Environmental Impact Assessment: Scoping Report

Small-scale Mining 'Hotspot' on Farm Otjakatjongo

Karibib District, Erongo Region



Prepared for:

Ministry of Mines and Energy Small-scale Mining Division No. Aviation Road Windhoek Namibia

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ABBREVIATIONS AND ACRONYMS

List of Acronyms, Abbreviations and Terms

amsl	above mean sea level
BAT	Best Available Technology
BID	Background Information Document
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COVID-19	'CO' - Corona, 'VI'- Virus & 'D' - Disease of 2019
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EIF	Environmental Investment Fund
EMA	Environmental Management Act
EMP	Environmental Management Plan
ERSMA	Erongo Regional Small Miners Association
GPS	Global Positioning System
GRN	Government of the Republic of Namibia
ha	Hectare
HPP	The Harambee Prosperity Plan
IAPs	Interested and Affected Parties
KCC	Karibib Constituency Council
m ²	Square meters
m ³	Cubic meters
MC	Mining Claim
MCs	Mining Claims
MEFT	Ministry of Environment, Forestry and Tourism
MITSD	Ministry of Industrialization, Trade and SME Development
MME	Ministry of Mines and Energy
NAAQS	National Ambient Air Quality Standards
NCIS	Namibia Central Intelligence Services
NEPL	Non-Exclusive Prospecting License
NHC	National Heritage Council
NO ₂	Nitrogen Dioxide
NSI	Namibia Standards Institute
PM	Particulate Matter
PPE	Personal Protective Equipment
SABS	South African Bureau of Standards
SHE	Safety, Health & Environment
SME	Small and Medium Enterprises
SSM	Small-scale Miner (Mining)
SSMs	Small-scale Miners
UNDP	United Nations Development Programme

Glossary of Terms and Definitions

Aggregate:

Aggregates are raw materials (crushed stones, gravel and sand) used in the manufacturing of construction products which in turn are used to build our houses, roads, schools, offices, shopping malls, hospitals, airports, street roads and other developments within our urban and rural environments.

Anthropogenic Impact:

Human impacts on the environment which include changes to the biophysical environments, ecosystems, biodiversity and natural resources caused directly or indirectly by human activities including global warming, environmental degradation, etc.

Biodiversity:

The variability among living organisms from all sources including terrestrial marine and other aquatic ecosystem and ecological complexes which they are part of.

Cumulative Impact:

In the context of mining, means the impacts of mining activities which in themselves may not be significant but may become significant when added to the existing and potential impacts resulting from similar or diverse activities or undertaking in the area.

Decommissioning:

The process which begins after termination or cessation of mining activities or mineral processing and ends with closure. It involves, amongst others, the removal of unwanted infrastructures, making safe of any dangerous excavations and surface restoration so as to minimise the adverse environmental impacts of mining activities remaining after cessation of operation.

Environment:

All physical, chemical and biological factors and conditions which influence an object and or organism. It is also defined as the surroundings within which human beings exist and is made up of the land, water, atmosphere, plants and animal life (micro and macro) including interrelationships between the factors and the physical or chemical conditions that influence human health and well-being.

Environmental Impact:

Environmental impact is any change to the environment whether adverse or beneficial, wholly or partially, resulting from an organization activities, products or services.

Environmental Management Plan (EMP):

A working document on environmental and socioeconomic mitigation measures which must be implemented by several responsible parties during all phases of a proposed development.

Landfill:

Onsite disposal of relatively small quantities of papers and plastics by burning in holes and pits.

Mineral Reserve:

The mineral is referred to as a reserve when the extent of the amount of that mineral which can be extracted has been quantitatively proven, through drilling and other acceptable sampling methods for which the level of confidence is high.

Mineral Resource:

The mineral is called a resource when the extent of extractable amount of that mineral is only estimated with a low level of confidence, i.e. the resource is only inferred or estimated from geological evidence and assumptions, but has not been verified via drilling and other acceptable sampling methods.

Mining:

Mining is the process which involves the extraction of mineral resources from their host sources, excluding fossil minerals.

Mining Claim:

A parcel of land with dimensions of 600 m by 300 m and not exceeding 18 ha, securing a mineral asset (deposit) pegged and registered as provided for in the Mineral (Prospecting & Mining) Act, which gives the holder exclusive rights to exploit the mineral asset secured by such a MC for his or her own benefit.

Overburden:

In the context of tourmaline mining, overburden are waste materials covering the tourmaline bearing pegmatites which must be removed before the mineral bearing materials can be extracted.

Sensitive Area

A sensitive area or environment is described as an area or environment where a unique ecosystem, habitat for plant and animal life, wetlands or conservation activity exists or where there is high potential for ecotourism.

Tailings:

Tailings are any waste materials, slimes or residue produced from mining or processing of minerals.

Topsoil:

The layer of soil covering the earth which provides a suitable environment for the germination of seed, allowing the penetration of water and a source of micro-organisms, plant nutrients, seeds and with depth not exceeding 0.5 m.

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EXECUTIVE SUMMARY

1. Introduction

There are approximately 40 Small-scale Miners (SSMs) mining tourmalines on Otjakatjongo, a game farm situated in the Karibib district, approximately 20 km north of Wilhelmstal. The C36 gravel road had split the farm into two portions (**Figure 2**). All mining activities are on the portion west of C36 which is approximately 2 330 ha. The homestead and a modern lodge are built along the banks of the Khan River, on the portion east of C36. Otjakatjongo is visited by trophy hunting enthusiasts, hailing from regional and international destinations.

The farm size, the MCs pegged on the farm and the statuses of such MCs are as shown in Table 1. For many years, SSMs have been mining tourmalines from a pegmatite belt running on the west section of the farm. Whilst the operations are perfectly legal, there has been no specific EIA conducted into such mining activities as required by EMA. In this report, Otjakatjongo constitutes the EIA study area.

TABLE 1: Farm Size and Number of Mining Claims								
	Size (ha)	Status of Mining Claims			MCs, Sizes, Footprint as % of Farmland & Holders			
Farm Name		Active	Pending Renewal	New Applications	MCs	Size (ha)	%	MC Holders
Otjakatjongo	8 258	0	6	12	18	324	3.9%	7
Total	8 258	0	6	12	18	324	3.9.%	7

2. The EIA Proponent and Objectives

The EIA study has been proposed by the Small-scale Mining Division of MME with the financial support from UNDP. The objectives of the EIA were:

- To provide a framework for understanding of the environmental impacts associated with tourmaline mining carried out by SSMs within the study area.
- To determine the cumulative impacts both direct and indirect which the mining activities have had on the biophysical and socio-economic environments.
- To analyse the baseline situation of tourmaline SSMs in terms of its economics, social and environmental consequences.
- To formulate a generic Environmental Management Plan (EMP) demonstrating how the environmental impacts eventuating from such mining activities can be managed and in so doing, to facilitate the ECC authorisation process.

4. Nature of Mining Activities

On Otjakatjongo, tourmalines are found in two geological formations, in unconsolidated alluvial sediments and in hard granitic pegmatites. Apparently, 'tourmaline pockets' with beautiful gemstones have been successfully recovered at Otjakatjongo.

To some extent, tourmaline mining on Otjakatjongo is semi-mechanised, but the scale and scope is quite small in terms of the volume of soil materials handled. The mining operations have these common parameters:

- > No use of water other than for human use \rightarrow (low impact on available water resource).
- No use of electricity \rightarrow (zero impact on available energy pool).
- > No downstream processing such as crushing and milling \rightarrow (zero impact).
- > Mining semi-mechanised but scale and scope is still small \rightarrow (low impacts).
- Occasionally, blasting is done, but the scale and magnitude are very small such that the associated vibrations and dust are inconsequential.

5. Environmental Impacts Associated with the Operations

Even though the mining activities are relatively small, there are inherently environmental impacts associated with these specific activities:

- > Provisions for basic infrastructures (access roads, camp sites, workshops, etc.).
- > Mining operations (excavations, trenching, drilling and blasting, etc.).

6. Assessment Criteria

Each impact as identified during the Scoping has been assessed on the basis of its nature, extent, duration, intensity/severity and probability for such an impact actually occurring. A **Significant Rating** was then determined for each assessment. This essentially means significance for decision to grant the ECC.

- > Impacts with Low (negative) Significance Ratings will not affect the decision.
- Impacts with Medium (negative) Significance Rating will affect a decision unless such impacts are effectively mitigated.
- Impacts with High (negative) Significance Ratings will definitely affect decision irrespective of mitigation measures.

Environmental Impact or	Significan	ice Rating	Dessible Mitiastics			
Concern /Issue	WOM	WM	Possible Mitigation			
Impacts on Soil Profile	Low (-)	Very Low (-)	Stockpile and preserve topsoil excavated for future rehabilitation.			
Construction of Access Roads	Medium (-)	Low (-)	 Select routes along fences which would involve the least removal of plants & trees. Avoid sensitive (watercourses) areas. 			
Establishment of Camp Sites	Medium (-)	Low (-)	 Avoid sensitive areas. Use materials which blend in well with the environment. 			
Construction of Site Workshops	Medium (-)	Low (-)	 Avoid sensitive areas. Rehabilitate on cessation of operations.			
Mining Activities/Operations	High (-)	Low (-)	Backfill all excavated trenches.Fence in active working.Comply with the EMP.			
Visual Intrusion	Medium (-)	Low (-)	 Maintain a high standard of housekeeping. Where possible, use materials which blend in well with the environment. 			
Waste Management	Medium (-)	Low (-)	 A Waste Management Plan should be developed which addresses waste handling and disposal. The EMP must be complied with. 			
Fire Hazards	Medium (-)	Low (-)	 Make open fire at a designated area only. Have firefighting equipment handy. 			
Impacts of Blasting	Medium (-)	Low (-)	 Comply with regulations related to explosive handing, transport and storage. Comply with the EMP 			
Impact on Archaeological, Cultural and Heritage Remains	Low (-)	Very Low (-)	 Respect heritage & cultural remains. Comply with the EMP. 			
Impacts on Mammals	Medium (-)	Low (-)	 Backfill all excavations to prevent injury to wildlife and livestock. Hunting of wildlife is strictly prohibited. 			
Impact on Reptiles	Medium (-)	Low (-)	 Killing of snakes & reptiles is not allowed. Comply with the EMP 			
Impact on Birds	Low (-)	Low (-)	Birds nesting should not be disturbed.No hunting of guinea fowl is allowed			
Impact on Employment Creation	Low (+)	Low (+)	 Respect the labour laws when recruiting. Ensure that recruitment is gender and disability compliant. 			
Impact on the Local Economy	Low (+)	Low (+)	 Support local businesses by procuring goods required for the operation locally. Join local organizations and lobby groupings – ERSMA. 			
Health and Safety Aspects	Low (-)	Medium (+)	 Provide decent onsite sanitation, suitable PPEs to SSMs and first aid kits. Maintain a high standard of housekeeping. Obey COVID-19 regulations and protocols. 			

EIA Scoping Report for SSM 'Hotspot' on Farm Otjakatjongo - Executive Summary

6. Public Participation Process

The EIA study was announced through advertising in three local newspapers. Considering that SSMs are working on the farms without access to newspapers, an announcement was aired on the national radio, through the office of the Karibib Constituency Councilor. A Background Information Document (BID) with detailed information on the EIA was prepared and circulated to SSMs, identified stakeholders, landowner and the neighbouring farm owners through the Chairman of the Wilhelmstal Farmers Association.

The requirement of the Environmental Management Regulations to place EIA notices at the project site was waived because access to the farm is restricted while all MC holders on the property were known.

Nearly all SSMs mining on Otjakatjongo are residents of Karibib. In light of the COVID-19 protocols, it was deemed necessary to only hold one public meeting for all stakeholders. The said meeting was held on 10 October 2020 in Karibib and was well attended. Amongst the issues raised by SSMs were the following:

- > excessive compensation demanded by Otjakatjongo Management;
- > landowner demanding SSMs to wear uniforms;
- farm management requesting SSMs to wear identification tags with their names and MCs were they work;
- SSMs required to wear shoes with branded soles for purposes of easier access control and effective poaching combating;
- SSMs being falsely accused and blamed for all poaching incidents occurring at Otjakatjongo.

Otjakatjongo Management presented grievances with respect to SSMs which included:

- > SSMs unwilling to backfill excavated trenches;
- > Access roads being constructed without the consent and approval of Management
- > Management not informed on guests visiting SSMs on the farm;
- > Snares and trap wires planted to catch wildlife; and
- > increased levels of poaching including dried meat retrieved from a deserted Camp Sites.

7. Conclusion and Recommendation

Generally, the mining activities on Otjakatjongo are more organized and carefully executed. The operations have smaller footprints and the associated impacts can be effectively managed, if the SSMs undertake and commit themselves to comply with the EMP.

On the basis of the EIA findings, it is recommended that each MC holder be granted an ECC if he/she commits to the terms of the EMP and those of Farm Management.

1.0 BACKGROUND INFORMATION

1.1 Introduction

Otjakatjongo is a registered game farm, situated in the Karibib Electoral Constituency in the Erongo Region. According to the mineral database of the Ministry of Mines and Energy (MME), there are approximately eighteen (18) Mining Claims (MCs) held by seven (7) Mining Claim holders (mineral right holders). The statuses of the MCs are:

- ➢ Six (6) MCs are pending renewals;
- > Twelve (12) MCs are new applications.

Currently, there are upwards of forty (40) people working on those MCs, who, together with the mineral rights holders are collectively referred to as Small-scale Miners (SSMs).

Historically, tourmalines have been mined on Otjakatjongo and from two other neighbouring farms (**Fig. 4**) for many years, dating back to the period when Namibia was a German colony. At present, MC holders are only required to complete a standard questionnaire and to sign a Pro-forma Environmental Contract. However, the Pro-forma Environmental Contract is considered as outdated and inadequate to protect the receiving environment.

In terms of the Environment Management Act (Act No 7 of 2007), and the Environmental Impact Assessment (EIA) Regulations of 2012, all mining activities are listed as activities for which EIAs are mandatory.

1.2 **Proponent of the EIA Study**

The Small-scale Mining Division of the Ministry of Mines and Energy (MME) is the proponent of the EIA study, while the funding has been provided by UNDP. Generally, the Small-scale Mining Division is responsible to oversee the SSM subsector in the country which underpins the commitment of the Namibian Government to develop the sector, because a well-developed SSM subsector has the potential:

- to combat unemployment;
- to eradicate poverty; and
- > to ultimately to contribute to the mainstream economy.

MME requested for an EIA to be conducted into the mining activities of SSMs on Otjakatjongo, and for a **Generic** Environmental Management Plan (EMP) to be developed. The generic EMP will provide operational guidelines to the seven (7) mineral right holders when applying for the ECCs for their respective MCs. The EIA was done by Joel Shafashike, an independent EIA Consultant between September and November 2020.

1.3 **Objectives**

The key objectives of the EIA are:

- To provide a framework for understanding of the environmental impacts associated with tourmaline mining by SSMs on Otjakatjongo.
- To determine the cumulative impacts which the mining activities of SSMs have had on the biophysical and socio environments.
- ➢ To analyse the baseline situation of SSMs in terms of its economics, social and environmental consequences.

EIA : Scoping Report for SSM on 'Hotspot' located on Farm Otjakatjongo

- ➢ To raise awareness amongst SSMs to start understating and appreciating the environment in which they conduct their mining activities.
- To prepare a generic and simplified Environmental Management Plan (EMP) for SSM operations on the farm.

Through the EMP, mechanisms are provided which ensure that, going forward, each SSM when granted an ECC will have his/her mining operations harmonised with national laws, regulations and policies. This also includes having a valid workable agreement with the landowner.

Each SSM is expected to take personal responsibility by ensuring that his/her mining activities are conducted in a manner which is socially acceptable, environmentally sustainable and practically safe to the livestock, wildlife, farm staff personnel and farm guests who include international visitors.

1.4 **Location and Description**

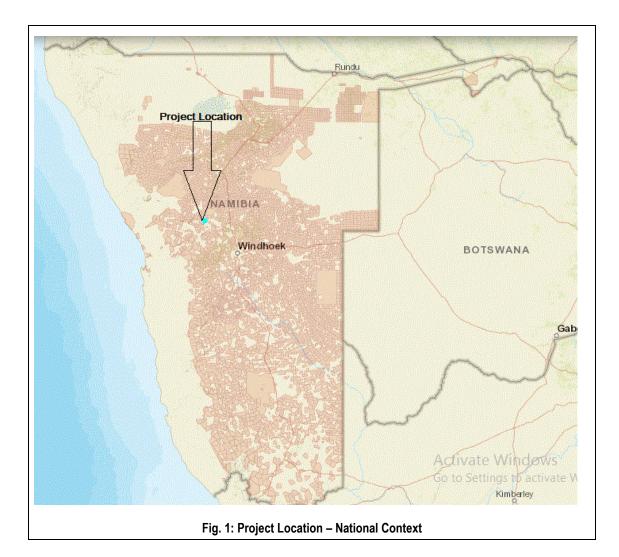
The study area comprises of a game farm, Otjakatjongo, as shown in Figures 2, 3 & 4. The property is located in the magistrate district of Karibib in the Erongo Region. The GPS coordinates are 21°46'44" S and 16°13'18" E. The farm covers a geographical area of 8 258 ha and is owned by Otjakatjongo Lodge CC. From Okahandja, Otjakatjongo is reached by driving approximately 65 km on the B2 Highway up to Wilhelmstal, then turning on to the C36 gravel road and driving a further 20 km up to the farm gate. From Omaruru, the farm is reached via the same gravel road and is approximately 60 km.

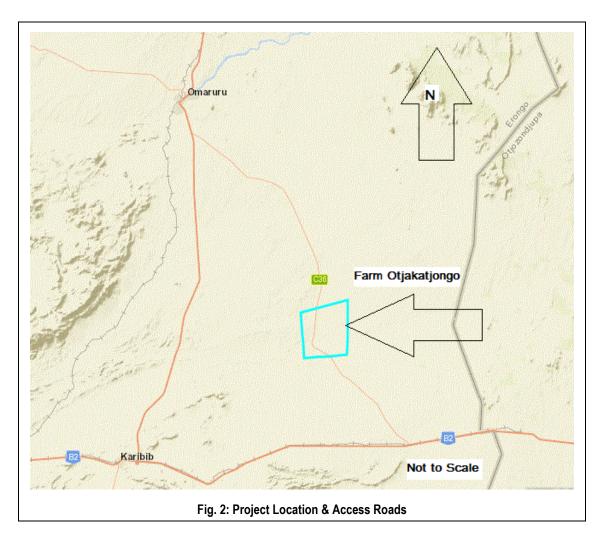
The C36 gravel road had split the farmland into two portions. The portions to the east and west of C36 are 5 922 ha and 2336 ha, respectively. The homestead and lodging facilities are built to the east, along the banks of Khan River, approximately 7 km from C36. Both portions are game fenced.

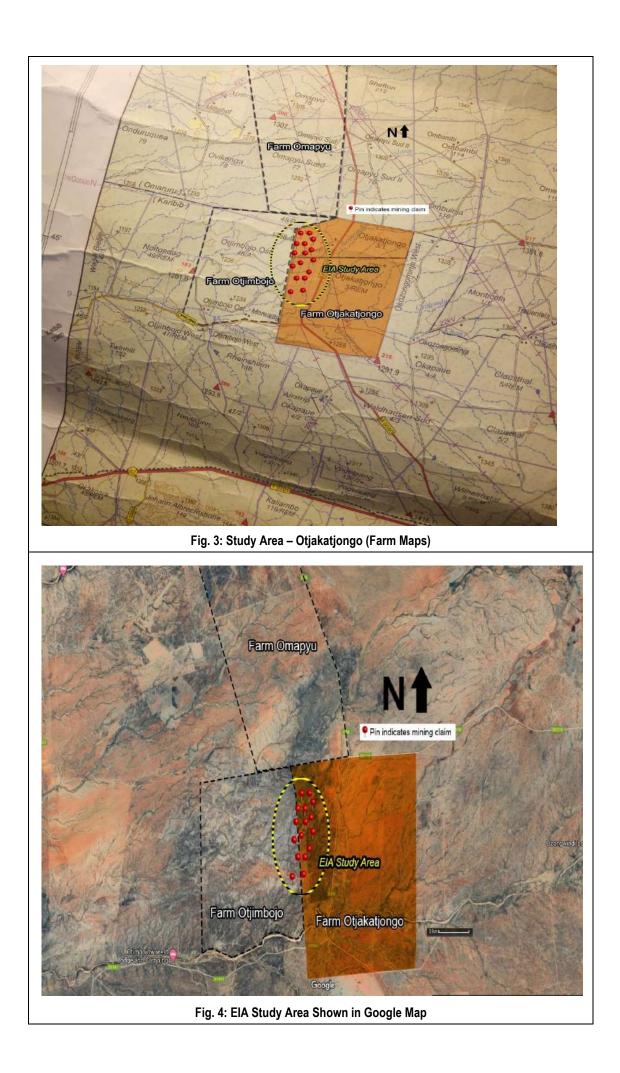
The number and status of the MCs pegged on the farmland are as indicated in Table 1. All mining activities are confined to the west portion, along the western border of Otjakatjongo with Otjimbojo (Figures 3 & 4).

Otjakatjongo is a hunting farm and the lodge is used to accommodate its hunting patrons, who visit the farm from regional (South Africa) and international countries (mostly USA and EU States).

TABLE 1: Farm Size and Number of Mining Claims								
	Size	Status of Mining Claims			MCs, Sizes, Footprint as % of Farmland & Holders			
	Farm Name (ha)		Pending Renewal	New Applications	MCs	MCs Size (ha)		MC Holders
Otjakatjongo	8 258	0	6	12	18	324	3.9%	7
Total	8 258	0	6	12	18	324	3.9.%	7







2. APPROACH AND METHODOLOGY

In carrying out this EIA an investigative approach was adopted which included the following:

- > Field visual surveys and observations of mining activities and facilities;
- > Consultation with MC Holders and individual SSMs contracted to mine tourmaline;
- Consultations with the Farm Management;
- > Desk studies and literature review on SSM in Namibia and elsewhere;
- > Public Participation Process (PPP).

Baseline information about the mining activities and facilities of SSMs including the general surroundings were obtained from primary and existing secondary information as well as from field observations. As part of the scoping assessment process in order to determine the potential environmental impacts, Interested and Affected Parties (IAPs) were identified and consulted. Their comments, inputs and or concerns were noted and included in the PPP section of the EIA Scoping Report.

For each impact identified, preventative and mitigation measures have been proposed in the EMP including guidelines for final rehabilitation on cessation of mining activities. Based on the finding of this EIA, a generic EMP was prepared as a standalone document.

3. NEED FOR THE ACTIVITY

3.1 What is Tourmaline?

According to Gem World Publication, tourmalines were discovered by Dutch traders in the late 1600's and were, initially, assumed to be emeralds. It was only in the 1800s when it was proven that the stones were different. The name, tourmaline, comes from the Sinhalese term 'turmali', which the Dutch merchants gave to the beautiful multicoloured stones, discovered in what is today known as Sri Lanka. The name was given to all coloured crystals on the island of Sri Lanka at that time. In the figures 5, 6 & 7 below, the Paraiba Tourmalines from Mozambique and Brazil are the most expensive stones costing over U\$10 000 per carat. (*source:Gem World Publication*) The chemical classification name of tourmaline is boron and occurs in a combination of colours. The properties of tourmaline are as listed in table 2.



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TABLE 2: Physical Properties of Tourmaline						
Chemical Classification	Boron					
Colour	Black is the most common color, but also occurs in blue, green, yellow, pink, red, orange, purple, brown, and colorless. Single crystals are often color-zoned.					
Streak	White when softer than the streak plate. Colourless when harder than streak plate.					
Luster	Vitreous					
Diaphaneity	Transparent to translucent to nearly opaque					
Cleavage	Indistinct					
Mohr Hardness	7 to 7.5					
Specific Gravity	2.8 to 3.3 (varies with changes in chemical composition)					
Diagnostic Properties	Lack of visible cleavage, prismatic crystals with rounded triangular cross- sections that are often striated, vibrant colours, pleochroism.					
Chemical Composition	CY ₃ Z ₆ (T ₆ O ₁₈)(BO ₃) ₃ V ₃ W					
Crystal System	Hexagonal					
Uses	Used as jewel gemstones and mineral specimen					

3.2 Tourmaline Occurrences

Tourmaline is commonly found in granite and granite pegmatites and also in metamorphic rocks such as schist and marble. Schorl and lithium-rich tourmalines are usually found in granite and granite pegmatites while magnesium-rich tourmalines, are generally restricted to schist and marble. (*Wikipedia*).

According to Hobart M King, author and publisher of Geoscience News and Information, the most spectacular tourmaline crystals are formed by hydrothermal activity, when hot waters and vapors carry the elements needed to form tourmaline into pockets, voids, and fractures, which offer an open space for crystal growth. The tourmaline crystals formed in these cavities range in size from tiny millimeter crystals to massive prisms weighing over 100 kilograms.

Hobart King further asserted that one rich pocket of nice tourmaline crystals can yield mineral specimens and quality gem materials worth millions of US dollars. Apparently, many SSMs, mineral collectors and gem hunters have become wealthy by discovering just one of these treasure-filled cavities or pocket.

3.3 World Tourmaline Sources

Brazil has been the world's biggest supplier of tourmalines for over 500 years while the first tourmaline mine was developed in the USA in 1821. Today, five African countries are listed by Geoscience News and Information as important producers of gemstones. These are Nigeria, Mozambique, Namibia, Madagascar and Tanzania.

3.4 Namibia Tourmaline Sales Value

Whilst Namibia is listed as a supplier of top quality gemstones to the world market, it has not been possible to obtain any export value of tourmalines out of Namibia.

4. DESCRIPTION OF THE ACTIVITIES

In this section, the activities conducted by SSMs are described based on two field trips to Otjakatjongo, as well as through discussions held with MC holders, SSMs and the Management of Otjakatjongo Lodge CC which owns the farm.

4.1 **Common Operation Parameters**

Generally, the following parameters are found to be common to all SSMs working on the said farm:

- The footprint of each mining operation is relatively small and confined to areas of less than 2 ha on each specific MC.
- The operations do not involve downstream processing such as rock crushing, milling and complicated product recovery.
- The operations do not use harmful chemicals such as mercury, which is used in the processing of gold, and therefore a harmful chemical to the environment.
- > The operations do not make use of water which is a scarce resource in Namibia.
- > The operations do not make use of energy, i.e. no electricity is required.
- Where machineries are used, it is either one piece of equipment (either an air compressor or JCB excavator).

4.2 **Detailed Description of Activities**

The operational activities are described in terms of the following:

- ➢ Mining Claims;
- Scope of Mining activities;
- > Existing Infrastructures, and
- Socio-economic Environments.

4.2.1 Mining Claims

All the MCs and mining related activities are confined to the portion west of C36 (Figure 2). There are in total eighteen (18) MCs pegged on the farm that are held by seven (7) individual Namibians, as shown in Table 3 below. Physical verification of MCs on the game farm was outside the scope of the EIA assignment.

According to the Farm Manager, only the first three MC holders listed on Table 3 have access agreements with Otjakatjongo Lodge CC. A map of the Mining Claims pegged on the Otjakatjongo as provided by the Farm Management is attached as Appendix 2. As can be seen on the map, some MCs appear to have been pegged across neighbouring land which is not allowed by the Minerals Act.

Mr Ernst Naomab, one of the three MC holders with access agreement, was available during the field visit. Mr Naomab has been mining tourmaline since 2004, (Photo 7), essentially as a sideline operation and had little success. At present, Mr Naomab is not mining because the compensation fees were excessive and unworkable for his operation. He has in the meantime transferred one of his MCs to another SSM (Mr Jeano Foelscher). At one point, Mr Naomab had 'contracted' fifteen SSMs to mine tourmalines from his MCs.

TABLE 3: Holders of MCs on Farm Otjakatjongo							
MC HOLDER		STATUS OF I	MCs	REMARKS			
MC HOLDER	Active	Renewal	Application				
Ernst Naomab		3		Note:			
Jean Foelscher		2	3	The Farm Management has no			
Martha Von Francois		1		access agreement with the last			
Timotheus Xoagub			3	three MC applicants.			
Aaron Shilongo			2				
David Weeks			2				
Jonas Shimutwikeni			2				
Total Mining Claims	0	6	12	18			
Total MC Holders				7			
Total Land Claimed (ha)				324			

Of the seven (7) MC holders, Mrs Martha Von Francois is the only female with mineral rights on the farm. It is understood that Ms Von Francois was currently not working her single MC which is pending renewal. Efforts to make contact with Mrs Francois have not been successful.

4.2.2 Scope of Mining Activities

On Otjakatjongo, tourmalines are mined from granitic pegmatites that are buried a few centimeters below the surface. During the time of the visit, mining was conducted on two MCs both held by Mr Foelscher, who lives in Swakopmund. In the ranks of SSMs, Mr Foelscher is admired and considered as a successful SSM who has hit a few 'tourmaline pockets'. The mining operations were quite well organized. There were two teams working on two separate MCs which are approximately 2 500 m apart.

<u>Team 1</u>

This team was working on MCs MC-69627 and had basic machines (an air compressor, portable generator, jackhammers, Bell wheel loader and other accessories). The loader in Photo 6 has been, reportedly, broken down for a long time. Tourmalines were mined from two trenches which appeared to be deep, because a small generator was used to provide lighting (Photos 4 and 5).

The team consisted of approximately sixteen (16) SSMs and was headed by a young white Afrikaans speaking man (Photo 9). According to the supervisor, over the last 18 months, the team has recovered about 3 000 g (3 kg) of good quality tourmalines that are exported to clients in Germany and Thailand. Each SSM earns a basic salary per month and a commission once the tourmalines have been sold.

<u>Team 2:</u>

This team was working on what appeared to be MC-67009. The team had basic machines consisting (an air compressor, JCB, jackhammers, etc. and consisted of approximately twenty (20) young men. There were four young, Afrikaans speaking men, one of whom was the team foreman. The pick-ups used by the team (Photo 10) were branded as STS Construction & Renovations, which implies that tourmaline mining was not the core business.

The supervisor of the team was reluctant to reveal information related to the operation, i.e. tourmalines recovered, where they sell their tourmaline, how long they have been mining, etc. The reluctance was possibly because the EIA Consultant was in the company of the Farm Manager (seen in Photos 9 & 15). Photo 8 is depicting the working of team 2.

Huge excavated trenches of different sizes (Photos 1, 3 & 17) have been left open and unfenced. It was also evident that drilling and blasting have been performed in the past. This conclusion was backed by explosive remnants, drilled holes and detonators found on old mining areas (Photos 20 & 21). When asked about blasting, both teams have denied conducting any blasting. Unauthorised use, handling, transport and storage and use of explosives are criminal activities for which perpetuators could go to jail for a long time.

In Namibia, the handling, use and storage of explosives is regulated under the Explosives Act, (Act 26 of 1956), which, like most laws in Namibia was adopted at independence. This Act has not been amended yet in Namibia, but in South Africa, the same Act has been amended (Act 15 of 2003) with severe penalties for transgressions. A first offender could go to jail for up to ten years and up to twenty years for subsequent offences.

In Namibia, explosives are handled by the Namibia Explosives Unit, a special division within the organizational structures of the Namibian Police Force.



Photo 1: An Old Excavated Trench



Photo 2: Farm Road used as access to MCs



Photo 3: Old Workings Unrehabilitated.



Photo 4: A Portable Generator



Photo 5: An Active trech – light is required



Photo 6: A broken Frontend Loader



Photo 7: MC Pegs & Beacons



Photo 8: Active Workings to Expose Pegmatites

EIA : Scoping Report for SSM on 'Hotspot' located on Farm Otjakatjongo

4.2.3 **Onsite Accommodation Camp Sites**

The two teams of SSMs mining on Otjakatjongo are accommodated at two different locations on the farm. Team 1 is staying at an old farmhouse constructed on this portion of the farm. The homestead has been refurbished and supplied with grid electricity. There is a borehole supplying water and there are facilities for entertainment and sanitation. Team 2 is staying at a Camp Site where they have erected tents (Photo 11). Temporarily ablution facilities are available. SSMs have access to potable water from two boreholes on the property. Generally, the living conditions for the SSMs mining at Otjakatjongo are much better when compared to those of SSMs working on other farmlands.

4.2.4 Socio-economic Aspects

According to the supervisors of both teams, all 40 plus SSMs were formally employed with contracts and receiving a basic monthly salary and a commission from the sales of tourmalines.

Working hours were from 07h00 to 16h00, Monday to Friday. Workers are provided with protective personnel equipment consisting of overalls, safety shoes, safety glasses and there is decent sanitation. Transport to the MCs which are approximately 3 km from the homestead is also provided. According to both supervisors, production is erratic and unpredictable.





Photo 9: Supervisor driving SSMs from work. (With his back to the camera is the Farm Manager)

Photo 10: A pickup used in mining operation



Photo 11: A Camping Site, well equipped with ablution facilities.

5. ALTERNATIVES

There were no alternative scenarios considered, because the mining operations are brownfield and not greenfield ones.

6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

The information in this section was compiled from a number of sources, some of which are listed below:

- Visual observations during two visits to Otjakatjongo;
- Desk study of various materials;
- Digital Atlas of Namibia which was itself compiled by the University of Cologne based on the data sourced from the Directorate of Environmental Affairs of MEFT;
- > Groundwater in Namibia, an exploration to the Hydrogeological Map;
- > Namibia Weather Services website (<u>www.namibiaweather.info</u>);
- > Discussions with the Farm Manager and farming staff;
- > Discussions with MC holders with MCs on the Otjakatjongo;
- Discussions with SSMs;
- Rangeland Monitoring Project in Namibia an EU funded project implemented in collaboration with Agra.

6.1 The Physical Environment

With respect to the physical environment on the game farm, the settlement of Wilhelmstal has been taken as a reference point. From Wilhelmstal, the road distance to Otjakatjongo farm gate is approximately 20 km. The homestead and lodging facilities are to the east of C36, along the banks of Khan River, approximately 7 km from the farm gate. The C36 gravel road is well maintained while the single track farm road to the homestead is a good condition.

6.1.1 Climate Conditions

There is no weather station on the farm and the information presented on climatic conditions is derived from the nearest weather stations, being Omaruru and Wilhelmstal which are 60 km and 27 km away, respectively.

6.1.1.1 **Temperature**

The coldest temperatures within the study area are recorded during the months of June and August. During this period, night temperature could drop below 0 °C while day time temperatures generally range between 5 °C and 10°C. Usually, the warmest temperatures are encountered during the summer months of October and March when the temperatures range between 20 °C and 37 °C.

6.1.1.2 Rainfall

The annual rainfall around the study area is highly variable and unreliable. Over the last ten rainfall seasons, the average annual rainfall over the study area has been 240 mm, with most precipitation occurring during the months of January, February and March each year. A unique rainfall incident was experienced during the rainy season of 2008-2009 when the highest rainfall of 242.5 mm was recorded in the month of February.

6.1.1.3 Wind Pattern

The prevailing wind direction within the study area is predominantly from east to west. Northerly winds are infrequent, occurring mainly during the winter and spring months. Wind can occur at any time of the day or night, but the highest annual wind speeds can be expected in the afternoon hours from 12h00 to 22h00. The wind occurrence, direction and strength have no significant impact on the mining activities conducted on the properties.

6.1.2 **Topography and Drainage**

The terrain is typically arid to semi-arid shrub land characterised by a mixture of bush, woodland and shrub-land, gradually increasing in thickness from west to east. When viewed from C36 within a distance of about 2 000 m, the topographic relief has modest variations in elevation with a maximum elevation change of approximately 90 m across the western section of the farm.

The Khan River which originates from Otjisemba settlement, northwest of Okahandja is the main feature crossing the farm to the south. The lodge and homestead are built on the banks of the river, giving the place a beautiful pleasant atmosphere. A number of ephemeral watercourses were observed crisscrossing the farm draining towards the Khan River.



Photo 12: View of Khan River which runs through the farm



Photo 13: View to the Farm Portion seen from C36



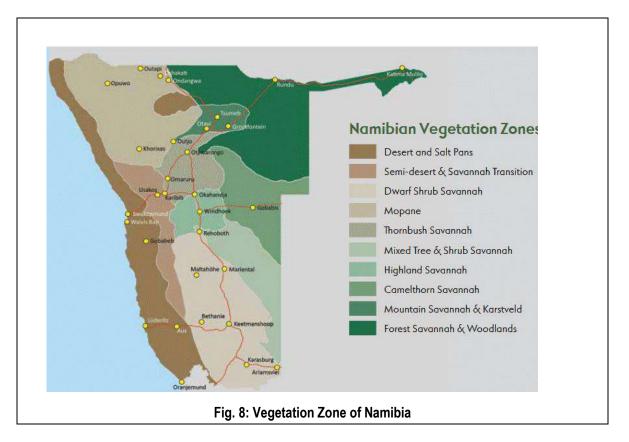
Photo 14: Waste Rock seen from a distance



Photo 15: An all terrain utility vehicle with solid tyres

6.1.3 Vegetation

From a rangeland perspective the study area would fall under what is referred to as 'Thornbush Savanna' in terms of the agro-ecological zoning map of Namibia (Figure 8). In such an area, the biomass is estimated at 510 kg dry mass per hectares. At an average rainfall of 240 mm per year, the area is not suitable for intensive commercial cattle farming. However, small livestock such as sheep, goats and game which are natural browsers than grazers should thrive. In figure 20, an indication of the vegetation on the west portion of the farm can be seen.



6.1.4 Geological Aspects and Hydrology

A number of geological publications have been written on the tourmaline bearing pegmatites around the study area. The granitic pegmatites had intruded the oldest rock formation – the Precambrian Damara Sequence of Namibia. While several pegmatites lack valuable minerals, some have minerals of economic interests and have been mined in the past. Tin and tantalite were the main mineral commodities mined at Uis by Iscor Tin of South African from 1958 until 1989 when the mine closed down. During the time of its operation, the Uis Tin Mine was the largest tin mine in the world and employed in excess 2 000 personnel who lived on the mine town. In 2019, the Uis Mine was re-opened by AfriTin, also from South Africa.

South of Karibib, pegmatites have been mined for a range of minerals: lithium, beryllium, tin and tourmaline bearing lithium-cesium-tantalite. Lithium has been mined on a commercial scale in the Karibib area in the past but operations were suspended due to demand decline in the markets. However, there are advanced plans to resume mining operations for lithium in the same locality. Increasing demand by modern technology for rare elements, especially those hosted in pegmatites with specific properties, i.e. petalite, spodumene, quartz of high purity, feldspar for industrial ceramics, etc. will make the Namibian pegmatites vital economic resources.

Within the study area, there has been no exploration conducted to define the tourmaline resources contained in the targeted pegmatites, hence the operations of SSMs are at the best speculative in nature and at the worst, gambling in character.

The study area being an arid location is devoid of sources of surface water such as natural lakes, springs, fountains or man-made earth dams. The water for farming applications is

obtained from boreholes drilled at different locations on the farm. The average depth for boreholes ranges between 100 m and 150 m and typical yield could be anything between 1 m³ to 2 m³ per hour. The quality of the water is, reportedly good, such that the water is used without the need for treatment.

6.1.5 Soil Aspects

The soil appears to be sandy ranging in colour from reddish to grey with broken calcrete pieces in it, to fine red sand. Judging from the uprooted plants within the mining areas, and the general vegetation outlook over the plains, the soil is quite deep such that the presence of calcrete did not limit the rooting system. Generally, in the semi-arid climate environments, the organic content of soils is usually low and the topsoil poorly developed. However, the densely vegetated woodlands along the banks of the Khan River (Photo 12) would suggest that the topsoil is better developed in those sections of the study area.

6.1.6 Available Infrastructures

Otjakatjongo is accessed via the C36 gravel road from Omaruru, Karibib or Okahandja. Within the study area access to the MCs is provided by single track farm roads which require the use of 4x4 vehicles to get around. Working areas within the MCs are reached via access roads constructed by MC holders as seen in Photos 2 and 3.

Mobile cellular coverage both by MTC and TN Mobile networks are available over the study area. The west portion of Otjakatjongo has two functional boreholes, one in close proximity to MC-67009 which is being worked and the second one at the farm homestead. Electricity is available from the national grid.

6.1.7 Land Use, Alternatives and Ownership

Wildlife ranching is the primary land use of Otjakatjongo with trophy hunting being the main source of income supplemented by the lodge. In terms of the Wildlife Ordinance of 1967, a farmer on a freehold land in Namibia, is given conditional right to use 'wildlife' on his/her property for recreational hunting. The species allowed for hunting under this law are *Kudus, Oryx, Common Warthog and Springbok*. In addition, landowners could also benefit from wildlife through consumptive use and ecotourism.

Types of consumptive use of wildlife permitted in Namibia are:

- Shoot and sell' with this permit a game farmer is allowed to shoot wildlife in order to sell the meat. The hunting period is during July and August each year.
- Safari hunting this is guided hunting provided mostly to foreign tourists, hunting under the guidance of a professional hunter. Male animals are often hunted for trophy horns, skulls, teeth and or bodies. The safari hunting season is usually from 1 February to 30 November each year and a farm must be registered as a hunting farm.
- Biltong hunting this permit allows hunting of non-trophy animals for the production of biltong. 'Shoot and sell permits' can serve the same purpose. The biltong hunting season is from May to August for perimeter game-fenced farms and June and July for non-game fenced farms.
- Wildlife harvesting this permit allows culling of wildlife by specialist teams who sell the culled meat on to third parties such as abattoirs or meat processors.
- Live capture and sale this permit allows capturing of live wildlife for sale to other farmers for restocking, for export to other countries or institutions conducting researches or for breeding purposes.

According to a 2011 survey study titled: *'An Analysis of Game Meat Production and wildlife-based Land Uses on Freehold Land in Namibia*" by Peter Lindsey, wildlife farming is increasingly becoming popular and a profitable enterprise in Namibia with approximately 288 000 km² of freehold land used for wildlife farming. Of these land, about 32 000 km² is used exclusively for game farming. During 2011, Namibia's total meat production was 104 140 tons made up of 78 140 ton beef and 26 000 tons game meat.

As an alternative use, the grazing yield on this farm is considerably low to support full scale beef production. Even with clearing of bush encroachment, grazing yield would still remain marginally inadequate and of low quality for intensive beef production. Cropping is also not feasible given the low and erratic rainfall.

Otjakatjongo is a freehold land parcel and therefore privately owned.

Some of the negative impacts associated with mining activities on the farm are:

- > Open trenches which are not rehabilitated presenting a safety hazard to wildlife.
- Poor waste management could lead to plastics, bottles and cans strewn around the area resulting in visual nuisance.
- High levels of poaching resulting in low game head count and impacting the bottom line of farming operation.

6.2 THE BIOLOGICAL ENVIRONMENT

6.2.1 Animals (Mammals, Reptiles and Birds)

The information provided under this section is based on desktop studies of available database records, literatures and specialized studies conducted in and around the study area by various specialists including the work of zoologist, Griffins (2003) and the National Avifaunal Database complied by Dr Chris Brown.

According to the work of Griffins (2003) there are about 139 species of animal that used to occur and still occur within the wider study area. The species list includes 4 amphibians, 49 reptiles and 66 mammals. Of the total number of species, 56 have been accorded national conservation status. It should be mentioned that the majority of these species have broad national distribution.

6.2.1.1 Mammals

Large mammals such as elephants, lions and rhinos are confined to bigger conservation parks and do not occur in the study area. The dense stands of predominantly thorny bushes have made habitats unsuitable to many grazing mammals and those that survive by hunting, such as cheetahs. According to the farm personnel, the animals listed in Table 4 are common on Otjakatjongo. Occasionally, leopards have been spotted on the hills to the northwest corner of the farm. Poaching has been mentioned as serious challenge as described in section 8.4.1.

IGO AND NEIGHBOURING					
	GAME ON OTJAKATJONGO AND NEIGHBOURING FARMS				
Bat-eared Fox	Zebra Plains	Blue Wildebeest			
Jackal, Black-backed	Impala, Common	Damara Dik-Dik			
Wildebeest, Black	Waterbuck	Duiker			
Blesbok	Sable Antelope	Hedgehog			
Branded Mongoose	Impala, Black faced	Pangolin			
Bat-eared Fox	African Ground	Cheetah			
Chacma Baboon	Squirrel	Leopard			
Dassie	Ostrich, Common	Honey Badger			
Cheetah	Damara Dik-Dik	Red Hartebeest			
Genet	Honey badger	Steenbok, and			
Hedgehog	Leopard	Common Eland			
	Bat-eared Fox Jackal, Black-backed Wildebeest, Black Blesbok Branded Mongoose Bat-eared Fox Chacma Baboon Dassie Cheetah Genet	Bat-eared FoxZebra PlainsJackal, Black-backedImpala, CommonWildebeest, BlackWaterbuckBlesbokSable AntelopeBranded MongooseImpala, Black facedBat-eared FoxAfrican GroundChacma BaboonSquirrelDassieOstrich, CommonCheetahDamara Dik-DikGenetHoney badger			

EIA : Scoping Report for SSM on 'Hotspot' located on Farm Otjakatjongo

6.2.1.2 Reptiles

Most of the reptiles occurring within and around the study area have developed some form of adaptation skills to surviving in the arid conditions. Of the forty nine (49) species of reptiles likely to occur within the study area, four (4) are believed to be endemic to Namibia. These are the *Dwarf Gecko, Kalahari Whip Snake, Leopard Whip Snake* and *Zebra Snakes.* All four species have a wide distribution throughout Namibia and will not be affected by mining activities.

Snakes such as Cobra and Dwarf Python are often encountered, especially on the mountainous hills where they prey on rodents and rats. The python and chameleon have legal protection. Due to their slow movement, chameleons are often killed by vehicles. Most people will enjoy viewing a chameleon changing its colour.

The banks of the Khan River which runs through the farm are the natural habitats to many reptiles in the area. Reptiles which utilize rocks as their natural habitats are likely to be impacted by mining activities, but the impact is confined to a relatively small footprint.

6.2.1.3 Birds (Avifauna)

Most bird species occurring in Namibia are regarded as highly nomadic which tend to follow rainfall patterns and vegetation growth and availability resulting from such rainfall. In case of large birds, these are generally known to navigate vast tracks of terrain hence reducing their sensitivity to areas of disturbances and conflict. Naturally, the trees along the Khan River are green throughout the year and therefore presenting suitable habitats and breeding grounds for birds.

There are no known birds endemic to the study area. Apart from a few pest species and some that are huntable game, most bird species are protected by law in Namibia. The *Lappet Faced Vulture* is classified as vulnerable and therefore protected. This species tends to use the same nest built in large trees year after year. They are known to have large ranges and prone to collision with powerlines. Large trees along the Khan River are likely to be suitable for *Lappet Faced Vultures* to build nests in, but the mining activities are remote from the Khan River and have no impact.

6.3 THE SOCIO-ECONOMIC ENVIRONMENT

The conditions pertaining to the socio-economic impacts and general health aspects of the SSMs have been described under sections 4.2.2, 4.2.3 and 4.2.4 and therefore not repeated here. The socio-economic environments discussed under this section are those of the Erongo Region and the town of Karibib. Most of the SSMs have Karibib as their home town, and it is also the place where tourmaline trading activities take place.

6.3.1 Regional Context

According to the 2011 Population and Housing Census, the Region of Erongo had a population of 150 400 people or 7.1% of the total Namibia population of 2 104 900 people at that time. Over 80% of the population in Erongo live in urban areas while 20% live in rural areas.

6.3.2 **Constituency Context**

The town of Karibib is the administrative capital for the Karibib Electoral Constituency and had a population of 13 320 during the 2011 national census. The population of the town was 5 132 at that time. The majority of the residents work on the mines around the town and approximately 58% of the population was depended on salaries and wages earned through formal employment. The Navachab gold mine is the biggest employer in the town. Salaries and wages from the farming activities accounted for approximately 6% while approximately 9% of the population was depended on non-farming and non-mining businesses.

Ten years ago when the census was conducted, Karibib had the second highest unemployment rate in the region after the Daures Electoral Constituency. The Karibib constituency was ranked as having the poorest standard of sanitation. The consequential poor economic status of the town had led to the downgrading of the local authority from the level of a municipality to that of town council status one step above the village council.

Most SSMs reside in Karibib; and it where they spend their disposable incomes i.e. support to their families and friends and payment for services (water, electricity, rates, etc.) to the local authority. Given the lack of geological data, in understanding the extent of the tourmaline resources on the farm, any long term economic impacts, which tourmaline mining would have on the town of Karibib and those participating in the subsector, would remain uncertain.

7.0 THE LEGAL FRAMEWORK

7.1 Introduction

The Republic of Namibia has five tiers of law and a number of policies relevant to environmental assessment and protection which includes the following:

- > The Namibia Constitution;
- Statutory law;
- ➢ Common law;
- Customary law, and
- International law.

7.2 Specific Legal Instruments

The Mineral (prospecting and Mining) Act, Act No. 33 of 1992 is the specific legislation governing the mineral sector in Namibia. The Mineral Act falls under the Ministry of Mines and Energy governs and allows for, amongst others these mineral licenses:

- Reconnaissance Licenses;
- Prospecting Licenses;
- Non-Exclusive Prospecting Licenses;
- Mining Claims;
- Mining Licenses, and
- Mineral Export Licenses.

In addition to the above, the Minerals Act also allows for the monitoring of mining operations, reporting requirements and general compliance to the Act including disposal methods and rehabilitations. The Mining Commissioner, a statutory appointment made by the Minister of MME in terms of the Minerals Act, is the official responsible for the implementation of the Minerals Act as well as related regulations such Health and Safety Regulations.

The Explosive Unit under the Namibia Police Force is responsible for the regulations related to the use, transport, storage and handling of explosives.

The Environmental Management Act (Act No. 7 of 2007) is the legislation responsible for conducting of environmental impact assessments, the granting of ECCs and monitoring of all listed activities/developments which have been granted ECCs including enforcing of compliance in terms of the provisions of the Environmental Management Act. The Environmental Commissioner is a statutory appointment made by the Minister of MEFT in terms of the Environmental Management Act to oversee the implementation and administration of the Environmental Management Act.

7.3 Applicable Relevant Policies

The following legislations and policies are also applicable to the EIA study:

- ➤ The EIA Policy (1995);
- Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation (1994);
- > The National Climate Change Policy of Namibia (September 2010);
- > The Minerals Policy of Namibia (2004);
- > Policy for the Conservation of Biotic Diversity and Habitat Protection (1994);
- The Fifth National Development Plans (NDP5);
- The National Resettlement Programme;
- > The Affirmative Action Loan Scheme Policy;
- The National Land Policy;
- ➤ The National Land-Use Policy;
- Land Tax Regulations;
- Resettlement Land Act, and
- > The Harambee Prosperity Plan of 2015.

As the main source of legislation, the Constitution of Namibia (1990) makes provision for the creation and enforcement of applicable legislations. In this context and in accordance with its constitution, Namibia has passed numerous laws intended to protect the natural environment and to mitigate against adverse environmental impacts.

In the contexts of the mining activities conducted by SSM, there are several laws and polices applicable which are reflected in Table 6 below.

Table 5: Laws, Policies & Regulations Applicable to the 'Listed Activities'											
Laws & Policies	Α	В	C	D	Ε	F	G	Н	I	J	κ
The Constitution of Namibia	х	х	х	х	х	х	х	х	х	х	х
Minerals (Prospecting & Mining) Act, Act 33 of 1992	х									х	
Environmental Management Act, Act 7 of 2007	х	х	х	х	х	х	х	х	х	х	х
Regulations of the Environmental Management Act	х	х	х	х	х	х	х	х	х	х	х
Mine Health & Safety Regulations, Section 138A of Minerals Act		х	х	Х	х	х	х	х	х	х	х
Water Resource Management Act, Act 11 of 2013	х							х	х	х	х
Explosives Act of 26 of 1956 of SA as Annotated Statutes	х	х		х		х					х
Nature Conservation Ordinance No. 14 of 1975	х							х			
Nature Conservation Amendment, Act 5 of 1996	х	х	х			х			х	х	х
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	х	х	х					х			х
Controlled Wildlife Products and Trade Act (Act 9 of 2008)	х		х	х	х		х	х	х		х
Animals Protection Act, Act 71 of 1962	х		х	х	х	х		х	х		
Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation	x	x	x	x	x	x	х	x	x	x	x
Pollution Control and Waste Management Bill		Х	Х	Х				Х			Х
Hazardous Substance Ordinance No. 14 of 1974		х	х	х				х	х	х	х
Labour Act No. 6 of 1992 and its Related and Health and Safety Regulations		х	х	х				х		x	x
Public and Environmental Health Act No. 86 of 2015		Х	х	Х	Х	х	х	х	х	х	х
Agricultural (Commercial) Land Reform Act, Act 6 of 1995		х					х	х		х	
Legend		•	•	•	•	•					

A Use of natural Resources

I Archa

B Emissions Impact (Air & OdourC Emissions (to land & Hazard)

D Noisy Impacts

E Visual Impacts

F Vibrations

H Biodiversity

Archaeological, Cultural and Heritage Impacts

J Social-economic Impacts

K Health and Safety Impacts

ICIS

G Land Use

In addition, the following International Conventions, which, in respect of Section 144 of the Constitution automatically form part of the Namibian law, may also apply:

The Convention on Biodiversity (1992);

- The Basel Convention on movements of Hazardous Wastes and their Disposal (1989);
- The United National Framework Convention on Climate Change (UNFCCC);
- The Vienna Convention for the Protection of the Ozone Layer (1985);
- The Montreal Protocol on Substances that Deplete the Deplete the Ozone Layer (1987).

8. ASSESSMENT CRITERIA

The environmental impacts associated with tourmaline mining activities are assessed based on the criteria explained in this section. In line with the Environmental Management Act, a broader definition of 'Environment' is adopted, which includes both bio-physical and socioeconomic components.

The objective of the Environmental Assessment Policy is to seek to achieve a balance between positive and negative impacts, and between bio-physical impacts and economic gains to the society. Hence, both negative and positive impacts on the environment were considered. To the extent that is practically possible, this report will propose and suggest measures to mitigate negative impacts associated with mining activities, by SSM on the game farm.

Where positive impacts are derived from the mining operations, measures have been suggested to enhance such positive impacts to benefit the broader society.

The assessment has considered the nature and scope of the mining operations, the access roads constructed to reach the MCs, the mining methods used, the equipment and tools used and the living conditions of SSMs.

Normally, there is a two-way interaction between a project and the environment. Not only does a project have impacts on its environment, but the environment also provides opportunities and constraints on the project. A typical example on this two-way interaction is, in the case of harvesting encroacher bush for the production of wood chips used to produce electricity. The project has the potential for negative impacts on the vegetation, but it also provides an opportunity to turn an existing environmental problem into a benefit.

The assessment is made based on the current prevailing situation. Should the scope and scale of the mining operations change in any material way, i.e. full scale mechanization of tourmaline operations, then some of the mitigations as recommended in this EIA will have to be reconsidered.

In the next section, for each activity with the potential for environmental impact, a brief description of the potential impact has been presented. Where practically possible, the presentation is followed by a table that summarizes the assessment according to specific criteria as outlined in table 6 below.

Table 6: Assessmen	t Criteria
Nature of Impact	An explanation on how the environment will be affected by specific activities.
Mitigation	What measures could be applied to reduce negative impacts or to enhance positive impacts?
Extent	The geographical extent of the impact.
Duration	 The length of time that the impact could persist: Short term - from 0 to 5 years; Medium term - from 5 to 15 years; Long term - lifespan of the project; Permanent - beyond the project lifespan.
Intensity or Magnitude	 Low - natural, social and cultural functions are not significantly affected. Medium - natural, social and cultural continue to function but are modified. High - natural, social and cultural are permanently altered.
Probability	 The probability of the impact actually occurring: Improbable - a low probability that the impact will occur. Probable - a distinct probability that the impact will occur. Highly Probable - it is most likely that the impact will occur. Definite - the impact will occur regardless of mitigation measures.
Confidence	 The level of confidence that can be placed on this assessment: Low- implies that further investigation may be required if the impact could potentially be significant. Medium - Further investigation may be required if impact could be significant. High- Impact well understood. Further investigations may be required to determine the effectiveness of possible mitigation measures
Significance	 The Significance Rating of the impact is determined as a synthesis of the above assessment criteria where: Low Significance - the impact would not have an effect on the decision to approve the project. Medium Significance - the assessed impact should have an effect on the decision unless the impact is effectively mitigated. High Significance - the decision would be influenced regardless of the mitigation.
Further Investigation or monitoring	A recommendation for further investigations (prior to the implementation of the project) or monitoring (prior to commencement and/or during the operational phase).

9. ASSESSMENT OF IDENTIFIED IMPACTS

9.1 Impact Assessments and Mitigation Measures

In this section, all possible impacts associated with tourmaline mining by SSM on Otjikatjongo are assessed and a <u>Significance Rating</u> for each impact determined. Mitigation measures on how the identified environmental impacts could be reduced, eliminated or minimised are also provided. The assessments are grouped into three categories of:

- > The Physical Environment;
- > The Biological Environment, and
- > The Human Environment.

9.2. THE PHYSICAL ENVIRONMENT

9.2.1 Impacts on Soil

On Otjakatjongo, tourmalines are mostly mined from pegmatites which are covered by a layer of topsoil. The topsoil has to be removed in order to expose the pegmatites (Photo 8). It is important to mention that, the organic matters which support the vegetation are contained in the topsoil. It is therefore important, that where possible, topsoil should be preserved for rehabilitation of worked out areas. Normally, the topsoil would have a darker colour. Where there is no clear indication, the top 300 mm should be deemed to be topsoil.

The following measures are proposed:

- > The topsoil should be removed with the vegetation and stored together so that the vegetation helps to hold and enrich the soil while it is on stockpiles.
- Ideally, topsoil should be stockpiled on raised areas in conical heaps not exceeding 1.5 m in order to allow the moisture and oxygen to penetrate the heap.
- Grass and indigenous shrubs should be allowed to grow on the stockpiles.
- > Topsoil should be stored separately and not mixed with any subsoil.
- When rehabilitating any excavated trenches, the subsoil should be replaced first and the topsoil last.

Table 7: Impacts on Soil

Potential Impacts:				
Potential destruction of soil profile by mixing topsoil and subsoil.				
 Potential erosion of to 	psoil.			
	Possible Mitigation Measures			
Stockpile topsoil and s	subsoil separately and away from watercourses.			
Leave vegetation and	plant matter in the topsoil.			
Prevent erosion of top	soil by storing it on raised land.			
Encourage regrowth o	f grass & plants on stockpiles.			
When rehabilitation, fir	rst replace subsoil, then topsoil on top.			
Nature of Impact Negative				
Extent of the Impact Mining areas only				
Duration	Short term, during mining operation only.			
Intensity High				
Probability Definite				
Confidence High				
Significance	Low, provided mitigation is effectively applied.			
Further Remarks	Provide training to SSM			
	Comply with the EMP			

9.2.2 Impacts of Operational Infrastructures

A MC holder is expected to develop basic infrastructures to support the tourmaline mining operations. These infrastructures are:

- > an access road to the MC and internal routes within the MC,
- > a Camp Site where the personnel (SSMs) will reside,
- a site for safe storage of machinery, vehicles, equipment and tools including an on-site administrative office.

9.2.2.1 Impacts of Access Roads

With respect to new operations, the MC holder is expected to develop access roads leading to Camp Sites and MCs as well as internal routes within each MC. This activity will inevitably involve some soil disturbances. The selection where to route such roads should be done in consultation with the landowner.

For existing operations where such access roads already exist, the MC holder is expected to ensure that access roads, wherever practically possible, are aligned with the provisions of the EMP.

Table 8:	Impacts of	Constructing	Access Roads	to MC & Camp Sites
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Potential Impacts:

- Loss of grazing land and habitats.
- Dust is likely to be generated during the construction.
- Long exposure to dust could lead to health problems (eye irritations, lung infections, etc.)
- Noise and gaseous emission from machines used in the construction.

Possible Mitigation Measures

- Avoid constructing access roads over sensitive (watercourses and or steep) areas.
- Select the route which allows for the least removal of bushes and trees.
- Follow existing fence lines where disturbances had occurred in past, i.e. installation of fences.
- Construct only one access road to Camp Site & MCs.
- Operate vehicles on access roads only with zero tolerances for off-road driving.
- Limit speed to a maximum of 30 km/hour on access roads.

Maintain access roads regularly.			
Nature of Impact	Negative		
Extent of the Impacts	Footprint of MCs		
Duration	Short term, during the lifespan of operation		
Intensity	Low with mitigation		
Probability	Definite without rehabilitationImprobable with mitigation		
Confidence	High		
Significance	Medium to low with mitigation.		
Further Remarks	Access roads must be constructed with the consent of the landowner .Comply with the EMP.		

9.2.2.2 Impacts of Camp Sites

The SSMs working on Otjakatjongo are split into two groups. One group stays on a Camp Site while another stays in a refurbished farmhouse. Once the new MC applications have been approved, new Camp Sites have to be constructed.

It is proposed that a specific area be chosen and designated as a single Camp Site where all SSMs working on the farm are accommodated as opposite to having Camp Sites scattered all over the farm. This will help to improve sanitation, hygiene, waste management and ease policing and control especially against poaching. The SSMs will amongst themselves develop 'housekeeping rules'.

Any new site where a single Camp Site is to be established should be done in conjunction with the Farm Manager.

Table 9: Impacts on establishing Camp Sites				
Potential Impacts:				
 Loss of grazing land and habitats. Littering, including windblown plastics which can be fatal if consumed by wildlife & livestock. A Camp Site can be unsightly and visual nuisance if constructed with scraps and poor quality materials. 				
	Possible Mitigation Measures			
 Establish a single Camp Site away from any known sensitive areas and over raised land. Select the area which is the minimum reasonably required and involving the least removal of vegetation. Where feasible, the materials which blend in well with the natural surrounds should be used to avoid a Camp Site being an eyesore. Provide suitable sanitation and keep Camp Site clean and tide at all times. 				
Nature of Impact Negative				
Extent of the Impacts	 Footprint of Camp Site when one single Camp Site is selected. Whole farm when Camp Sites are built all over the farm. Neighbouring farms, in case of windblown litter or fire outbreak. 			
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EIA : Scoping Report for SSM on 'Hotspot' located on Farm Otjakatjongo

Duration	 Short term - if Camp Site is rehabilitated on cessation of mining activities. Long term - if Camp Site facilities are not removed at the end of mining operations. 	
Intensity	Low with mitigation. Medium without mitigation.	
Probability	Probable.	
Confidence	Low	
Significance	Low	
Further Remarks	 Select a site for a single Camp Site with the permission of the landowner. Comply with the EMP 	

9.2.2.3 Impacts on establishing a small site workshop for storage and maintenance of machines, vehicles, equipment and tools.

For existing mining operations with established facilities, the MC holder must ensure that current conditions of such facilities are brought in alignment with the guidelines provided in the EMP.

For any new operation, permission where to construct a small workshop in which to carry out maintenance work to machinery, vehicles and equipment used in the operation must be obtained from the Farm Manager. This area would also serve as:

- > a parking area for machines and vehicles;
- > a secured storage place for tools & equipment, and
- > a small on-site administrative office.

Ideally, the following documents and contact numbers for key stakeholders should be held in an on-site office:

- > Mining Claim Certificate Licence or a copy thereof;
- ECC or copy thereof;
- > Agreement with the landowner;
- List of names of SSMs working on the MC;
- Contact number of MC Inspector;
- > Contact number of the nearest NamPol Charge Office;
- > Contact of Farm Manager, Ambulance, Hospital/Clinic, Fire Brigade, etc.

Table 10: Impacts on establishing of a small site workshop		
Potential Impacts:		
Same impacts as in Tal	Same impacts as in Table 8 & 9.	
	Possible Mitigation Measures	
 Avoid sensitive areas (stormwater, raised areas, etc.) when selecting a suitable location. Select a site which is adequate for the need of the operation which involves the least removal of vegetation. Potential for visual intrusion should be taken into account when picking the location and all required site infrastructures. Waste both solid and liquid must be handled separately and disposed as proposed in the EMP. The workshop must be fenced off and access controlled. 		
Nature of Impact	Negative.	
Extent of the Impacts	Footprint of workshop with mitigation. Beyond the workshop without mitigation measures.	
Duration	Short term - if removed at the end of the mining operation. Long term – if not removed and the area rehabilitated at the end of the mining operations.	
Intensity	Low with mitigation.	
Probability	Probable if mitigation measures are ignored and not complied with.	
Confidence	High.	

Significance	Medium to low with mitigation.	
Further Remarks	Establish a small workshop with the permission of the landowner.Comply with the EMP.	

9.2.3 Impacts of Mining Activities (excavations and trenching)

By its very nature, mining is an inherently destructive process and it effects can have sever impacts to the floral and faunal diversities in any area, where mining activities take place. Although there are some regulations in place, such regulations are often not enforced by the authority or they are neglected and ignored by the operators, especially the smaller operators or SSMs.

The ideal mining method for tourmaline is opencast mining. With this method, the materials excavated from the first trench are stockpiled next to the trench. When the second trench is excavated, such materials are used to backfill the first trench. In the end, there are neither open trenches nor heaps of waste materials. It would appear that no backfilling has taken place since tourmaline mining started on the farm. There are many open trenches all over the place which present safety hazards to the wildlife, farming personnel and to the SSMs themselves.



Photo 16: Open excavated trenches - unrehabilitated and unfenced

Table 11: Impacts of Mining Activities			
	Potential Impacts:		
 Reduced grazing capacity of the farm. Loss of habitats to faunal diversity. Safety hazard to farming personnel, hunting patrons & wildlife Pollution from gaseous emissions to potential contamination of water bodies. 			
Possible Mitigation Measures			
 Any excavation made must be backfilled and the area carefully rehabilitated on cessation of mining activities. Active mining sites with deep trenches must be backfilled. Machinery and equipment must be regularly serviced and well maintained. 			
Nature of Impact	Negative		
Extent of the Impacts	Footprint of mining area. Possibly beyond mining area without mitigation.		
Duration	Short term, if rehabilitated at end of mining operations. Long term, without rehabilitation on cessation of mining operations.		
Intensity	Low with mitigation. High without mitigation.		
Probability	Improbable.		
Confidence	High.		
Significance	Medium to low with mitigation.		
Further Remarks	Comply with the EMP.		

9.2.4 Impacts on Ambient Air Quality

At Otjakatjongo, the SSM operations are carried out with a single machine or two machines which are operated for a few hours only. Little gaseous emission is therefore released into the atmosphere. Dust generated from trenching (Photos 5 & 17) is also minimal and does not escape into the atmosphere.

Generally, dust from blasting tends to be of large particles which are associated with a nuisance factor. However, the scale of the operation is so small that dust from the occasionally blasting activities will not have any significant impact.

Table 12: Impacts on Ambient Air Quality			
	Potential Impacts:		
Health hazardBreathing nuisance			
	Possible Mitigation Measures		
 Avoid clearing too much vegetation. PPEs should be provided to SSMs working in areas where dust levels are higher. Vehicles & machinery must be well maintained and regularly serviced. 			
Nature of Impact	Negative		
Extent of the Impacts	Normally 1 500 m to 1000 m decreasing in intensity with distance from source.		
Duration	Short term, if mitigated. Long term, without mitigation.		
Intensity	Low with mitigation. High without mitigation.		
Probability	Probable.		
Confidence	High		
Significance	Low with mitigation.		
Further Remarks	Comply with the EMP.		

9.2.5 Visual and Light Impacts

The mining operations are not visible to the general public using the C36 gravel road, and there are no sensitive receptors within a radius 3 000 m of the operations. Potential visual nuisance is possibly the 'accommodation' structures of SSMs.

Heaps of excavated waste rocks scattered over a large wide area (as seen in Figure 3, 4 & 14) to the northeast of the farm; are visual intrusions requiring some attention. With a bulldozer, the waste rock on stockpiles could be used to backfill the open trenches and profiled to display a pleasant looking environment.

Normally, conditions are dark at night in these rural areas and the little bit of light which can be seen would be from open wood fires when SSMs prepare meals. This light is only on for a few minutes and visible within a radius of less than 300 m.

Table 13: Visual and Light Impacts		
	Potential Impacts:	
Camp sites built with	Camp sites built with shacks and scrap metal sheets are eyesores.	
Windblown papers ar	 Windblown papers and plastics could result in visual nuisance. 	
Airborne dust from or	Airborne dust from occasional blasting.	
Amenity nuisance	Amenity nuisance	
Possible Mitigation Measures		
Locate infrastructures away from sensitive and elevated areas.		
 Maintain a high standard of housekeeping which includes an effective waste management system. 		
Pick up wind-blown papers and plastics around the Camp Site to avoid visual nuisance		
Nature of Impact	Negative	
Extent of the Impacts	Localised with mitigation.	

	Widespread without mitigation – plastics blown to neighbouring farm.
Duration	Short term, if mitigated. Long term, without mitigation.
Intensity	Low with mitigation. High without mitigation.
Probability	Probable.
Confidence	High.
Significance	Low with mitigation.
Further Remarks	Comply with the EMP.

9.2.6 Impacts of Wastes – Solid and Liquid

Different types of wastes are produced by SSMs in various ways:

- Waste generated at the Camp Sites is likely to consist of the following:
 - Household Waste: plastics, bottles, cans, cartons, spoilt food, pots, pans, kettles, bins, water containers, buckets, safety boots, overalls, etc.
 - Sleeping Items: sleeping mats, beds, sleeping bags, mattresses, old blankets, pillows, chairs, tables, etc.
 - Accessory Items: cellphone charges, cellphone batteries, electrical cables, torches, solar panels, chairs, etc.
 - Camping Construction Materials: scrap iron sheets, wooden poles, steel frames, nails, doors, heavy duty tarpaulins, etc.
 - Effluent disposal and toilet facilities.
- Where mining is conducted with the use of earthmoving machineries, the associated waste is likely to include fuel leaks, oil filters, used oil containers, old batteries, old tyres, scrapped tools, redundant equipment, etc. (Photo 18 & 19). Where mining is done by manual labour, little waste is generated and will mostly be in the form of obsolete tools: spades, shovels, picks, chisels, etc.
- On Otjakatjongo, a modern lodge is operated which generates some kind of waste materials. It is proposed that recyclable waste (cans, plastics, packaging materials, etc.) from the mining operations be stuffed in suitable containers and brought to the farm homestead for disposal together with the lodge waste. It is further proposed for the lodge to offer recyclable waste to recycling companies or to depose of such waste at an approved site, e.g. Karibib or Omaruru landfill sites. Liquid and hazardous waste should be disposed of as recommended in the EMP.
- Small volumes of papers and plastics maybe landfilled and burnet at the Camp Sites so as to avoid wind dispersal of plastics and papers. Burning of small volumes of dry waste is still considered the best practice because it prevents wind dispersal and vermin e.g. rats and flies. Overall the SSMs are not generating significant quantities of **solid waste**.

Tab	Table 14: Impacts of Solid Waste		
	Potential Impacts:		
٠	Potential contamination of the Camp Sites and surroundings.		
•	Visual intrusion if plastics and papers are blown away by wind.		
•	Health hazard, if plastics are consumed by livestock and wildlife.		
	Possible Mitigation Measures		
•	Keep various types of waste separate at the Camp Sites and dispose of as provided for in the EMP. Solid and hazardous waste to approved landfill sites and recyclable waste to the farm lodge.		
•	SSMs must liaise with Farm Managers on the disposal of recyclable waste. It is advisable that recyclable waste be disposed together with that of lodge.		
•	Organic waste (food items, etc.) should not be fed to wildlife as it leads to human-wildlife conflicts.		

- Small volumes of dry waste (papers & plastics) may be landfilled and burned down in small pits.
- Avoid wind dispersal of papers and plastics as it results in visual nuisance.
- Maintain a high standard of housekeeping at the Camp Sites.

Nature of Impact Negative	
Nature of Impact	
Extent of the Impacts	Localised with mitigation.
	Whole farm without mitigation, e.g. odour.
Duration	Short term, if mitigated.
Duration	Long term, without mitigation.
Intensity	Low
Probability	Improbable
Confidence	High
Significance	Low with mitigation.
Eurothan Damaarka	Comply with the EMP
Further Remarks	Ongoing awareness through training of SSMs and planning are essential.

The mining of tourmaline is a dry process which does not involve any downstream processing. There are no chemicals involved. However, when machineries are used, hazardous waste is generated, usually in the form of:

- used oil;
- ➤ grease;
- ➤ fuel;
- ➤ fuel filters;
- ➢ oil filters;
- batteries;
- ➤ tyres;
- > engine parts.

The only waste water involved will be domestic sewerage and water used for washing of equipment and machineries.



Photo 17: Hazardous waste (discarded used fuel)



Photo 18: Plastics, tyres & scrap metals

Table 15: Impacts of Hazardous Waste		
Potential Impacts:		
Potential contamination of underground and/or waterstream.		
Safety hazard to the eco	Safety hazard to the ecosystem.	
Possible Mitigation Measures		
Ensure machineries are well maintained and not leaking.		
Use drip pans when re-fuelling or changing oil & fuels.Store used oil filters in leak-proof steel containers until disposed of.		
Only store fuel on site if licensed to do so.		
Nature of Impact Negative		

Extent of the Impacts	On site, but could be widespread if water streams are affected.
Duration	Short term, if mitigated. Long term, without mitigation.
Intensity	Low
Probability	Low
Confidence	High
Significance	Low with mitigation.
Further Remarks	Endeavour to conduct an operation free of hazardous wastes.

9.2.7 Impacts of Fire Hazard

Open fire is used by SSMs to prepare food on the Camp Sites. Extreme caution should be exercised when using open fire especially during windy times. It is advisable that a fire-break be cleared around the perimeter of any Camp Site where open fire is used to help to prevent fire from reaching the 'veld'.

Table 16 : Impacts of Fire Outbreak		
Potential Impacts:		
 Fire could lead to loss of grazing land as grass and vegetation will burn down. Fire could result in the destruction of faunal habitats. Damage to property, equipment, vehicles and in severe case even loss of life. 		
	Possible Mitigation Measures	
 Open fire may be made at designated areas only. Fire-fighting equipment should be readily accessible and kept in a good working order. No smoking should be allowed in areas where there is a fire hazard, i.e. near fuel storage area. Fire emergence procedures should be established for the operation. Clear a fire-break around the perimeter of the Camp Site if open fire is used. No trees or shrubs should be felled or wilfully damaged for purposes of obtaining firewood. Ensure that SSMs are given the basic training on how to combat fire. 		
Nature of Impact	Negative	
Extent of the Impacts	Site specific if quickly contained. Widespread if not contained quickly.	
Duration	Few minutes with early detection and mitigation. Could burn several hours if detected late and without mitigation.	
Intensity	Depends of extent of the fire.	
Probability	Improbable	
Confidence	Medium	
Significance	Low	
Further Remarks	Comply with the EMP.	

9.2.8 Impacts from Noise, Blasting and Vibrations

9.2.8.1 Environmental Noise

Unless machineries are used mining operations conducted by SSMs with hand held tools do generate significant noise and vibrations. SABS 10103 (2004) provides 'acceptable rating levels for noise in districts'. For rural districts such as these mining operations at Otjakatjongo, an acceptable outdoor noise level is considered to be 45 dBA during the daytime and 35 dBA during the night. Noise levels at the Camp Sites are not expected to exceed these parameters. The distance from the source of noise is also an important factor in noise attenuation. The decibel level decreases most rapidly over the first 100 m and then less for each additional 100 m from the source. The homestead and lodge are over a distance of 8 km from the MCs, noise will therefore attenuate naturally to a significant degree.

Table 17: Impacts of N	oise from Mining Activities	
Potential Impacts:		
 Prolonged exposure t Loud noise can be an 	o noise could lead to health problems. noying.	
	Possible Mitigation Measures	
 Blasting must only be done during the day, after all stakeholders have been given adequate notification. The silencers on equipment and machinery used in the operation must be regularly serviced and replaced when redundant. PPEs must be provided to SSMs working in places where noise levels are higher . 		
Nature of Impact	Negative	
Extent of the Impacts	From machinery & equipment - within 100 m. From blasting up to 1 500 m depending on intensity and time of day.	
Duration	From machinery & equipment – up to 5 hours per day. From blasting - lasts for a few seconds only.	
Intensity	From machinery & equipment - intensity is low at 500 m. From blasting – intensity must be low at 1 500 m.	
Probability	Improbable.	
Confidence	Medium.	
Significance	Low.	
Further Remarks	Comply with the EMP.	

9.2.8.2 Potential Blasting Impacts

It was evident that blasting activities having been conducted in the past on some MC (Photo 20 & 21). The two teams currently mining on the farm have denied using any explosives in their operations. Blasting is often associated with vibrations, smoke, noise and dust.

The use of explosives is regulated under Explosive Act (Act 26 of 1956) which has not been repealed yet. The use, handling, transport and storage of explosive without the necessary permits and licenses is a criminal offence and offenders could be severely punished including going to jail for periods ranging between 10 and 20 years. Blasting notices have to be issued at least 24 hours prior to all stakeholders: the Farm Managers, neighbouring farms and Roads Authority. Only persons with valid open blasting certificates are permitted to perform blasting.



Photo 19: A charged blast hole with live fuse

Photo 20: A drilled blast hole on the Rock Face

Table 18 : Impacts of Drilling & Blasting	
Potential Impacts:	
Noise and strong vibrations if blast is big and near.	
Smoke and dust particles with a strong smell from explosive chemicals.	
Possible Mitigation Measures	
All blasting must be conducted within the applicable regulations.	
Handling, transport and storage of explosives and accessories must be done in full com	pliance of
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	ns. be given 24 hours prior to blasting to all stakeholders. may handle explosive and conduct blasting.
Nature of Impact	Negative
Extent of the Impacts	On site within a radius of 1 500 m from source depending on the size and intensity of blasting.
Duration	Drilling – lasts up to 3 hours per day. Blasting - quick and lasts a few seconds only
Intensity	Could be intense closest to the source but less intense outside 500 m from source.
Probability	Low
Confidence	Medium
Significance	Low
Further Remarks	Comply with the EMP.

9.2.9 Impact on Water Resources and Availability

The mining of tourmalines does not involve any downstream processing which require the use water. The water which is required is human use and for cleaning purposes only. There are two boreholes on the portion where MCs are located and SSMs are allowed to use the water from the boreholes at a fee. The quality of the water is good and is consumed without any treatment. The water drawn by SSMs is not expected to exceed the yielding capacity of the boreholes.

Table 19: Impacts on W	Table 19: Impacts on Water Resources & Availability	
Potential Impacts:		
Possible depletion of	the aquifer.	
	Possible Mitigation Measures	
 Water should be used sparingly because it is a scare resource and expensive. Ensure that leakages of hazards waste such as fuel do not contaminate the underground water resources. 		
Nature of Impact	Unknown	
Extent of the Impacts	Unknown	
Duration	SSMs spend about three weeks per month at Camp Site.	
Intensity	Unknown without mitigation, low with mitigation	
Probability	Probable, if not managed and aquifer levels monitored	
Confidence	Medium.	
Significance	Low	
Further Remarks	Comply with the EMP.	

9.2.10 Impacts on Archaeological, Cultural and Heritage Remains

There are no known sites with remains of archaeological, cultural or heritage nature. However, in the event that such remains are discovered during the mining activities all work must be stopped and the office of the National Heritage Council notified. Work must only resume once NHC has provided directives.

Table 20 : Impacts on Archaeological, Cultural and Heritage Remains		
Potential Impacts:		
Potential damage to archaeological remains as a result of mining activities.		
Potential unearthing of human bones or graves of dead people that are not marked.		
Possible Mitigation Measures		
 If any remains are found, stop work immediately and notify the offices of NHC in Windhoek. Take GPS coordinates and cordon off the area with yellow or clearly visible materials. Items unearthed may not be touched or removed from their location before officials from NHC visit the site or further directives received from NHC. 		

 If remains are of a human nature, cordon off the area and report findings to the nearest NamPol office giving exact coordinates. Human remains are only exhumed by NamPol officials. Items of cultural and heritage including any graves must be respected. 	
Nature of Impact	Negative
Extent of the Impacts	Within the footprint of the mining area.
Duration	Permanent without mitigation.
Intensity	Potentially high without mitigation, but low with mitigation.
Probability	Improbable
Confidence	Unsure
Significance	Potentially low with mitigation, high without mitigation.
Further Remarks	Comply with the EMP.

9.3 THE BIOLOGICAL ENVIRONMENT

9.3.1 Impacts on the Natural Vegetation

In terms of the agro-ecological zoning map of Namibia, the study area falls under the 'Thornbush Savannah' (Figure 8). It consists of dense low strands of encroacher bush species with understory of grasses. The area has therefore low to marginal grazing capacity. There are no known vegetation species of conservation concern.

Table 21: Impacts on Natural Vegetation	
	Potential Impacts:
Destruction of vegetation	on as a result of mining activities.
 Destruction of faunal h 	abitats.
	Possible Mitigation Measures
Limit mining activities	within demarcated areas.
• Avoid mining in areas	which look sensitive, i.e. slopes
 Rehabilitate mined out 	areas.
 Avoid making unneces 	sary access roads.
Nature of Impact	Negative
Extent of the Impacts	Footprint of mining area with mitigation.
Duration	Short term, if rehabilitated on completion of mining activities.
Duration	Long term, without rehabilitation of mined out areas.
Intensity	Low with mitigation.
	High without mitigation.
Probability	Definite without rehabilitation.
-	Improbable with mitigation.
Confidence	High
Significance	Low
Further Remarks	Provide an environmental awareness training workshop to SSMs.
	Monitor vegetation regrowth upon rehabilitation.

9.3.2 Impacts on Animals (Mammals, Reptiles & Birds)

9.3.2.1 General and Special Habitats

Based on available records and discussion held with the farming personnel, there are no endemic species on the farm. The MCs cover a geographical area of approximately 324 ha or 4% of the total farmland area (Table 1). The actual mining footprint is confined to approximately 20% of the total area covered by all MCs. The impacts on the mammals, reptiles and birds are assessed as follow.

The following recommendations would be applicable to all fauna.

- Habitats in the dry-arid of the study area are highly sensitive to disturbances. Hence every effort should be made by MC holders to ensure that mining activities are conducted within the boundaries of each MC and not outside such boundaries.
- SSMs should be trained for them to appreciate the faunal diversity on the farm on which they conduct their mining operations. Slow moving reptiles such as chameleons should not be killed. At night a variety of nocturnal animals and birds (e.g. owls) would normally come to life. This is the time when they hunt for food and should not be disturbed or killed.
- Discourage scavengers (and reduce consequent human-wildlife conflict) by not disposing of any refuse on the Camp Sites. If bins are used and kept outdoors such bins should have secure lids such that jackals, mice, rats, etc. cannot gain access. Feeding of wild animals such as baboons should be discouraged as it could lead to future conflicts between SSMs and baboons.

9.3.2.2 Impacts on Mammals

All the mammal species within the study area have a wide distribution and no population should be significantly affected by loss of habitat as a result of mining activities. However, there are open trenches which present serious danger to the movements of wildlife. Some of these trenches have been dug many years ago and never backfilled or at the least fenced off. The explanation that that SSMs would come back to such trenches is not acceptable. Tourmalines are not renewable - once an area has been mined, it should be rehabilitated because the tourmalines have been mined out.

Black-backed jackals are common within the study area. They should be discouraged from scavenging by ensuring that no scraps of food or bins are accessible to them at the Camp Sites. Hunting or persecuting game must be strictly forbidden. This must be stressed in the access-contracts between the landowner and holders of MCs as a condition, which, if violated could lead to access to the farm being denied.

Table 22 : Impacts on Mammals		
Potential Impacts:		
Mining leads to loss of gra	Mining leads to loss of grazing and destruction of habitats.	
	Possible Mitigation Measures	
 Enforce prohibition of poaching and killing of wildlife Prevent scavenging by preventing access to food or waste bins at camp sites Backfill all worked out mining excavations & trenches Fence off area of active mining with deep trenches 		
Nature of Impact	Negative	
Extent of the Impacts	 Footprints of all mining areas Access roads and internal routes within mining areas Stockpiles of excavated waste rock materials 	
Duration	 Short term if backfilled shortly after mining Long term if left un-rehabilitated for longer periods 	
Intensity	Low with manual labourMedium with some form of mechanization	
Probability	Definite for mining area footprint, access roads & stockpile areas	
Confidence	High for mining area footprint, access roads & stockpile areas	
Significance	Medium to low with mitigation	
Further Remarks	Monitoring and reporting of any problems with wildlife	

9.3.2.3 Impacts on Reptiles

Reptiles are vulnerable to the extent that their habitats are destroyed when excavations are made by SSMs in search of tourmalines. With respect to soil invertebrates the area impacted by mining activities is quite smaller while the area covered by reptiles is large. Slow moving species such as chameleons are more vulnerable and are often killed by vehicles if drivers are not trained and made aware to be cautions of such species. Snakes are often killed because persons are scared of them. The overall impact is the reduction on the population of any reptile species.

Table 23: Impacts on Reptiles	
	Potential Impacts:
Mining activities will result i	n the destruction of habitats and vegetation.
	Possible Mitigation Measures
 Train and educate SSMs to appreciate and preserve all forms of life within the working areas. Snakes and reptiles in their natural habitats must not be killed except in circumstances where human life and or safety is in danger. Limit movements of vehicles on existing access roads and internal routes. Sensitive areas should be avoided when developing Camp Sites and or workshops. 	
Nature of Impact	Negative
Extent of the Impacts	 Footprints of all mining areas. Access roads and internal routes within mining areas. Stockpiles of excavated waste rock materials.
Duration	Short term if backfilled shortly after mining activities.Long term if left un-rehabilitated for longer periods.
Intensity	Low with mitigation.
Probability	Definite for mining area footprint, access roads & stockpile areas.
Confidence	High, impact is well understood.
Significance	Low
Further Remarks	Comply with the EMP.Rehabilitate worked out areas.

9.3.2.4 Impacts on Birds

Within the study area, the bird populations are generally nomadic and have very large ranges. The big trees on the banks of the Khan River have ideal conditions for various species of birds. The destruction of bird habitats within the footprint of the mining activities is therefore very small. Guinea fowls are very common birds within the study area.

Table 24: Impacts on Birds	
	Potential Impacts:
Same as for Table 23.	
	Possible Mitigation Measures
 Educate and train SSM to appreciate and preserve all forms of life within the working areas. Minimise habitat destruction within the areas demarcated for mining. No hunting of guinea fowls or any other bird species is allowed. Take special care when driving at night to avoid hitting nocturnal birds. 	
Nature of Impact	Negative
Extent of the Impacts	Footprints of all mining areas and Camp Sites.
Duration	Short term if backfilled shortly after mining.Long term if left un-rehabilitated for longer periods.
Intensity	Low with mitigation
Probability	Improbable for mining area, access roads & camp site
Confidence	High for mining area footprint, access roads & stockpile areas
Significance	Low
Further Remarks	Comply with the EMP

9.4 THE HUMAN ENVIRONMENTAL (SOCIO-ECONOMIC) IMPACTS

With regard to the human social-economic environmental aspects, consideration has been given to the following aspects:

- illegal killing of wildlife and livestock (poaching);
- employment opportunities;
- support to the local economy, and
- health and safety including the Covid-19 pandemic.

9.4.1 Impacts of illegal killing or poaching of wildlife

Concerns have been raised by the landowner on increased level of poaching which has resulted in reduced wildlife head counts. The most recent poaching incident happened on 19 August 2020 when a Karibib based anti-poaching unit was called out to the farm. An Oryx and Zebra were caught by poachers in snares. When tracks (footprints) were followed by the rangers, they led the rangers to a deserted Camp Site on the farm, where fresh and dried game meat was found stored in tents (Photo 23 to 28). The photos were supplied by the Farm Manager. The Camp Site belonged to SSMs contracted by Mr Jeano Foelscher. When the supervisor of the mining operation (Mr Nino Pascheka) was confronted on the meat, he pleaded innocent but offered to compensate the landowner for the killed game. Following this incident, several snares and plate traps were found on the farm (Photo 23).

The farm has a 24 hour security-manned gate on the C36 gravel road. The security guard is meant to ensure that no unauthorized persons enter the premises. Proposals on how to eliminate poaching and to enhance security control over the farms have been made, during the public meeting and are included as part of the mitigation measures. The photographs depicting poaching have been provided by Otjikatjongo Farm Manager.

Table 25 : Impacts of P	Table 25 : Impacts of Poaching	
	Potential Impacts:	
	isiness of the farm hence poaching is hitting the bottom line. res will endure long hours of suffering and pain followed by inhumane other devices.	
	Possible Mitigation Measures	
 No snares or trap win MC holder must provi SSMs going away fro advance. For ease of security of MC number where th SSMs should also we 	mitted on the Camp Sites. e devices may be used to catch wildlife. ide the landowner with a list of names of all SSMs working on their MCs. im the mining area must notify the Mining Supervisor/Foreman well in control, it is proposed for each SSM to have badges with his names and e SSM works. ear safety shoes with branded soles. ments observed by SSMs around must be reported to the landowner.	
Nature of Impact	Negative	
Extent of the Impacts	Poaching is common on many farms in the area.	
Duration	The impact of poaching has long term effects.	
Intensity	Low with mitigation.	
Probability	Improbable	
Confidence	Medium subject to security system put in place.	
Significance	Low with mitigation.	
Further Remarks	Comply with the EMP.	





Photo 21: Snares & trap wires to catch game

Photo 22: Dried game meat stored in tent



Photo 23: Remains of a killed Oryx

Photo 24: Remains of a killed Zebra



Photo 25: Game meat retrieved from a Camp Site



Photo 26: Another game slaughtered on the farm

9.4.2 Impact on Employment Creation

Unemployment is a serious problem in Namibia particularly amongst the youth, and it is more rampant in the rural areas of the country where economic opportunities are limited. Lack of employment opportunities in the rural areas has resulted in increased levels of migration to urban areas in the hope of finding jobs and better living conditions.

With the exception of the SSMs working at Otjakatjongo who are paid a basic salary and a commission on the tourmalines recovered, this is not the case with other SSMs working elsewhere.

	Potential Impacts:
	e/salary. to family and other dependants . e to live a dignified live and an improved standard of living.
	Possible Mitigation Measures
Uncertain	
Nature of Impact	Positive
Extent of the Impacts	Localised and national since SSMs come from several regions.
Duration	During mining operation
Intensity	Low
Probability	Improbable
Confidence	High
Significance	Low
Further Remarks	Exploration work is required to quantify the tourmaline resource.

9.4.3 Impact to the Local Economy

Karibib is the local home to many SSMs mining semi-precious from several localities within the region of Erongo. Industries giving support to SSMs are also based in Karibib. It is also the main trading centre for semi-precious stone in Namibia.

All SSMs and MC holders within the study area have Karibib as their home town. It is where their families live and where they spend their disposable income making payments for rates and services (water, electricity, refuse removal, etc. to the local municipality), school fees, medical bills and procurement of groceries and other basic human needs.

The Ministry of Industrialisation, Trade and SME Development has also established a semiprecious training centre, where young Namibians who aspire to become gemmologist are trained on all facets of semi-precious stones: identifications, inspections, weighing, cutting, and polishing including price determination.

Table 27: Impacts on the Local Economy		
	Potential Impacts:	
 Creation of employment - many SSMs are working in the subsector. Increased local spending through procurement of goods & services. Injection of income in the local community of Karibib. 		
	Enhancement Measures for Potential Impacts	
 Support local businesses by procuring goods and services for tourmaline mining operations. Comply with all applicable rules and regulations. Join local organizations and lobby groupings such as Erongo Region Small Miners Association to increase bargaining power. 		
Nature of Impact	Positive	
Extent of the Impacts	Localised and national	
Intensity Low		
Probability Improbable		
Duration	Uncertain without knowledge of the resource base.	
Intensity	Uncertain without the knowledge of the resource base.	

9.4.4 Impact on Health and Safety

Tourmaline MC Holders should strive to create good and safe working environment which is free of accidents, free of health hazards and associated impediments. This EIA has been conducted during the time when the whole world is battling to contain the spread of the deadly SARS CoV-2, the virus that causes Coronavirus Disease 2019 (Covid-19).

Depending on the type of work being performed and exposure risk, it is incumbent upon the MC holders that a safe and corona-free working environment and for the SSMs to comply with the control and prevention measures as stipulated by the Ministry of Health & Social Services.

The Covid-19 general guidelines recommended are:

- > Wash your hands frequently with soap and clean water for at least 20 seconds.
- > Avoiding touching your eyes, nose and mouth with unwashed hands.
- Practice social distancing by staying a distance of at least 2 meters from the next person when queuing in shops, banks or in bars.
- > Wear face mask which covers the mouth and nose.
- Comply with laws and regulations as announced by the authority from time to time.
- Observe and comply with symbols in the figure below.



FIGURE 9: Covid-19 Safety Signs & Symbols

Table 28 : Impact on Health and Safety Aspects		
	Possible Impacts :	
 Incidents could lead to serious accidents. Injuries from accidents are undesirable and costly. Poor working conditions could lead to loss of life. Incidents of fire outbreak could lead to loss of assets/properties. Unhygienic conditions could lead to health problems. 		
	Possible Mitigation Measures	
 Develop a Waste Management Plan and stick to it. Train and educate SSMs on safety aspects related to tourmaline mining. SSMs must be provided with suitable PPE. Limit speed to 20 km/hour on all access roads and MC internal routes. Enforce good housekeeping and ensure proper handling of wastes. Ensure adherence to the relevant health and safety legislations. Discourage SSMs from abuse of alcohol. No use of drugs should be allowed on Camp Site. No firearms are allowed on the farm. 		
Nature of Impact	Neutral	
Extent of the Impacts	Localised	
Duration Long term		
Intensity	Intensity High to Low	
Probability Probable		
Confidence	High	
Significance	Low	
Further Remarks	Protect amenity values by running a hazardous free operation.	

10. PUBLIC PARTICIPATION PROCESS

10.1 Introduction

Public Participation Process (PPP) is an integral part of the EIA process, as outlined in section of 27(1) (h) of the Environmental Management Act and section 32 of Environmental Assessment Regulations. Experience has demonstrated that effective Environmental Impact Assessment (EIA) is depended upon the full and rigorous participation of the community in which the proposed project, in this case the mining activities, conducted by SSMs are situated.

One of the key objectives of the Scoping Assessment is to identify stakeholders or Interested and Affected Parties (IAPs), who may be directly affected by such mining activities and to invite such IAPs to participate in the EIA process. Through the PPP, IAPs are provided an opportunity to voice any concerns and at the same time to propose workable solutions.

In broader terms, the objectives of the PPP are, amongst others, the following:

- To sensitize and make the general public aware of the existing tourmaline mining operations conducted on the aforesaid game farm including any commercial benefits derived from such activities and how such benefits accrue to the broader community.
- To outline the environmental impacts associated with tourmaline mining on the game farm and how any negative impacts can be minimised to acceptable levels.
- To ensure transparence and accountability in the decision-making process and therefore reducing conflict and misunderstanding, since decisions to grant mineral rights (Mining Claims to SSMs)) are deemed to have been made through a process which ensured transparence, involving all the parties within the affected community.
- To ensure that SSMs secure the approval of landowners which gives such SSMs some form of assurance and a sense of partnership with the landowners and in so doing to prevent unnecessary disputes and costs associated with litigations.

10.2 EIA Announcement

The EIA study was announced in the local newspapers on the dates as shown in the Table 29 below. Since the majority of SSMs involved in tourmaline extraction, do not have access to newspapers, another announcement was aired on the national radio of Namibia Broadcasting Communication (NBC). The NBC announcement had included an invitation to an information sharing meeting and was made by the Karibib Constituency Councillor, Hon Melanie Ndjago. Proof of newspaper adverts and the letter sent to NBC to announce the public information sharing meeting are inserted as appendixes 5 and 4 respectively.

The requirement of the Environmental Management Regulations to place EIA notices at the project site, i.e. in this case at the farm entrance gate was waived because access to the farm is not open to the general public. BIDs on the EIA were made available to neighbouring farms through Mr Nino Poschalski, the Chairman of the Wilhelmstal Farmers Association. A copy of the copy circulated to IAPs is attached as Appendix 1.

All SSMs mining tourmalines on Otjakatjongo have Karibib as their home town. A meeting was therefore held there on 10 October 2020. In light of the COVID-19 regulations, only one meeting was held and was well attended. The names of the participants at the information sharing meeting are listed in Table 33 and on a piece of paper attached as Appendix 6.

Table 29: Newspaper Advertisements					
Date	Publication	Distribution	Language	Publication Rate	
24-30 September 2020	Confidante	Nationwide	English	Weekly, Thu-Wed	
26-02 October 2019	Confidante	Nationwide	English	Weekly, Thu-Wed	
1 October 2020	New Era	Nationwide	English	Daily, Mon to Fri	
8 October 2020	New Era	Nationwide	English	Daily, Mon to Fri	
24 September 2020	The Namibian	Nationwide	English	Daily, Mon to Fri	
1 October 2020	The Namibian	Nationwide	English	Daily, Mon to Fri	

10.3 Identification of Stakeholders

One of the objectives of the PPP is to identify all possible stakeholders to the EIA. Listed in Table 30 below, are names of public officials representing Organs of State who have a direct bearing to the EIA process.

For this Scoping Assessment, interested and affected parties have been identified as landowners, neighbouring farms (as affected parties) and holders of mineral rights or MC holders who are both interested and affected parties.

Table 30: Statutory Stakeholders (State Organs)					
Names	Organization	Role	Remarks		
Mr Timoteus Mufeti	MEFT	Environmental Commissioner			
Dr Caroline !Garus-Oas	MEFT	Dep Environmental Commissioner			
Ms Saima Angula	MEFT	Dep Director, DEA			
Mr Damian Nchindo	MEFT	Chief Environmental Officer	BID		
Mr Hiskia Mbura	MEFT	Chief Environmental Officer	BID		
Mr Erasmus Shivolo	MME	Mining Commissioner			
Mr Abraham lilende	MME	Deputy Director, Mineral Rights			
Mr Brian Beukes	MME	Chief Mineral Rights			
Mrs Minsozi Sibeso	MME	Dep Director, SSM	BID		
Hon Neville Andre	ERC	Governor	BID		
Hon J Kambueshe	ERC	Chairman, ERC	BID		
Hon John Amutenya	ERC	Omaruru Constituency Councillor	BID		
Hon Melanie Ndjago	ERC	Karibib Constituency Councillor	BID		
Ms L H Doëses	ERC	Chief Regional Officer	BID		
Ms S Kauari	ERC	Director: Development Planning	BID		

BIDs were made available to each person listed in Table 31 either by email or through social media platforms.

Table 31: Identified Inter	ested And Affected Parties	
Names	Organization	Remarks
Mr Van Der Westhuizen	Manager, Otjakatjongo Lodge	
Mr W Lungu	Owner, Otjakatjongo Farm	
Mr Willem Alweendo	Manager, Omapyu Sud	
Mr Steven Skopelitus	Owner, Otjimbojo Ost	
Mr Peter Shilomboleni	Farm Manager, Otjimbojo Ost	
Mr Alfred George	Mining Claim Holder, Omapyu Farm	
Mr Jonas Shimutwikeni	Mining Claim Holder, Omapyu	
Mr Victor Angula	Mining Claim Holder, Omapyu	
Mr Denis Dausab	Mining Claim Holder, Omapyu,	
Mr Ernst Naomab	Mining Claim Holder, Otjikatjongo	
Mr Jeano Foelscher	Mining Claim Holder, Otjikatjongo	
Mr S Skopelitus	Otjimbojo Ost, Farm owner	
Mrs Elizabeth Kaperu	Mining Claim Holder, Otjimbojo	
Mr Jakkie Enslin	Mining Claim Holder, Otjimbojo	
Mr Nino Poschalski	Chairperson, Wilhelmstal Farmers Association	
Mr Emmanuel Shilongo	Osino Resources (EPL Holder)	
Mr Augutnius Geingob	Mining Claim Holder, Omapyu	
Mr Stefanus Khamuxab	Mining Claim Holder	

10.4 Issues and Concerns Raised at the Meeting

Various issues were raised by participants - mineral right holders, various stakeholders and landowners: Some of the issues stressed by SSMs and prospective SSMs with NEPL:

- > Unreasonable and unrealistic compensation demanded by landowners.
- Landowners wanting to treat SSMs as if SSMs were big exploration companies, i.e. Osino Resources which is exploring in the area.
- > Prospective SSMs with NEPL denied access to conduct prospection works on Omapyu.
- > Landowners denying SSM water, even when SSMs are willing to pay for the water.

Amongst the issues raised by landowners were:

- > Access roads constructed all over the places without permission of landowners.
- SSMs living huge trenches open and unrehabilitated presenting safety hazards to wildlife.
- Increased incidents of poaching with dried meat found stored in tents at a deserted Camp Site.
- Poor waste management with plastics blown around by wind fatal when consumed by wildlife (a bull died at Omapyu after eating plastics).
- > Lack of decent sanitation and ablution facilities for SSMs on Camp Sites.
- > Blasting conducted without giving adequate notifications to landowners, (Otjakatjongo).
- Willful damage to property a gate was damaged (at Omapyu) when an SSM retrieved a huge machine from the mining area.
- SSMs walking around without proper identifications.

- > MCs pegged in wrong areas and or pegs not clearly marked.
- > Mining activities conducted outside the confines of MCs.

Additional comments on the issues raised are given in the Table 32 below.

Table 32: Issues and Concerns Raised at the Meeting held at Karibib

ISSUE RAISED	REMARKS/COMMENTS
Issues Raised by	y SSMs
Compensation to landowners	Management asserted that the farm was not deriving income from the land covered by MCs and therefore a reasonable
Landowners were charging MC holders excessive fees as compensation for loss of grazing.	compensation should be paid covering access agreements, grazing and opportunity losses over the productive area covered by
One of the MC holder (Mr Ernst Naomab) who has been mining tourmalines on Otjakatjongo since 2004 mentioned that he was unable to continue to mining	MCs. Landowners were liable for paying annual
because the compensation fees were prohibitive. SSMs proposed that a standard rate be charged which	land tax even on the land taken up by mining activities.
includes the supply of water to SSMs. No Prospecting and No Pegging of MCs	
Holders of NEPL were not allowed to conduct prospecting activities on the section of the farm east of C36 gravel road.	
Water Supply Some SSMs were not allowed to access water on the	SSMs working on Otjakatjongo have access to clean drinking water from two boreholes.
farm.	
Issues Raised by La	indowners
Construction of access roads	
On Otjakatjongo several access roads and internal routes have been constructed by SSMs without seeking prior approval of landowners.	
Rehabilitation of Worked Out Areas	
Huge excavated trenches and pits were left open by SSMs. The trenches were not backfilled and the affected areas were not fenced in.	SSMs asserted that all excavated trenches should be considered as active mining areas where activities will be resumed.
The pits/trenches are an eyesore and presenting safety problems to livestock and wildlife. Some such trenches have been abandoned and not worked for years.	
Poaching Incidents of poaching have been encountered on a regular basis on Otjakatjongo. The recent incident took place in August 2020 when an Oryx and Zebra were caught in snares which prompted the Farm Manager to call out the anti-poaching unit from Karibib.	SSMs claimed to have no knowledge of poaching and instead pleaded for better and improved relationships between the parties (landowners and SSMs) in which the SSMs are not always viewed with suspicious eyes.
The anti-poaching unit followed the footprints up to a deserted Camp Site of SSMs where dried meat was found hidden in tents. When confronted, all SSMs denied wrong doing, however, the Mining Foreman agreed to compensate the farmer for the killed game	With improved relationships, the SSMs could actually cooperate with landowners to combat poaching together, by amongst others, alerting landowners on any suspicious movements in the area.
Several snares and plate traps have been retrieved from wildlife routes leading to water points on the farm.	The following proposals were made by landowner for consideration by the SSMs:

ISSUE RAISED	REMARKS/COMMENTS
Drilling & Blasting Some SSMs were conducting blasting without notifying landowners. Given that the landowners are operating hunting farms, failure to notify the Farm Manager on blasting schedules does not bode well for the farming operations and its trophy hunting patrons. (One could image a situation where a hunting operation is underway and a blast goes off frightening the wildlife.) It is also feared by landowner that SSMs were handling explosives and conducting blasting without the necessary authorisation. (During the field observation, explosive remnants were found strewn all over the mining areas).	 SSMs should wear identification name badges. The badges must bear the full names of the SSM and the MCs to which the SSM is affiliated. SSMs should wear uniforms for ease of identifications. SSMs should wear shoes with branded soles for ease of identifications.
 Waste Management Housekeeping and general hygiene around Camp Sites were generally poor. The Camp Sites were untidy, filthy and strewn with all kinds of rubbish. Windblown plastics are observed around all Camp Sites – plastics can cause fatalities when consumed by livestock and wildlife. 	
Sanitation: There were no toilet facilities at some Camp Sites and SSMs were making use of bushes as 'toilets'.	

Table 33: PPP - Participants Meeting held at Karibib(See also list filled in by Participants – Appendix 6)				
Full Names	Organisation	Contact Number		
Butzi & Manja Kuhne	Otjimbojo Ost, Farm Manager	0811453553		
Joseph Xamiseb	Small Miner	0812373153		
Jakkie Enslin	Small Miner (Right Holder)	0811274541		
Alfred George	Small Miner (Right Holder)	0816341397		
Naresh Kumak,	Gemstone Consultant	0813215113		
Pekakarua Metarapi	President, ERSMA	0812274651		
Magreth Kaperu	Small Miner	0816969074		
Elizabeth Kaperu	Small Miner (Right Holder)	0817524385		
Tina Kaperu	Small Miner	0816582510		
Denis Dausab	Small Miner (Right Holder)	0812726215		
Jonas Shimutwikeni	Small Miner (Right Holder)	0812777555		
Kelto N	Small Miner			
Kosmos Ndemuweda	Small Miner			
Ernst Naomab	Small Miner (Right Holder)			
Nghilifavali Thomas	Small Miner	0814028664		
Victor Angula	Small Miner (Right Holder)	0812046572		
Wilhelm Alweendo	Omapyu Süd, Farm Manager	0813783197		
Emmanuel Shilongo	Osino Resources	0816866089		
Hartmut Foelscher	Small Miner (Right Holder)	0813049986		
James Eliphas	Small Miner	0813740701		
Immanuel Shipunda	Small Miner	0812937452		
Moses Simon Axel	Small Miner	0812132496		
Augustinus Geingob	Small Miner (Right Holder)	0812721292		
Petrus Malapi	Small Miner	0812513533		
Erkki Ekandjo	Small Miner	0817085209		
Joseph Mwatile	Small Miner	0813191171		







Photos 27: Participants at PPP meeting held at Karibib on 10 October 2020

11. CONCLUSIONS AND RECOMMENDATION

The MCs are pegged on a game farm, but on a separate portion of the farm (west of C36) which measures approximately 2 330 ha. The wildlife is kept on the bigger section of the farm (about 5 900 ha) located east of C36. The homestead and lodge are also located on this section of the farm.

Whilst the mining operations have relatively small footprints, it is a serious concern that no efforts have been made to backfill the numerous trenches made by SSMs in pursuit of tourmalines. MC holders have therefore to ensure that environmental disturbances from tourmaline mining are managed and kept to the minimum.

In the EMP document, mitigation measures have been proposed which have to be complied with. Any trench made in search of tourmaline must be backfilled and rehabilitated, as far as practically possible, to pre-mining conditions.

On the basis of the EIA findings, it recommended that ECCs can be granted to SSM applicant provided that recipient SSMs commit themselves to comply with the EMP. It is further recommended that any renewal of MCs be considered only after officials from both MEFT and MME have visited and inspected the mining sites and confirmed compliance with the EMP.

APPENDIX 1

Background Information Document (BID)

BACKGROUND INFORMATION DOCUMENT (BID)

Environmental Impact Assessment for Small-scale Mining Hotspots on Farm Otjakatjongo

Karibib District, Erongo Region

INVITATION TO PARTICIPATE

November 2020

BACKGROUND

According to the Ministry of Mines and Energy (MME), there are approximately eighteen (18) Mining Claims (MCs) held by seven (7) Small Scale Miners (SSM) on Otjakatjongo, a game farm situated in the Karibib District of Erongo Region. The statuses of the MCs are as given in the Table 1 below:

TABLE 1: Farm Sizes and Number of Mining Claims								
Size	Size	Status of Mining Claims			MCs, Sizes, Footprint as % of Farmland & Holders			
Farm Name	(ha)	Active	Pending Renewal	New Applications	MCs	Size (ha)	%	MC Holders
Otjakatjongo	8 258	0	6	12	18	324	3.9%	7
Total	8 258	0	6	12	18	324	3.9.%	7

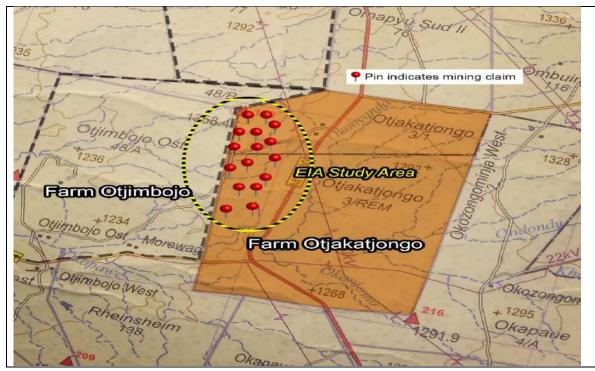
Although SSMs have been mining tourmalines on the farm for many years, such mining activities have been done in the absence of Environmental Management Plans (EMPs). In terms of the Environment Management Act (Act No 7 of 2007), and the Environmental Impact Assessment (EIA) Regulations of 2012, all mining and quarrying operations are listed as activities for which EIAs are mandatory. The EIA and EMP would allow SSM to apply for ECCs from MEFT for their respective MCs.

The proponent of the EIA study is the Ministry of Mines & Energy's directorate of Small Scale Mining Division. MME would like a Scoping Assessment conducted into the mining activities of the SSM on the farm Otjakatjongo and for a <u>Generic</u> EMP to be developed. The generic EMP will be used by the four MC holders when applying for EECs for their respective MCs from MEFT.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA):

Generally, an EIA is an effective planning and decision making tool. It allows for the identification of possible environmental impacts associated with mining activities on the commercial farm. Through the Environmental Management Plans, (EMPs), effective measures are recommended which aim to strike a balance between preserving the environment and allowing commercial benefits to the parties, the farm owner and the small-scale miners.

Where negative impacts are likely to emanate from the semi-precious mining activities, mitigation measures are recommended in the Environmental Management Plan (EMP) to reduce such impacts to acceptable levels. Where positive impacts are likely to result, measures are recommended to enhance such benefits from the operation. Ultimately, the EMP will ensure that mining activities, once permitted through the issuance of an ECC, such mining activities will be conducted in accordance with the terms as agreed upon between the parties viz. the farm owner, the Mining Claim holders and MEFT.



Project Location

PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) is an important part of the EIA process, as it offers an opportunity to IAPs to actively participate in the EIA. Through PPP, stakeholders, which include the neighbouring farms, are given a platform to identify issues of concern and to propose possible solutions to such issues. For this EIA, the PPP will involve the following:

• Notification of the EIA and Opportunity to Comment

 This is done by means of newspaper adverts, placing of on-site notices as well as meeting and engaging withfarm owners, Mining Claims holders and their contractors and sub-contractors

An information sharing meeting to be held at Karibib Town Hall on 10 October 2020 from 10h00

• Draft Scoping Assessment Report and generic EMP Report

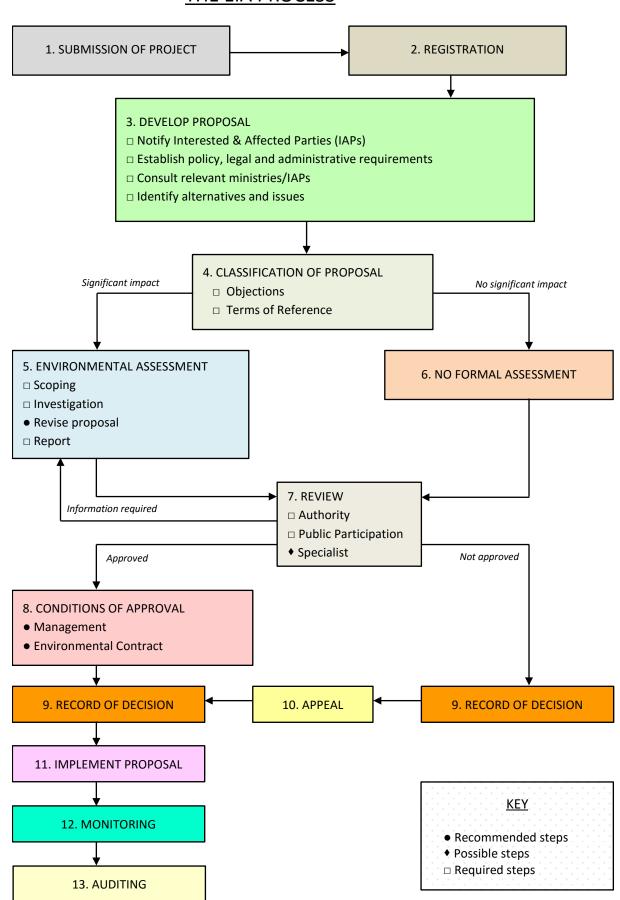
- These reports will be made available to the farm owner, registered MC holders, and to all registered IAPs.
- o Farm owners, MC holders and all IAPs will have 14 days to submit their comments

• Final Notification

 All parties will be informed when the Scoping Assessment and EMPs Reports have been submitted to MEFT.Each Mining Claim Holder will then be expected to submit a signed copy of the EMP to MEFT when applying for an EEC for their respective mining activities.

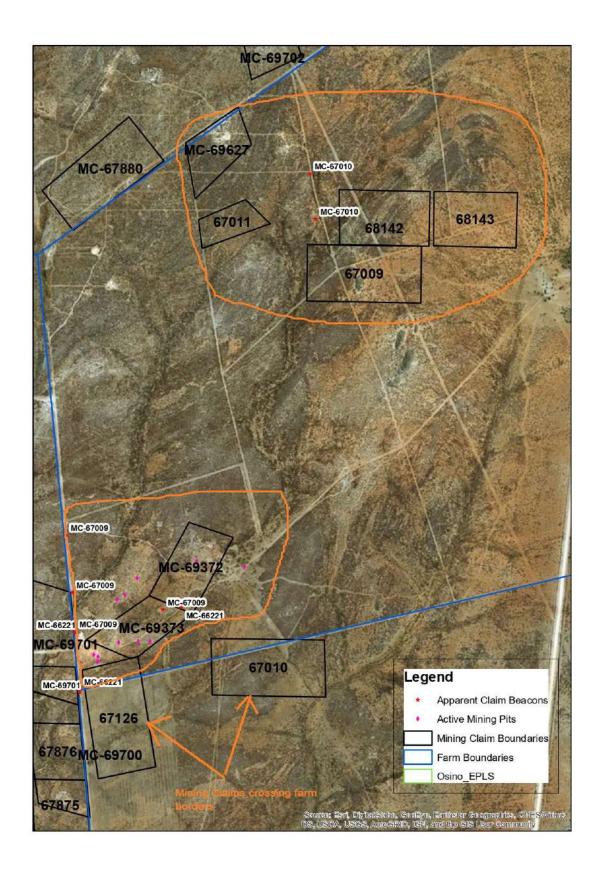
PUBLIC INFORMATION SHARING MEETING	CONTACT DETAILS
Place: Karibib Town	Kindly provide your comments and or input to:
HallDate: 10 October	EIA Consultant
2020 Time : 10h00	Box 25021
	Windhoek Cell: 081 418 3125
	Fax: 08864 5026
	Email: <u>ekwao@iway.na</u>
	Inquiries: Joel Shafashike
	Closing Date: 15 November 2020

THE EIA PROCESS



APPENDIX 2

Map of MCs as Provided by Farm Management



APPENDIX 3

Email Communication with Land Owner

Good day Mr Shafashike,

Thank you for your e-mail and sharing the generic document with us.

Considering that your recommendations once accepted by the Environmental Commissioner will confer a legal obligation to the MC Holder, we would like to state the following:

Table 5.3.2 : Generic EMP – Poaching of Wildlife

• For ease of security control, it is proposed for SSM to have badges with their names and MC number. You could also add that these badges should also have the name of the claim holder.

Table 5.2.3: Generic EMP – Drilling & Blasting

We would greatly appreciate if MC holder's that are blasting are not only obligated to have necessary records on site but they should also be mandated to furnish the landowner with copies of relevant certificates for handling, transporting and use of these explosives. Further, also share blasting schedules with the landowner.

It would be beneficial to also include in your glossary of terms and definitions, the strict definition of a "small miner". We seek clarity in the context of the small mining operations on our farm, is a small miner classified by virtue of using hand tools to mine or is one that makes use of heavy duty machinery such as a JCB OR excavator still a small miner?

Further, your conclusion states," it is incumbent upon the MC holder to assess whether any modifications to the mitigation measures as proposed in this EMP may be required to improve the overall efficiency and applicability of the EMP to his/her unique operational circumstances."

How will these modifications be dealt with (between the MC holder and landowner) as these measures are legally binding once accepted and failure to comply is criminally prosecutable.? Will it not create a grey area for MC holders to be selective in what to execute? Please advise if my understanding of this statement is incorrect.

Kind Regards,

Wilson Lungu On behalf Otjakatjongo Lodge CC Registration No of Corporation: CC/96/978

NTB Registration: GFA 00186, TPH 00474

From: Joel Shafashike <ekwao@iway.na>
Sent: Friday, 27 November 2020 10:44 am
To: wilz.lungu@yahoo.com
Cc: 'Bernie Hogel (PB&P)' <peterbeck@manx.net>; 'Wilma van Der Westhuizen'
<wilmavdwest@hotmail.com>
Subject: RE: BID - Small-scale Mining Hotspots on Farms Otjikatjongo

Good day Mr Lungu,

Attached hereto in the Generic Environmental Management Plan (EMP) proposed to safeguard the mining operations conducted by small miners on the farms: Otjimbojo & Otjakatjongo. The Scoping and EIA Report has been separately.

Your comments and or inputs will be highly appreciated

Regards

Joel Shafashike

From: wilz.lungu@yahoo.com [mailto:wilz.lungu@yahoo.com]
Sent: Saturday, October 24, 2020 23:35
To: ekwao@iway.na
Cc: 'Bernie Hogel (PB&P)'; 'Wilma van Der Westhuizen'
Subject: BID - Small-scale Mining Hotspots on Farms Otjikatjongo

Good day,

We would like to raise our issues/concerns being the owners (IAP) of Farm Otjakatjongo on which mining activities are conducted by the SSM as per the purpose of your Background Information Document (BID).

Farm Otjakatjongo has a total size of 8,257.621 hectares of which we operate a Game Lodge on 5,921.776 hectares, and it is on the remainder portion (2,336 ha) that we have small scale mining.

Generally, our issues generally border on the following issues:

- 1. Open & abandoned mining excavations including pits and trenches on the farms no back-filling / no rehabilitation is done. It would be ideal that all active pits are fenced off.
- 2. New roads (without prior consultation with farm owners), new excavations, and claim beacons everywhere.
- There has been roads made all over the place in the vicinity of MC-69372, MC-69373 towards the west up to the farm boundary. These roads are within the two mining claims and outside. In some areas, roads have been created sort of half way then abandoned.
- There are excavations made within MC-69372, MC-69373 and outside this mining claims.
- There are claim beacons setup in the wrong areas. Some of them are 2km away from the correct positions while some are more 6km away from the correct position. MME should conduct a comprehensive mining inspection on Farm Otjakatjongo. The purpose of the inspection would be to confirm and assess whether those in possession of valid mining claims on the farm are conducting their operations on designated areas as per your official MME database.
- 3. Poaching-please find attached report by K9, a security firm we have engaged to monitor the mining area.
- 4. Toilets in all small scale miners camps and rubbish to be taken off site to waste dump facilities.
- 5. House keeping around small scale miners camps rubbish around campsites, helping themselves anywhere and everywhere.
- 6. Blasting- As we operate a hunting farm, we fear the safety of our staff and guests as we are never informed of when and where blasting will take place on this side of the farm. We would greatly appreciate if the relevant department would look into whether the handling, transporting and use of such explosives is being done in accordance with necessary safety and licensing requirements.
- 7. Identification. All small miners should have badges of identification to include their claim number, the name of the claim holder on which they are mining. Further, the Small scale miners should all wear the same uniform and have their shoe soles branded. Possible consideration to allow for a working hour schedule for entry onto the mining areas to allow for ease of security control.
- 8. Reasonable compensation for access agreements, and for the limitation of the productive use of the land for any livestock farming or grass harvesting.

Please note: The locations of active mining pits and the locations of the apparent mining claim beacons might have changed from the time this data was captured. (Please refer to attached map_Otkajatjongo_Mining Claim)

Further, we will share files via WeTransfer 1.03GB of a few claims showing the extent of the mining activity.

• Aerial photographs and video of each Claim. Google earth plotting map GMZ file which you can open on Google Earth.

If you require any further clarity or information please do let us know.

Kind Regards,

Wilson Lungu On behalf Otjakatjongo Lodge CC Registration No of Corporation: CC/96/978

NTB Registration: GFA 00186, TPH 00474

APPENDIX 4

Public Information Sharing Meeting: NBC Announcement



ERONGO REGIONAL COUNCIL karibib constituency

 Tel:
 064-550346
 P O Box 380

 Fax:
 064-550347
 Karibib

07 October 2020

TO: Namibia Broadcasting Corporation

(Please announce the following in all vernaculars)

The Karibib Constituency Councillor on behalf of **Ekwao Consulting** would like to invite all the interested and affected parties (IAPs) to an information sharing meeting on Environment Impact Assessment for small scale mining hotspots on commercial farms: Otjikatjongo & Omapyu. The meeting will take place as follows:

Date:10 October 2020 (Saturday)Venue:Karibib Town HallTime:10H00

For more information, please do not hesitate to call Mr. Joel Shafashike at Cell: 0811273027 at Ekwao Consulting.

Yours in development.

M Hon. Melanie Ndjago (MP)

Hon. Melanie Ndjago (MP) Regional Councillor Karibib Constituency

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APPENDIX 5

Newspaper Advertisements





Notice

Legal Notice

Tel: (061 2080800

Notice Legal Notice

NOTICE OF SALE IN EXECUTION IN THE MAGISTRATES COURT OF OKAHANDJA HELD AT OKAHANDJA

CASE NO: 119/2019 in the matter between. PATRICK GODFREY FERIS EXECUTION CREDITOR

and

HEROLD STUMPFE EXECUTION DEBTOR

an parsance of appopnent mine above Honouxable Court granted on 04^m DAY OF NOVEMBER 2020 and Warrant of Execution dated 09th APRIL 2020 the following goods will be sold in execution on WEDNESDAY the old" day of HOVEMBER 2020 at 17H00 at 117 DR VEDDER 9 TREET, OKAHANDJA, REPUBLIC OF NAMIBIA

COODS: 1 1X KIC FRIDGE 2 4 PIECE LOUNCE SUITE 3 1 X DINING TABLE & 4 CHAIRS 4 CHAIRS 4 1 X CHEST OF DRAWERS 5 1 X SIDEBOARD

TERMS: VOETSTOOTS AND CASH TO THE HIGHEST BIDDER

Dated at OKAHANDJA on this 22nd day of SEPTEMBER 2020 LENI GEBHARDT & COMPANY

NC LEGAL PRACTITIONERS FOR THE PLAINTIFF CNR OF BRUNO TEMPLIN & MARTIN NEIB STREETS

FERI/0003) REPUBLIC OF MANEJA MINISTRY OF THADE A NOUSTRY LIQUOK ACT, 1998 MOTICE OF MUNISTRY OF THADE A NOUSTRY LIQUOK ACT, 1998 MOTICE OF (MUNISTRY OF THADE AND A MODIE 1990 MOTICE OF (MUNISTRY OF THADE AND A MUNISTRY OF THADE AND A MUNISTRY OF THADE AND A MUNISTRY OF THADE MUNISTRY

Lodgett 27 OCTOBER 2020 Date of meeting of Committe Mhich application will be her 09 DECEMBER 2020 y abjection or willten automore 7 Dail

e Sected a very of the Committee to e Sected a very or less then 2.3 days the date of the meeting of the tee at which the application will be heard



Fax (061) 220584

Notice Legal Notice NOTICE OF SALE IN EXECUTION

IN THE HIGH COURT OF OKAHANDJA HELD AT WINDHOEK

CASE NO: HC-MD-CIV-ACT-CON-2020/00825

In the matter between:

ILENI GEBHARDT & COMPANY PLAINTIFF/EXECUTION CREDITOR

and

ITUMELENG CONSTRUCTIONS & DE-BUSHING CC 1sT EXECUTION DEBTOR/

1ST DEFENDANT WILFRED LEYDEN NAIBAB 240 EXECUTION DEBTOR/ 240 DEFENDANT

In pursuance of a judg above Honourable Count ted on 12TH DAY OF JUNE granted on 12" Dat or com-2020 and Writ of Execution dated 12" of JUNE 2020 the following goods will be sold in execution on SATURDAY the 0" of NOVEMBER 2020 at 16H30 bits the PENDENCE

at NO 422 INDEPENDENCE AVENUE, WINDHOEK, REPUBLIC OF NAMIBIA

GOODS: 1.1 X LAND ROVER REGISTRATION NUMBER LEY10 NA TERMS: VOETSTOOTS AND CASH TO THE HIGHEST BIDDER

Dated at OKAHANDJA on this 21ST th day of SEPTEMBER

REPUBLIC OF NAMEUA MINISTRY OF TRADE & MUDISTRY LOUGH ACT, 1998 NOTICE OF APPLICATION TO A COMMITTEE NA TERMS OF THE LILUTION ACT, 1998, particultars of which appear below. Will be made to the Regional Lique Licensity MUSATI Octoward Strate States of the MUSATI 1. Name and pockal address of appearance of the States of the Appearance of the Appe

Application will be lodged: OUTAPI MAGISTRATE 6. Date on which application will

09 DECEMBER 2020 Any objection or written submission in terms of section 28 of the Act in elation to the applicant must be sent ar delivered to the Secretary of the Committee to reach the Secretary not less than 21 days before the date of the meetine of the Committee at Any ob in terr

NOTICE LOCAL AUTHORITIES ACT 1992 PERMANENT CLOSURE PERMANENT CLOSURE WINDHOEK, MEASURING ± 143 M2 IN EXTENT, AS A PUBLIC OPEN SPACE" FOR CONSOLIDATION WITH ERF 2366, KLEIN WINDHOEK,

The City of Windhoek vide Resolution 259/10/2019 intends, on subdaviding Erf. 2486. Klein Windhoek into Erf. A2486 and the Remainder. The proposed subdivision will enable the City of Windhoek to pormanently colse proposed Erf. A2466. Klein Windhoek, measuring ± 143 met in extenti as a "Puble". Opon Space" in terms of Section 50 (3) (a)(a) and Section 50 (3)(a)(b) of the Local Authorities Act of 1992 (Act 23 of 1992).

The proposed "Public Open Space" closure will enable the City of Windhoek to sell Erf A/2486, Klein Windhoek to the owner of Erf 2366, Klein Windhoek for consolidation of the two erven.

Take notice that the locality plan of the above erven lies for nepection during normal office hours on the low n planning notice board of the City of Windhoek and SPC Office, 45 Feld Street, Windhoek.

PERMANENT CLOSURE OF ERF A/2486, KLEIN WINDHOEK, MEASURING ± 143 M2 IN EXTENT, AS A "PUBLIC OPEN SPACE" FOR CONSOLIDATION WITH ERF 2366, KLEIN WINDHOEK.

Further take note that any person objecting against this proposed permanent closure as indicated above may lodge such objection together with the grounds thereof. City of Windhoek (Town House, Independence Avenue, 5TH Floor, Office No.515) and with the applicant (SPC), in willing on or bolore Wednesday, 21 October 2020.

Applicant: Stubenrauch Planning Consultants PO Box 41404 Medhaels Windhoek Tel: 061-251189

The Chief Executive Officer City of Windhoek PO Box 59 Windhoek

Ref.: W/20038

VACANCY

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Notice Legal Notice

CALL FOR PUBLIC PARTICIPATION/COMMENTS

REZONING NOTICE

Should this application be successful, the number of vehicles for which parking must be provided on-site will be in accordance with the Omthiya Town Planning Scheme.

com.na Tel: 061 269 697 Cell: 086 3232 230

11111

PLANNING CONSULTANTS

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE COMPLETION OF THE DEVELOPMENT OF A SERVICE STATION, A RURAL RESIDENTIAL AND NATURE ESTATE, BUSINESS ERVEN AND STREET PORTIONS ON PORTION 1 OF FARM GROSS HAIGAMAS NO. 447, KHOMAS REGION Take notice that Nghivelwa Planning Consultants (Town and Regional Planners) on behalf of the owners, intends applying to the Omultiya Town Council for the:

 Rezoning of proposed Portion A of Erif 912, Omuthiya Extension 3 from "Public Open Space" to "Government"; Rezoning of proposed Portion B of Erif 912, Omuthiya Extension 3 from "Government" to "Public Open Space"; KHOMAS RE GION Green Earth Environmental Consultants has been appointed to attend to and complete an Environmental Impact Assessment and Environmental Management Plan (EMP) in order to obtain an Environmental Management Act (No. 7 d/2007) and the Environmental Impact Assessment Regulations (GN Join GG 4878 of 6 February 2012) to finalise the town Janning procedures for the development of a service station, a rural residential and nature estate, business erven and street portions on Portion 1 of Farm Cross Haigamas No. 447, Khomas Region. Proposed Portion A/912 and Protion B/844 are located in Omuthiya Extension No. 3 and currently measures 427m⁴ and 749m² in extent respectively. Proposed Portion A/912 is currently reserved for "Public Open Space" purposes while proposed Portion B/844 is currently reserved for "Government" purposes. Government purposes. It is the intention of the owners to rezone proposed Portion A of Er1912, Ornuthys Extension 3 from "Public Open Space" to "Government", proposed Portion B of Er1912, Omuthya Extension 3 from "Government" to "Public Open Space" and consequently consolidate with two other portions. The proposed portions, therefore, they are not constructed on the two proposed portions, therefore, they are not expected to have any regative impacts to the surrounding area nor the urban charactor.

Name of proponent: Mr. Christiaan Bazum

Christiaan Bazun Project location and description: Portion i is located asid km south of Windhoek on the Bi Road, directly northead of Omeya and is 778,8432ha in exidential with an approved consent for a Nature Estate. It is the internion to subdivide Portont to create land portons or a ruai readential development and nature estate, a service satison, positions for business use and streets to be used to access atison, positions for business use and streets to be used to access atison, positions for business use and streets to be used to access the newly created portions. A locality, subdivision and land use plan of the alle is displayed on the Town Planning Notice Board in the Customer Care Cente. Municipal Offices, OK and Crown Earth Environmental Consultants at Bridgevice Offices, N. 4 Dr. Weshook.

Further take notice that the plan of the erf lies for inspection on the town planning notice board of the Omulthya Town Council Omulthya and the applicant. Suite 4, Paragan Office Suites, Garten Street, Windhoek. Interested and affected parties are heroby invited to register in terms of the assessment process to give input, comments and opnicers regarding the propeed project. A public meeting will be held only if there is enough public inferest. Only I&APs that registered will be notified of the possible public meeting to be held. Further take notice that any person objecting to the proposed use of the land as set out above may lodge such objection together with the grounds thereof, with the Town Council and with the applicant in writing within 14 days of the last publication of the notice. The last date for any objection is: 22 October 2020

The last date for comments and/or registration is 23 October 2020. Contact details for registration and further information: Dated at Omuthiya this 1st day of October 2020. Applicant: Nghivelwa Planning Consultants P O Box 40900, Ausspannplatz Web: www.nghivelwa.com.na Email: planning@nghivelwa. com.na

Green Earth Environmental Consultants Consultant Entremonstrate Consult Persons Charlie Du Toit/ Carien van der Walt Tel 0811273145 E - m ail: ch a r lie @ greenearthnamibia.com and carien@greenearthnamibia.com

Green Earth

Notice Notice Legal Notice Legal Notice

REZONING NOTICE

D U N A M I S CONSULTING TOWN, REGIONAL PLANNERS AND DEVELOPERS on behalf of the owner of Portion 178 (a Portion of Portion 58) Farm Brakwater No. 48 intends to apply to the Windhoek Municipal Council for the following:

 Rezoning of Portion 178 (a Portion of Portion 58) Farm Brakwater No. 48 from "Residential" with a density of 1:5ha to "Institutional" for a Rehabilitation and Recreational Centre, -Consent to commence with the proposed development while the rezoning process is rezoning process is being completed.

rezoning process is being completed. Portion 178 (a Portion of Portion 58) Farm Brakwater No. 48 is located in the North-Western Area of Brakwater. The property is currently zoned "Residential" with a density of 1:5ha and measures 5ha in extent. The new zoning of "Institutional" as primary use would allow the owner to operate an Animal supported Rehabilitation and Recreational Centre for the disabled and socially disadvantaged children on a total floor area of 2.5ha being 50% of the Portion size. On-site parking as required in terms of the Windhoek Town Planning Scheme will be provided for respectively. Further, take note that

Further, take note that the locality plan of the Erf can be inspected at the Windhoek Town Council Customer Care Centre Town Planning Notice Board, 80 Independence Avenue, Windhoek.

Further take note that any person objecting to the proposed land use as set out above may lodge such objection together with the grounds thereof in Writing at the Windhoek Urban Planning Offices Room 518, 5th Floor, Town House Main Building within 14 days of the last publication of this notice (final date for objections is October 21, 2020).

Cell: +264 855 512 173 Email: ndimuhona@ dunamisplan.com



Page 54

-cerusAll 1. Naro and podal address of applicant AMAALVA MARA POBIOX 247 ORAHAO 2. Name obsainess or proposed Business to which applicant relates OSHIMPERGULA SHIEBEEN 3. AddressL ozadion of premises to HICKOCA ULUXVALUDEN HICKOCA ULUXVALUDEN 5. Clerk of the court with whom Application with bu loaded

bate on which application will be Lodged;
 19-31 OCTOBER 2020
 7 Date of meeting of Committee at Which application will be heard;
 09 DECEMBER 2020
 Any objection or written submission

Committee to reach the sec not less than 21 days before t of the meeting of the Comm which the application will be

ILENI GEBHARDT & COMPANY INC LEGAL PRACTITIONERS FOR THE PLAINTIFF CNR OF BRUNO TEMPLIN & MARTIN NEIB STREETS OKAHANDJA (REF: ILE1/0001)

20

Employment CLASSIFIEDS es and Dead

of an advertisement not appearing on the date your with, please book timously - Classifieds smalls and holces: 12:00, two working days prior to pleating - Cancelfations and illurations: 16:00, two days effore date of publication in writing only Nat-

Notices (VAT Inclusive) gal Notice NS460.00 st Land Tite NS402.50 uor License NS402.50 the Change NS402.50 thdays from NS200.00

Terms and Conditions Apply.

Notice

NOTICE

PING AND IRONMENTAL IMPACT ESSMENT FOR SMALL LE MINING HOTSPOTS COMMERCIAL FARMS: COMMERCIAL FARMS: COMBOJO AND OMAPYU RONGO REGION

LIGNBO-LERONGO REGION here are ±70 Mining Claims, epistered to and worked by eaveral Small Scate Miners everal Small Scate Miners dopmentioned ent of eral Small Scare Minners Min search of sering produces erals on the aforemetioned is Prior to the exectment of Environmental Management (EMA) (Act 7 of 2007), ing Claim holders were only uitred to sign a Pro-Forma irrorimental Contract with Ministry of Environment, estry and Corrism (MEPT). In its of EMA, this has changed, ing Claim holders are now uitred to obtain Environmental arance certificates (ECC).

this end, an Environmental pactAssessment (EA) iscoing usy is being conducted on th farms to be followed by the mulation of Environmental magnement Pains (EMP) for ch farm. The EIA and EMPs failwithe SSM to apply for and fails in ECC for their respective ring Claims from MEFT.

asled and Affected Parties s) are hereby invited to ler for the ElA and to submit comments, interests, is and or inputs by 24 r 2020. A Background from Document (BID) is



d detaits okwao@wway.na 8864 5026 81 127 3027



TESEARCH, TRA

Tel: +264 85 3129363 Email: info@umbrellabc.co



TELEARCH, TRA

Tel: +264 85 3129363 Email: info@umbrellabc.co

APPENDIX 6

SSM MÆNNE KARIBIB (ELA 10.10.2020 Gult Blug Name & Joel Infashine WHX ELA constitut Box 25021, with elines Ciusijing 2. Butzi & Marja Kuhne (Otjimbojo Ost) 0811453533 kapu@iway.na 3. Joseph Xamist 08/2373153 4. Jablie Enestin. (otimbere OSI) 05/1274541 5. Alfred Samekeurs George - 0816241397 6. Augustines Creingos 08/273/272, 08/406366, augustine geryabiles 7. MOSES SIMON AXEL OSIZISZ496 Small miner 8. Imanuez stapounda DEIZ937452 Small miner 9. NAMITMUT Forbohn 0813044486 Small Mining 10. Europote Stillenson 0816866089 estillongo@esinorescurces.com 11. WILHELM ALWEENSO 08/3983/97 Kanonahunt@gmail.com 12. Nictor Angula 0812041572 Small Sale miner 13 NILIFAVALI I. THOMAS OB14028664 Smallsde Minor Small Sale Miner O 14 Kosnios Adenum BA Sucallsale mind Austi 6812726215 Stopping Miner N 0816582510 Small 15/miner 1skelto Tino kaperu Elizabeth Kaperu 0817524585 Small scale miner 19 Magreth Kaperi 0316969074 Small scale miner 20 Percatara & Metiopi 0812274651 Small S. Minors DI NARESH KUMPK OSIBAISII & Crowstone consultat 22 Joseph Musahle dør3191171 fruel min 23 Elizkie Eliandjo ogravessiog Fined Juli 24 Petrus Malapi osrajsisso Snullselmin 24 Petrus Malapi 081204 6572 Smell dale min Hangu 25

Attendances at Public Information Sharing Meeting at Karibib 0n 10 October 2020

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Harmony K. Musiyarira*, Ditend Tesh, Mallikarjun Pillalamarry and Nikowa Namate Department of Mineral and Process Engineering, Namibia University of Science and Technology, Windhoek, Namibia

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