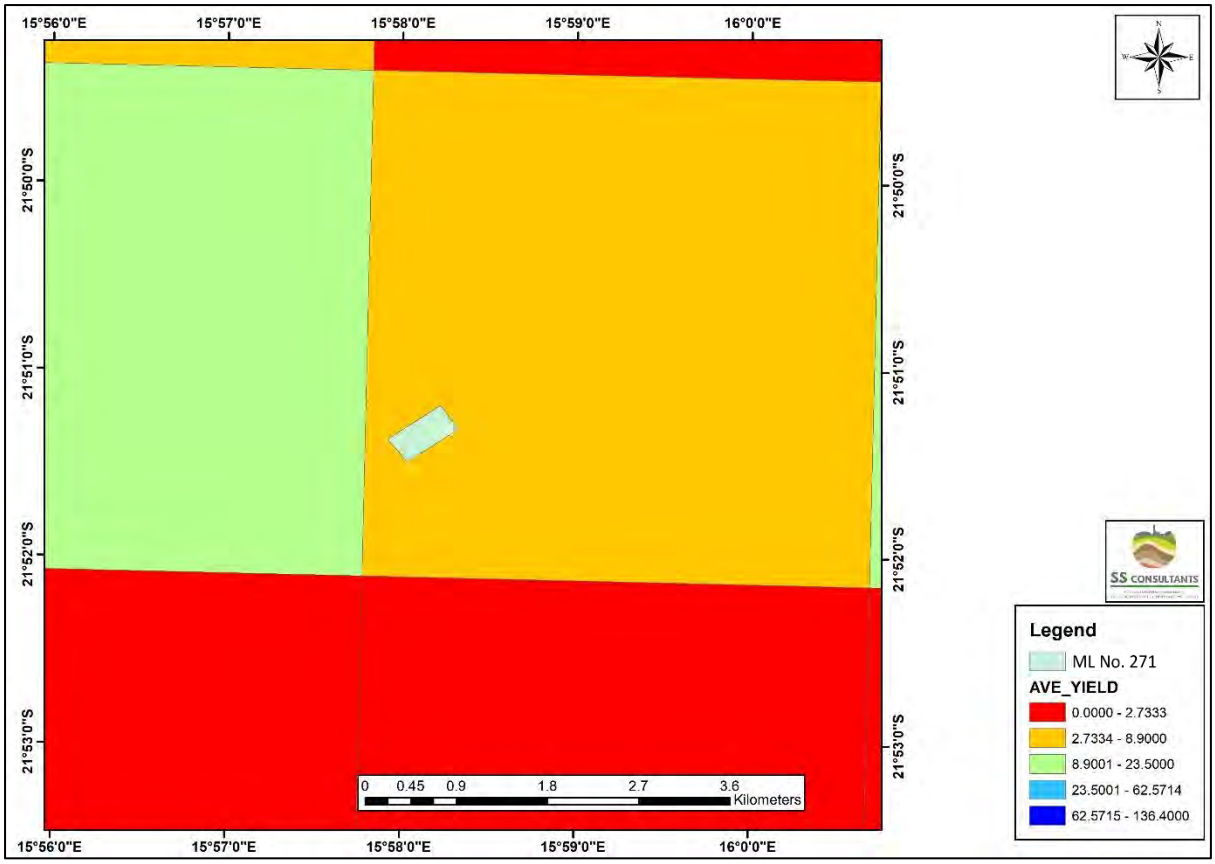


Figure 7-8: Average water yields within the ML area and surrounding areas source Atlas of Namibia, 2022.

It should be put into consideration that groundwater conditions vary significantly across regions. In many areas, challenges include limited availability, low and unreliable recharge rates, shallow borehole yields, deep water tables, poor quality, and high contamination risks. For the ML area the yields range from 2.7334 to 8.9 m^3/h (Figure 1-5). Therefore, to determine if this water yield is sufficient for supporting a small-scale quarry operation including a diamond cutting machine and sanitary needs, the following analysis is presented:

7.5. Archaeology and Heritage

The review of the Heritage Impact Assessment for Mining Claim 71544 which is now the same area covered by ML 271, assessment was conducted by Omapipi Tageya Archaeological and Heritage Consultants. The subsequent report, submitted to the National Heritage Council of Namibia (NHC), confirmed no declared archaeological or heritage sites within the project area. This finding was formally verified by the NHC in their consent with reference number

(No: Ref: 81/2023/85), provided in Annexure H. Despite this clearance, an accidental discovery procedure will be implemented to manage any unanticipated finds during operation.

7. DESCRIPTION OF THE BIODIVERSITY

7.1. Fauna Diversity

A comprehensive assessment on biodiversity was conducted in the area revealed that there is evidence of antelope present on the farm. The game animals occurring in the area includes; Kudu, Ostriches, Warthogs and Springboks. The presence of these animals creates a potential risk of illegal hunting, therefore appropriate measures should be in place to discourage people from engaging in illegal hunting activities as well as deter from such activities and protect the local wildlife

7.1.1. Reptiles Diversity

The general area of the mining license supports a relatively diverse reptile community, including several species endemic to Namibia. According to Mendelsohn *et al.* (2002), the region is likely to host between 41 and 5 reptile species. This diversity is facilitated by the availability of varied micro-habitats. The table below lists the reptile species known or likely to occur in the vicinity of ML 271.

Table 2: Reptile known and/or likely to occur in the general of ML 271.

Scientific name	Common name	Occurrence (*√*)	Conservation Status
Snakes			
Rhinotyphlops schlegelii	**Schlegel's Beaked Blind Snake**	**√**	**-**
Leptotyphlops labialis	**Damara Thread Snake**	**√**	**-**
Python anchietae	**Anchieta's Dwarf Python**	**√**	**-**
Python natalensis	**Southern African Python**	**√**	**Vulnerable**
Atractaspis bibronii	**Southern or Bibron's Burrowing Asp**	**√**	**-**
Xenocalanus bicolor	**Bicoloured Quill-snouted Snake**	**√**	**-**
Lamprohis fuliginosus	**Brown House Snake**	**√**	**-**
Lycophidion capense	**Cape Wolf Snake**	**√**	**-**
Lycophidion namibianum	**Namibian Wolf Snake**	**√**	**Endemic**
Mehelya vernayi	**Angola File Snake**	**√**	**Near-Endemic**
Pseudaspis cana	**Mole Snake**	**√**	**-**
Prosymna bivittata	**Two-striped Shovel-snout**	**√**	**-**

Prosymna frontalis	**South-western Shovel-snout**	**√**	**-**
Hemirhagerrhis viperinus	**Viperine Bark Snake**	**√**	**Endemic**
Dipsina multimaculata	**Dwarf Beaked Snake**	**√**	**-**
Psammophylax tritaeniatus	**Striped Skaapsteker**	**√**	**-**
Psammophis trigrammus	**Western Sand Snake**	**√**	**Endemic**
Psammophis notostictus	**Karoo sand Snake or Whip Snake**	**√**	**-**
Psammophis leopardinus	**Leopard and Short-snouted Grass Snakes**	**√**	**Endemic**
Philothamnus semivariegatus	**Spotted Bush snake**	**√**	**-**
Dasypeltis scabra	**Common or Rhombic Egg Eater**	**√**	**-**
Telescopus polystictus	**Eastern Tiger Snake**	**√**	**Endemic**
Dispholidus typus	**Boomslang**	**√**	**-**
Aspidelaps lubricus infuscatus	**Coral Snake**	**√**	**Endemic**
Aspidelaps scutatus	**Shield-nose Snake**	**√**	**-**
Elapsoidea sunderwallii	**Sundevall's Garter Snake**	**√**	**Endemic**
Naja annulifera/anchietae	**Snouted Cobra**	**√**	**-**
Naya nigricincta	**Black-necked Spitting Cobra**	**√**	**Endemic**
Bitis arietans	**Puff Adder**	**√**	**-**
Bitis caudalis	**Horned Adder**	**√**	**-**
Tortoises (Geochelone)			
Geochelone paradalis	**Leopard Tortoise**	**√**	**-**
Psammobates oculiferus	**Serrated or Kalahari Tortoise**	**√**	**-**
Lizards			
Zygaspis quadradrifrons	**Kalahari Round-headed Worn Lizard**	**√**	**-**
Monopeltis infuscata	**Dusky Spade-snouted Worm Lizard**	**√**	**-**
Heliobolus lugubris	**Bushveld Lizards**	**√**	**-**
Meroles suborbitalis	**Spotted Desert Lizard**	**√**	**-**
Nucras intertexta	**Spotted Sandveld Lizard**	**√**	**-**
Pedioplanis lineoocellata	**Spotted Sand Lizard**	**√**	**-**
Pedioplanis namaquensis	**Namaqua Sand Lizard**	**√**	**-**
Pedioplanisundulata	**Western Sand Lizard**	**√**	**Endemic**
Cordylosaurus subtessellatus	**Dwarf Plated Lizard**	**√**	**-**

Gerrhosaurus validus	**Giant Plated Lizard**	**√**	**Endemic**
Skinks (Scincidae)			
Lygosoma sunderalli	**Sundevall's Writhing Skink**	**√**	**-**
Trachylepis capensis	**Cape Skink**	**√**	**-**
Mabuya hoeschi	***Hoesch's Skink***	**√**	**Endemic**
Mabuya occidentalis	**Western Three-striped Skink**	**√**	**-**
Mabuya spilogaster	**Kalahari Tree Skink**	**√**	**-**
Mabuya striata wahlbergii	**Striped Skink**	**√**	**-**
Mabuya sulcata	**Westen Rock Skink**	**√**	**-**
Mabuya variegata	**Variegated Skink**		
Monitors (Varanidae)			
Varanus albigularis	**Rock or White-throated monitor**	**√**	**-**
Agamas (Agamidae)			
Agama aculeata	**Ground Agama**	**√**	**-**
Agama anchietae	**Anchietae Agama**	**√**	
Agama planiceps	**Namibian Rock Agama**	**√**	**Endemic**
Chameleons (Chamaeleonidae)			
Chamaeleo namaquensis	**Namaqua Chameleon**	**√**	**-**
Geckos (Gekkonidae)			
Lygodactylus bradfieldi	**Bradfield's Dwarf Gecko**	**√**	**Endemic**
Pachydactylus bicolor	**Velvety Thick-toed Gecko**	**√**	**Endemic**
Pachydactylus capensis	**Cape Thick-toed Gecko**	**√**	**Endemic**
Pachydactylus turneri	**Turner's Thick-toed Gecko**	**√**	**-**
Pachydactylus punctatus	**Speckled Thick-toed Gecko**	**√**	**-**
Pachydactylus rugosus rugosus	**Rough Thick-toed Gecko**	**√**	**Endemic**
Pachydactylus weberi werneri	**Weber's Thick-toed Gecko**	**√**	**Endemic**
Ptenopus garrulus maculatus	**Common Barking Gecko**	**√**	**Endemic**
Rhoptropus boultoni	**Boulton's Namib Day Gecko**	**√**	**Endemic**

The area supports a high diversity of reptiles, which are vulnerable to anthropogenic development such as mining activities. Recognising the high reptile diversity within the area

and the vulnerability of these species, the project commits to stringent mitigation measures. Mining operation will integrate specific procedures to avoid any potential harms to reptiles. The employees will be trained to appreciate the ecological values of these species in particular as a keystone species, fostering the culture of conservation beyond mere safety concerns.

7.1.2. Avian-Fauna Diversity

Table 3: Birds known and/or likely to occur in the general area of ML 271, Karibib district, Erongo Region.

Scientific name	Common name	Namibia Status
Agapornis roseicollis	**Rosy-faced Lovebird**	**Endemic**
Apus bradfieldi	**Bradfield's Swift**	**-**
Cypsiurus parvus	**African Palm Swift**	**-**
Streptopelia senegalensis	**Laughing Dove**	**-**
Oena capensis	**Namaqua Dove**	**-**
Ardeotis kori	**Kori Bustard**	**Near Threaten**
Pterocles namaqua	**Namaqua Sandgrouse**	**-**
Falco rupicolus	**Rock Kestrel**	**-**
Falco chicquera	**Red-necked Falcon**	**-**
Corvus albus	**Pied Crow**	**-**
Hirundu albigularis	**White-throated Swallow**	**-**
Hirundo dimidiata	**Pearl-breasted Swallow**	**-**
Hirundo cucullata	**Greater Stiped Swallow**	**-**
Hirundo semirufa	**Red-breasted Swallow**	**-**
Pycnonotus nigricans	**African Red-eyed Bulbul**	**-**
Eremomela icteropygialis	**Yellow-bellied Eremomela**	**-**
Prinia flavicans	**Black-chested Prinia**	**-**
Mirafra passerina	**Monotonous Lark**	**-**
Mirafra africana	**Rufous-naped Lark**	**-**
Mirafra fasciolata	**Eastern Clapper Lark**	**-**
Mirafra sabota	**Sabota Lark**	**-**
Calendulauda africanoides	**Fawn-coloured Lark**	**-**
Ammomanopsis grayi	**Gray's Lark**	**Endemic**
Chersomanes albofasciata	**Spike-heeled Lark**	**-**
Certhilauda benguelensis	**Benguela Long-billed Lark**	**-**

Eremopterix leucotis	**Chestnut-backed Sparrowlark**	**-**
Eremopterix verticalis	**Grey-backed Sparrowlark**	**-**
Calandrella cinerea	**Red-capped Lark**	**-**
Alauda starki	**Stark's Lark**	**-**
Bradornis infuscatus	**Chat Flycatcher**	**-**
Namibornis herero	**Herero Chat**	**-**
Nectarinia fusca	**Dusky Sunbird**	**-**
Bualornis niger	**Red-billed Buffalo-Weaver**	**-**
Philetairus socius	**Sociable Weaver**	**-**
Ploceus rubiginosus	**Chestnut Weaver**	**-**
Quelea quelea	**Red-billed Quelea**	**-**
Estrilda astrild	**Common Waxbill**	**-**
Vidua paradisaea	**Long-tailed Paradise -Whydah**	**-**
Vidua regia	**Shaft-tailed Whydah**	**-**
Passer domesticus	**House Sparrow**	**-**
Passer motitensis	**Great Sparrow**	**-**
Passer melanurus	**Cape Sparrow**	**-**
Passer griseus	**Southern Grey-headed Sparrow**	**-**
Anthus similes	**Long-billed Pipit**	**-**
Serinus alario	**Black-headed Canary**	**-**
Crithagra atrogulariis	**Black-throated Canary**	**-**
Serinus flaviventris	**Yellow Canary**	**-**
Serinus albogularis	**White-throated Canary**	**-**
Emberiza capensis	**Cape Bunting**	
Emberiza flaviventris	**Golden-breasted Bunting**	**-**

The general area of ML 271 is characterised by high avian species diversity, including several endemic and near-threatened species. While, many of these species are not currently of conservation concern, birds perform crucial ecological functions and remain vulnerable to disturbance. The proposed mining project poses several specific threats to the local avian fauna; which includes the direct destruction of nests and breeding habitats because some of these sites may fall within the targeted mining license area. Moreover, the birds will be exposed to noise and vibrations from mining equipment. This is a particular concern to the vibration-sensitive species, as it may negatively impact their breading potential.

8. FLORA DIVERSITY

The ML 271 is situated within a semi-desert to savanna transition zone (escarpment), a landscape dominated by trees and shrubs. The predominant trees and shrub species occurring in the area includes; *Acacia mellifera (Senegalia mellifera), Acacia hebeclada (Vachellia hebeclada)*, *Boscia albitrunca, Croton grastissimus, Catophractes alexandrii*, *Commiphora grandulosa, Myrothamnus flambellifolius, Parksonia africana, Terminalia prunioides and Zizphus mucronata.*

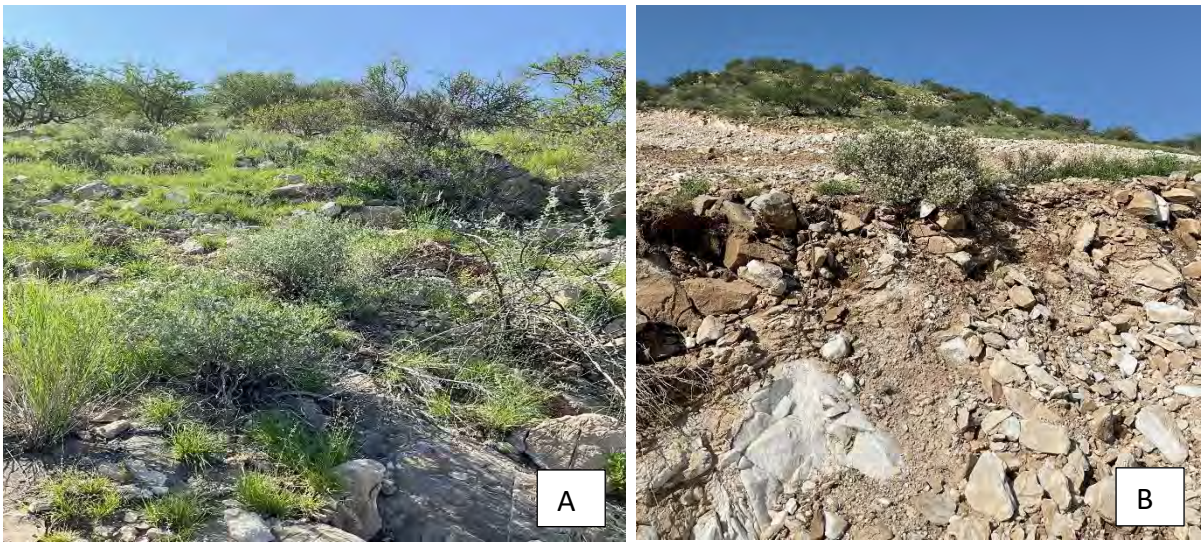


Figure 8-1: The current representation of the ML 271 (A undisturbed area and B disturbed area).

Table 8-1: Plant species recorded and anticipated to occur in the general area of ML 271.

Species	Occurrences	Protection Status	Conservation Categories
Acacia hebeclada	**Abundant**	**-**	**-**
Acacia erubescens	**Occasional**	**LC**	**-**
Acacia tortilis	**Occasional**	**LC**	**-**
Acacia senegal*. var. *rostrata	**Occasional**	**LC**	**-**
Acalypha segetalis	**Occasional**	**-**	**-**
Adenolobus garipensis	**Occasional**	**LC**	**-**

Aizoon schellenbergi	**Occasional**	**-**	**-**
Boscia albitrunca	**Common**	**LC**	**F**
Boscia foetida* subsp. *foetida	**Occasional**	**LC**	**-**
Barleria lancifolia* subsp. *lancifolia	**Common**	**-**	**-**
Blepharis grossa	**Common**	**LC**	**NE**
Monechma desertorum	**Common**	**LC**	**E**
Caesalpinia rubra	**Common**	**LC**	**-**
Catophractes alexandrii	**Abundant**	**LC**	**-**
Croton grastissimus	**Common**	**-**	**-**
Euphorbia chamaesycoide	**Occasional**	**-**	**E**
Euphorbia gariepina* subsp. *balsamea	**Occasional**	**LC**	**-**
Terminalia prunioides	**Common**	**-**	**-**
Zizphus mucronata	**Common**	**-**	**-**
Commiphora grandulosa	**Common**	**LC**	**-**
Commiphora glaucescens	**Occasional**	**LC**	**NE**
Commiphora tenuipetiolata	**Occasional**	**LC**	**-**
Commiphora dinteri	**Occasional**	**LC**	**NE**
Commiphora pyracanthoides	**Occasional**	**LC**	**-**
Commiphora virgata	**Occasional**	**LC**	**-**
Camptorrhiza strumosa	**Occasional**	**-**	**-**
Cyphostemma congestum	**Occasional**	**LC**	**-**
Cyphostemma juttae	**Occasional**	**LC**	**E**
Grewia flava	**Common**	**-**	**-**
Grewia tenax	**Occasional**	**-**	**-**
Helinus spartioides	**Occasional**	**-**	**-**
Hibiscus sidiformis	**Common**	**-**	**-**

Hermannia tigrensis	**Common**	**-**	**-**
Heliotropium ciliatum	**Occasional**	**-**	**-**
Jamesbrittenia pallida	**Occasional**	**-**	**E**
Tragia lancifolia	**Occasional**	**-**	**E**
Myrothamnus flambellifolius	**Common**	**-**	**-**
Manuleopsis dinteri	**Occasional**	**LC**	**E**
Petalidium lanatum	**Common**	**LC**	**E**
Petalidium variabile* var. *spectabile	**Occasional**	**-**	**E**
Portulaca hereroensis	**Common**	**-**	**-**
Phyllanthus pentandrus	**Common**	**-**	**-**
Pomaria lactea	**Occasional**	**-**	**-**
Sterculia africana* var. *africana	**Occasional**	**LC**	**-**
Sarcocaulon marlothii	**Occasional**	**LC**	**E**
Erythrina decora	**Occasional**	**LC**	**E**
Heliotropium tubulosum	**Common**	**-**	**-**
Heliotropium giessii	**Occasional**	**-**	**-**
Cleome angustifolia* subsp. *diandra	**Occasional**	**-**	**-**
Dicoma capensis	**Occasional**	**-**	**-**
Maerua schinzii	**Occasional**	**LC**	**-**
Monechma cleomoides	**Common**	**LC**	**-**
Moringa ovalifolia	**Occasional**	**P**	**NE**
Cleome angustifolia subsp. diandra	**Common**	**-**	**-**
Cleome elegantissima	**Occasional**	**-**	**-**
Cleome semitetrandra	**Occasional**	**-**	**-**
Cleome suffruticosa	**Occasional**	**-**	**E**
Crotalaria heidmannii	**Occasional**	**-**	**-**

Crotalaria argyraea	**Occasional**	**-**	**-**
Crotalaria sphaerocarpa* subsp. *polycarpa	**Occasional**	**-**	**-**
Sesbania pachycarpa.* subsp. *dinterana	**Occasional**	**LC**	**NE**
Sesbania sphaerosperma	**Occasional**	**-**	**-**
Sesamum capense	**Occasional**	**LC**	**-**
Sesamum marlothii	**Occasional**	**LC**	**E**
Tapinanthus oleifolius	**Occasional**	**LC**	**-**
Tephrosia dregeana* var. *dregeana	**Occasional**	**-**	**NE**
Tribulus zeyheri* subsp. *zeyheri	**Common**	**-**	**-**
Eragrostis porosa	**Common**	**LC**	**-**
Figurehuthia africana	**Common**	**LC**	**-**
Schmidtia kalahariensis	**Common**	**LC**	**-**
Stipagrostis uniplumis	**Abundant**	**LC**	**-**
Sarcocaulon marlothii	**Occasional**	**LC**	**E**
Sesamum rigidum* subsp. *rigidium	**Occasional**	**-**	**-**
Marcelliopsis denudata	**Common**	**LC**	**-**
Monsonia umbellata	**Common**	**-**	**NE**
Melinis repens	**Common**	**LC**	**-**
Ornithogalum rautanenii	**Occasional**	**LC**	**E**
Otoptera burchellii	**Occasional**	**-**	**-**
Limeum dinteri	**Common**	**LC**	**-**
Lophiocarpus tenuissimus	**Occasional**	**LC**	**-**
Indigastrum parviflorum* subsp. *parviflorum* var. *parviflorum	**Occasional**	**-**	**-**
Indigofera heterotricha* subsp. *pechuelii	**Common**	**LC**	**-**
Indigofera auricoma	**Common**	**-**	**-**

KEY: LC – Least Concern; **E**- Endemic; **NE**- Near - Endemic; **P**-Protected, **F** – Forestry protected under Forestry Act (Act 12 of 2001).

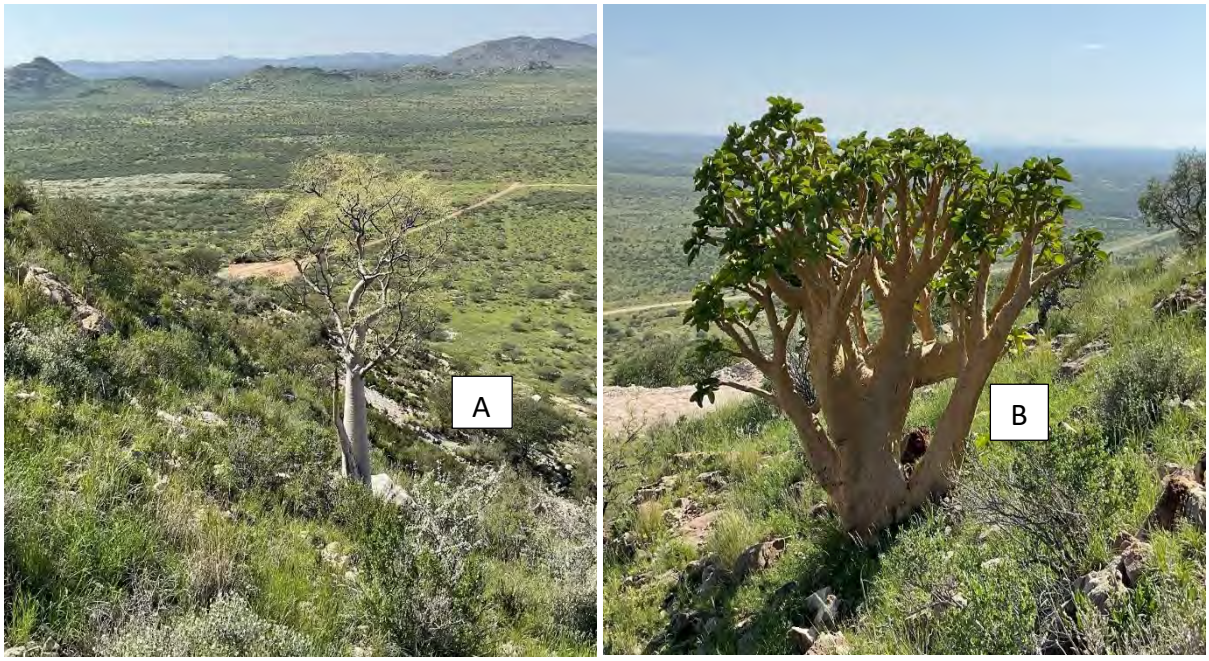


Figure 8-2: Some of the forestry protected plant species (A) Moringa ovalifolia and (B) Cyphostemma uter recorded in the ML 271 area.

Figure 8-3: Commiphora grandulosa recorded within the ML 271 area.

9. DESCRIPTION OF THE SOCIO-ECONOMIC

Karibib is a mineral-rich town and the district capital of the Karibib constituency in the Erono Region. Strategically located along the B2 road, it lies approximately halfway between Windhoek and Swakopmund, near the Khan River. The town is well-known for its unique marble quariies and QKR Navachab Gold Mine. Logistically, Karibib is well positioned, being connected by both the B2 road and a railway network that pass through the town.

According to the Namibia 2023 Population and Housing Census Report, the Erongo Region has a population of 240, 206, with Karibib itself having an estimated 5,132 inhabitants. The town has various economic and social infrastructures in place. The main economic activity is mining, while the surrounding areas focus primarily on livestock farming. The town features two state schools; Karibib Junior Secondary School and Ebenhaeser Primary School as well as one private school, Karibib Private School. The healthcare services are provided by the Karibib Clinic and a private medical centre.

10. DESCRIPTION OF THE PUBLIC PARTICIPATION

10.1. Public Participation Requirement

In accordance with Section 21 of the EIA Regulation, a mandatory public consultation process was undertaken to solicit inputs from all Interested and Affected Parties (I&APs). The public was provided with an opportunity to review and comment on the proposed project from 10 April 2025 to 30 April 2025 and further extended to 30 May 2025.

The following activities were conducted as part of this process:

- Newspaper advertisements were published in **New Era Newspaper** and **Confidente Newspaper** as further proof of notification (see Annexure D).
- Notices were placed on public notice board at Okawayo farm gate and OK Food in Karibib (**Annexure D**)

All comments and suggestions received from the public via email were formally acknowledged and, where appropriate, have been incorporated into this report. Proof of correspondence is provided in Annexure D. A summary of these activities is also presented in Table 10-1 below.

Table 10-1: Public Participation Activities.

Activity	Remarks
Placement of Advertisements in the Newspaper (Confidente & New Era)	See Annexure D
Placement of adverts at Okawayo Farm gate and OK Food in Karibib	See Annexure D

10.2.10.1. Environmental Assessment Phase 2

The second phase of the Public Participation Process (PPP) involves the lodging of the Draft Environmental Scoping Report (DERS). An Executive Summary of the DESR was prepared, and the public was given until 28 November 2025 to submit comments, suggestions, or opinions on the project.

11. ASSESSMENT METHODOLOGY

This segment outlines the assessment methodology used to determine the significance of the impacts from dimension stone mining at ML 271. The assessment covers impacts related to location, mining operations, and management, and where feasible, explores credible alternatives for the bio-physical and socio-economic environment.

The assessment focuses on the projects current phase, of continuous mining on a small-scale and intends to upscale the project into a Mining License after establishing that there are sufficient resources that can be mined for a period of 20 years or more. Due to uncertainties inherent in the proposed conversion of the current operation into a long-term mining operation, a standardised and internationally recognised methodology was adopted and optimised for this study. This tailored methodology, detailed in Table 6 below, was optimised to establish the significance of all conceivable ecological impacts associated with the proposed upscaling of this mine operation.

Table 11-1: Standardised and internationally acknowledged methodology to determine the significance of the possible 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).

CRITERIA	CATEGORY
	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

CRITERIA	CATEGORY
	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.

11.1 Impact Assessment Methodology

The significance of each identified impact is determined by evaluating three key criteria:

- Extent: The spatial scale of the impact.
- Magnitude: The size or degree of the impact, which is informed by specialist knowledge.
- Duration: The temporal scale of the impact.

The magnitude of an impact is assessed against a relevant standard, which requires a specified threshold value and source reference.

11.2 Determining Significance And Mitigation

The significance of impact is a consequence of its extent, magnitude, and duration. This rating is crucial as it is directly informed by both the nature of the impact and the sensitivity of the environment.

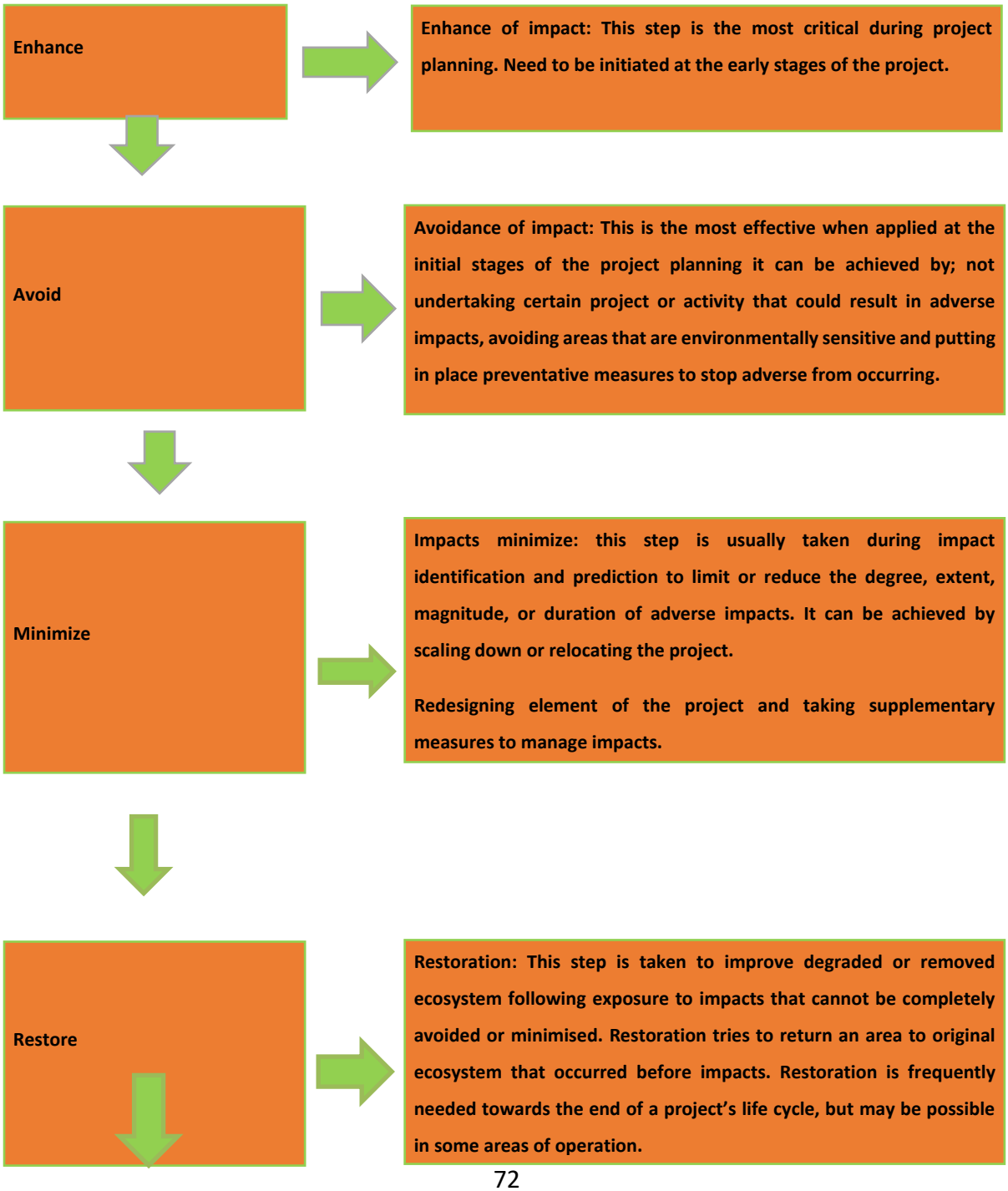
The assessment process for each impact is as follows:

- The significance is established without any mitigation.
- Then, the most effective available mitigation measures are applied, and the significance is re-evaluated.

The final pronouncement on sustainable mitigation measures for the proposed conversion of the existing mining operation into a long-term mining operation in a form of a Mining Licence rest with the proponent, **SG Mining CC**, and is subject to acceptance and approval by the relevant environmental authority.

12.MITIGATION MEASURES

A standard mitigation hierarchy is applied to address the impact of any planned project or activity. This hierarchy, illustrated in **Figure 12-1** below, consist of four sequential actions: avoidance, minimization, restoration, and compensation. The approach prioritises securing positive environmental benefits from the project. Where negative impacts are unavoidable, the hierarchy mandates the necessary actions to address them.



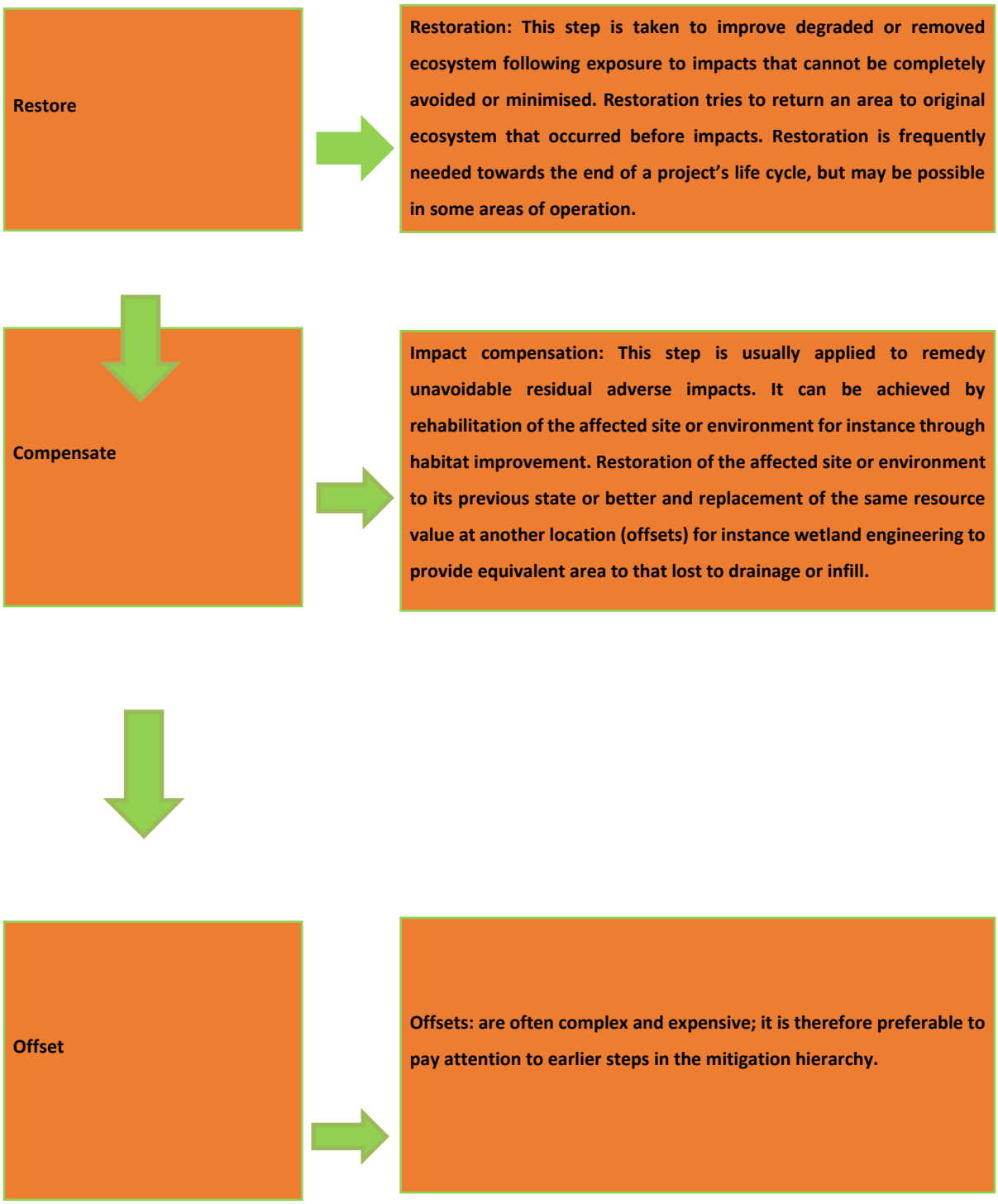


Figure 12-1: The mitigation hierarchy entails; avoidance, minimization, restoration and compensation.

13. ASSESSMENT OF POTENTIAL IMPACTS AND MITIGATION

This section assesses the potential impacts on the bio-physical and socio-economic environments resulting from the conversion of dimension stone mining to a Mining Licence. These impacts range from short-term activities, such as continuous access road grading to facilitate accessibility to the site as well as long-term upscaling of the mining operational impacts.

The findings herein are instrumental in providing the relevant authority, the Ministry of Environment, Forestry and Tourism (MEFT) - Directorate of Environmental Affairs (DEA), with the necessary information to comprehend the project's implications. This assessment will form the basis for their decision on the environmental authorization of the project and for setting appropriate conditions to manage the identified environmental aspects.

The baseline conditions and potential impacts stemming from the upscaling of mining activities and conversion of the mine into a Mining Licence are elucidated below. Each impact is assessed, and corresponding mitigation measures are suggested. Furthermore, recommendations are provided regarding potential cumulative impacts that may arise from the proposed upscaling of the operations.

13.1 Impacts During Mining Phase

Significant modification of the receiving environment is an inevitable consequence of upscaling mining operation and converting dimension stone mining at ML 271. A critical initial mitigation measure is the formal demarcation of designated zones for key operations, including the storage of cut marble blocks, the containment of waste rock, and the functioning of a dispatch area.

13.1.1 Surface and groundwater Impacts

The operation of heavy mining equipment introduces a risk of hydrocarbon and fluid leaks, which could potentially contaminate local groundwater aquifers and surface water systems. A series of mitigation measures will be employed to minimize these risks:

Groundwater Protection: To safeguard underground water resources, equipment integrity will be ensured through rigorous, pre-operational leak checks. Furthermore, any on-site refuelling will be performed from a secondary-contained system, such as a tank mounted on stilts, to prevent pollutants from seeping into the ground.

Surface Water Protection: To prevent contamination of surface water, particularly from mobilized pollutants during the rainy season, specific erosion and sediment control protocols will be established and maintained.

13.1.2 Noise Impacts

Operation of mining machinery will produce noise levels above the 85 dBA noise levels exceeding the standard threshold of 85 decibels. As employees will be exposed to this noise for extended periods, the following mitigation measures are required:

Provide all personnel with appropriate personal protective equipment (PPE), specifically hearing protection such as ear muffs or plugs. Implement a schedule of regular breaks to reduce the duration of continuous noise exposure.

13.1.3 Dust and emission impacts

The project area currently has a moderate air quality; however, this will be slightly impacted by fugitive dust generated from unavoidable mining activities, including the operation of machinery and vehicle movement. To mitigate these impacts and ensure regulatory adherence, all operations will be conducted in strict compliance with the Public Health Act of 2015 and the Atmospheric Pollution Prevention Ordinance (No. 11 of 1976).

13.1.4 Impacts on biodiversity

While the project area already experiences a degree of ecological disturbance from active mining, the proposed operations will intensify these impacts. The primary effect will be direct habitat loss through the clearance of vegetation at the project sites, resulting in a net increase in environmental disturbance and a potential reduction in local biodiversity.

13.1.5 Visual and Sense of Place Impacts

Mining operations will generate prominent surface features, namely stockpiled marble blocks and waste rock dumps, which will intrude upon the existing vista. The magnitude of this aesthetic impact is contingent upon the value that interested and affected parties assign to the current landscape. It is noted that this impact will not introduce a new visual element to the area, as similar features already exist from active mines, though it will increase the cumulative visual footprint.

13.1.6 Archaeological and Heritage Impacts

Based on an archaeological and heritage assessment, the National Heritage Council of Namibia (NHC) has confirmed that there are no declared heritage sites within the mining license area, as per their consent letter (Ref: 81/2023/85) Annexure H. Notwithstanding this finding, the implementation of an accidental find procedure is recommended to manage any unforeseen discoveries during operations.

13.1.7 Social Impacts

The project will deliver substantial socio-economic benefits amid high national unemployment. Within a context of high national and local youth unemployment, exacerbated by broader economic challenges, the proposed upscale and conversion of the mine to a Mining Licence will offers significant socio-economic advantages. It will generate a cumulative number of long-term and casual employment opportunities for the local population, directly improving individual livelihoods and the regional economy. Beyond local benefits, the project will make a strategic national contribution by earning foreign exchange and contributing financial resources to the state in the form of royalties and taxes.

13.1.8 Traffic Impacts

Overall traffic volume is not expected to increase significantly. Mining-related traffic will consist of light vehicles for personnel transport and heavy-duty equipment on-site. The primary traffic impact will be from flatbed trucks transporting marble blocks from the mine to the processing factory in Karibib and to the Walvis Bay port. To minimize impacts, all vehicle

movements must adhere to a strict schedule and remain within demarcated rights-of-way, thereby reducing disturbances to a negligible level.

13.1.9 Existing Service Infrastructure Impacts

Power Supply

A 275 kV generator will provide primary power to the site, ensuring an uninterrupted supply for mining operations. This is the optimal solution as the remote farm location lacks existing high-voltage infrastructure. Power will primarily be used for operating block-cutting equipment with large-diameter diamond saws and for daily site office functions.

To supplement this and support sustainability goals, the proponent will install solar panels on the roofs of all containerized site offices and storerooms. This initiative will reduce the carbon footprint, mitigate climate change impact, and align with the transition towards a green economy.

Water Supply

As per the agreement with the farm owner, water will be sourced exclusively from existing on-farm boreholes. It will be stored in three primary water containers, each with a capacity of 15,000 litres, and delivered by a water tanker on a bi-weekly schedule.

13.1.10 Waste Management Service Impacts

Mining operations and the presence of personnel on-site will inevitably generate various waste streams, including domestic, sanitary, and mineral waste. An integrated waste management plan must be implemented to mitigate these impacts.

Sanitation: The proponent must supply and maintain adequate, hygienic ablution facilities, with separate units for male and female employees. These facilities will be serviced weekly by a contracted party, with waste disposed of at the nearest approved sewerage disposal ponds in Karibib.

Solid Waste: Various wheelie bins and skip containers will be provided across the site for waste segregation. All collected domestic solid waste will be transported and disposed of at

the designated Karibib landfill site. It is recommended that these services be contracted to a reputable local Small and Medium Enterprise (SME).

Mineral and Inert waste volarisation: To minimize landfill burden and create economic opportunities, the proponent should explore innovative valorisation of mineral waste: that involve processing waste rock and marble off-cuts into powder for sale to road-marking industries. Supporting local initiatives to repurpose smaller marble pieces into products such as garden pebbles and crafts.

13.1.11 Storage and Utilisation of Hazardous Substance

Operations will involve the use of materials classified as hazardous under the Hazardous Substances Ordinance (No. 14 of 1974). This ordinance governs their entire lifecycle, including import, use, and disposal, due to their potential to cause injury, illness, or environmental damage through their flammable, corrosive, or toxic properties.

Consequently, it is imperative that all hazardous substances are managed under strict protocols. Primary storage must be within a secure, lockable container with access restricted to authorized personnel only to prevent accidental release or misuse.

13.1.12 Health, Safety and Security Impacts

The development is anticipated to draw a significant number of migrant workers to the area. This demographic shift poses a documented public health risk, as the interaction between a transient workforce and local communities can create social conditions that facilitate the spread of HIV/AIDS. Proactive mitigation measures will be essential.

14. ENVIRONMENTAL MANAGEMNT PLAN

This report contains an Environmental Management Plan (EMP) in Annexure B. Its objective is to specify the mitigation measures required during the mining and decommissioning of the dimension stone operation on ML 271 to reduce the project's adverse environmental impacts.

15.SUMMARY OF POTENTIAL IMPACTS

An overview of the likely impacts associated with dimension stone mining and the essential mitigation measures is presented in the environmental impact assessment matrix (Table 7). The matrix is designed to be applicable to all project alternatives, as the conceivable variations in impact scale among them were not deemed significant.

Table 15-1: Environmental impact assessment matrix for the mining of dimension stone at ML 271, Karibib district, Erongo Region.

Description of potential impact	**Project alternative**	**No mitigation / mitigation**	**Extent**	**Magnitude**	**Duration**	**SIGNIFICANCE**	**Probability**	**Confidence**	**Reversibility**	**Cumulative impact**
IMPACTS DURING EXPLORATION OF BASE AND RARE METALS, DIMENSION STONE, INDUSTRIAL MINERALS AND PRECIOUS METALS										
Surface and Ground Water Impacts	Mining activities	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)

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	Medium term	Neutral	Probable	Certain	Reversible	Neutral
Noise Impacts	Mining activities	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Medium - Low	Medium 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

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
Dust and Emission Impacts	Mining activities	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
Impacts on biodiversity	Mining activities	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Medium - 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
Visual and Sense of Place Impacts	Mining activities	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

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
Archaeological and Heritage Impacts	Mining activities	No mitigation	Local	Very low	Short term	Low	Probable	Certain	Irreversible	Very low(-ve)
		Mitigation	Local	Negligible	Short term	Very 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
Social Impacts	Mining activities	No mitigation	Local	Medium-Low	Short term	High++	Probable	Certain	Reversible	Medium-Low (-ve)
		Mitigation	Local	Low	Short term	High++	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
Traffic Impacts	Mining activities	No mitigation	Local	Low	Short term	Medium-Low	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Very low	Short term	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

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	SIGNIFICANCE	Probability	Confidence	Reversibility	Cumulative impact
Existing Service Infrastructure Impacts	Mining activities	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 Service Impacts	Mining activities	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	Mining activities	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

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

16.CONCLUSION AND RECOMMENDATIONS

This section provides a final inference and recommendations based on the Environmental Impact Assessment for the proposed dimension stone mining operation on ML 271. The Environmental Impact Assessment matrix (Table 7) indicates that most negative impacts of the proposed project are of medium to low significance. With the correct implementation of the mitigation measures detailed in Section 15 and the Environmental Management Plan (Annexure B), these impacts can be reduced to negligible or low levels.

The assessment confirms that the project will deliver substantial socio-economic benefits, including significant employment for the local community and contributions to the national economy through royalties, taxes, and foreign currency earnings. The information presented is considered adequate and relevant for decision-making. Therefore, it is strongly recommended that the project be approved and issued an Environmental Clearance Certificate (ECC) by the MEFT: DEA.

To ensure environmental compliance and sustainable operations, the following key recommendations are made:

Biodiversity Protection: All mining activities must avoid protected plant species within the license area. The proponent must implement an ecological compensation policy, including a vegetation management and tree planting program.

Fauna and Anti-Poaching: Strict protocols must be enforced to prevent illegal hunting by employees. Any suspicious poaching activity must be reported immediately to the Karibib police or the relevant anti-poaching unit.

Environmental Management and Monitoring: The proponent must appoint a registered Environmental Practitioner to conduct regular environmental audits. Continuous monitoring must be undertaken, and audit reports must be submitted to the Office of the Environmental Commissioner.

Economic Enhancement: The proponent is encouraged to realize its plan for establishing a marble cutting and processing factory in Karibib to maximize local value addition and skills development.

17.REFERENCES

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18.ANNEXURE

ANNEXURE A: Proof of Mining License submission at the MIME

Pre-Appn
ML-87
29-05-2025
30-05-2025

REPUBLIC OF NAMIBIA

MINISTRY OF MINES AND ENERGY

APPLICATION FOR A
MINING LICENCE
MINERALS (PROSPECTING & MINING) ACT, 1992, SECTION 91 (MINIMUM REQUIREMENT)

Date	30th May 2025	Informal name of area	

For Office Use

Reference	14/2/3/2/ 271
Deposit	N$ 5 000-00
Receipt no.	EFT
GIS sign	
date	
TAM sign	
date	

Date stamp

SECTION A – PARTICULARS OF APPLICANT

(i) Natural person

Full names			
Nationality *		Date of birth	
Telephone		Facsimile	
Residential address		Postal address	

** Copy of Identification Document or Passport to be attached*