SAVANNAH
ENVIRONMENTAL CONSULTANT SERVICES

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ENVIRONMENTAL SCOPING ASSESSMENT STUDY FOR THE PROPOSED HARVESTING OF ROSEWOOD AND KIAAT ON SMALL-SCALE FARM UNIT No. 1399 IN MASHARE CONSTITUENCY, KAVANGO EAST

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EXECUTIVE SUMMARY

Nondunge Brands and Investment CC (hereinafter “the proponent”) proposes the harvesting of Rosewood (Guibourtia coleosperma) and kiaat (Pterocarpus angolensis) from specific small scale farm units, namely Unit 1399 situated within the Mashare Constituency under the Shambyu Traditional Authority of the Kavango East Region, Namibia. Harvesting activities will be strictly confined to the farm units listed above, in accordance with land-use permissions, traditional authority jurisdiction, and statutory requirements.

The overall aim of the proposed project is to establish a model of community-based commercial forestry that balances livelihood improvement with long-term ecological sustainability. The project is intended to showcase how locally driven forestry initiatives can contribute to economic development without compromising the integrity and regeneration capacity of natural woodland ecosystems.

The proposed tree harvesting activities fall within the scope of the Environmental Management Act, 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment (EIA) Regulations of 2012. As such, these activities may not be undertaken without an Environmental Clearance Certificate (ECC).

To ensure compliance with the relevant environmental legislation, the proponent has appointed Savannah Environmental Consultant Services (SECS), an independent environmental consultancy, to undertake the required Environmental Scoping Assessment (ESA) process and to prepare and submit the application for an ECC on their behalf. The ESA process will identify potential environmental and socio-economic impacts associated with the proposed project and recommend appropriate mitigation measures to guide environmentally responsible project implementation.

PROJECT DESCRIPTION

Once the Environmental Clearance Certificate (ECC) is issued, the proponent will be permitted to commence with harvesting activities in accordance with the management measures outlined in the Environmental Management Plan (EMP) and in full compliance with the conditions issued by the Environmental Commissioner. The project will be implemented in three distinct phases, as outlined below:

Phase 1: Planning Phase – During this phase, the proponent ensures that all legal requirements are fulfilled, including the formal acquisition of harvesting rights from the relevant authorities, landowners and Traditional Authorities. This phase also includes permit applications, compliance checks and initial site assessments.

Phase 2: Setting-up Phase – This phase involves preparation of the designated sites, including the installation and mobilisation of machinery, equipment and temporary support structures. Access routes are confirmed, safety measures are established and the workforce is organised.

Phase 3: Operational Phase – This is the active period during which harvesting activities take place. It includes selective tree cutting, processing, loading and transport of timber, as well as continuous maintenance of the site, equipment and access routes. Environmental management actions, monitoring and reporting also occur throughout this phase to ensure ongoing compliance with the EMP and ECC conditions.

PUBLIC CONSULTATION

The public consultation process enabled the Environmental Consultant to identify potential impacts, mitigation measures, and project alternatives. Communication with Interested and Affected Parties (I&APs) was carried out through the circulation of a Background Information Document (BID) to pre-identified and newly registered I&APs, publication of notices in Windhoek observer and *New Era* and a consultation meeting with affected landowners. All inputs from the consultation, together with findings from the site visit and literature review, were integrated into the Environmental Scoping Assessment (ESA) Report and Environmental Management Plan (EMP).

POTENTIAL IMPACTS IDENTIFIED.

The proposed project is expected to deliver benefits such as job creation, and stimulation of the local economy. Potential adverse impacts include temporary disturbance to soil and vegetation during harvesting operations, dust and noise generation, waste production, occupational health and safety risks, visual impacts, and possible soil or water contamination from accidental spills. These impacts will be evaluated in detail, with appropriate mitigation measures outlined in the Environmental Management Plan.

RECOMMENDATIONS

The Environmental Consultant is confident that the potential negative impacts associated with the proposed project can be effectively managed through the implementation of recommended mitigation measures. Proper monitoring and strict adherence to these measures will further ensure that the activities are undertaken in a sustainable and environmentally responsible manner.

DISCLAIMER

The findings and conclusions presented in this report were prepared in accordance with the methodologies outlined in the Scope of Work and the Environmental Management Act (EMA), 2007, which represent accepted practice for conducting an Environmental Impact Assessment (EIA). While due care was taken to identify recognised environmental conditions, certain site conditions may not have been identifiable within the scope of the assessment or based on available information.

The Consultant considers the information obtained from public consultations, interviews, and documentary reviews to be reliable. However, no warranty is made regarding the completeness or accuracy of information provided by external sources. The conclusions and findings are limited to the date of evaluation, and no additional warranties, expressed or implied, are provided. This report is also subject to the limitations inherent in historical documentation, record accuracy, and the recollections of individuals consulted.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AMSL	Above Mean Sea Level
BID	Background Information Document
CV	Curriculum Vitae
DEAF	Department of Environmental Affairs and Forestry
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ESA	Environmental Scoping Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
GG	Government Gazette
GN	Government Notice
I&Aps	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
MIME	Ministry of Industries , Mines and Energy
PPE	Personal Protective Equipment
Reg	Regulation
S	Section
TOR	Terms of Reference

1 INTRODUCTION

1.1 Project Background

Nondunge Brands and Investment CC, hereafter referred to as the Proponent, has appointed Savannah Environmental Consultant Services CC (SECS), hereafter referred to as the Environmental Consultant, to undertake an Environmental Scoping Assessment (ESA) and Environmental Impact Assessment (EIA) process for the proposed selective harvesting of Rosewood (Guibourtia coleosperma) and Kiaat (Pterocarpus angolensis) on small-scale farm unit No. 1399 located within the Mashare Constituency under the jurisdiction of the Shambyu Traditional Authority, Kavango East Region, Namibia (Figure 1).

The proposed project will be implemented strictly within the legally recognised boundaries of the identified farm units and will not extend beyond approved land-use areas. Harvesting activities will be undertaken in accordance with customary land tenure systems, Traditional Authority approvals, statutory land-use permissions, and national environmental and forestry legislation.

The proposed development forms part of a broader national and regional objective to promote sustainable utilisation of indigenous forest resources through regulated, community-based commercial forestry systems. Namibia's woodland ecosystems, particularly in the Kavango East Region, provide both ecological services and socio-economic value to rural communities. However, unsustainable and illegal timber harvesting practices have historically contributed to forest degradation, biodiversity loss and ecosystem instability. The proposed project seeks to address these challenges by introducing a regulated, traceable and legally compliant harvesting framework that integrates conservation principles with livelihood development.

The project aims to establish a model of community-based commercial forestry that balances rural economic development with long-term ecological sustainability. It is intended to demonstrate how controlled timber harvesting, when supported by scientific management principles, regulatory oversight and community governance structures, can contribute to poverty alleviation, income diversification and rural infrastructure development without compromising woodland ecosystem integrity, species regeneration capacity or biodiversity conservation.

The proposed harvesting initiative aligns with Namibia's broader environmental governance framework, sustainable land-use planning objectives, and natural resource management

strategies, which emphasise conservation, responsible resource utilisation, community participation, and intergenerational equity in the use of indigenous natural resources.

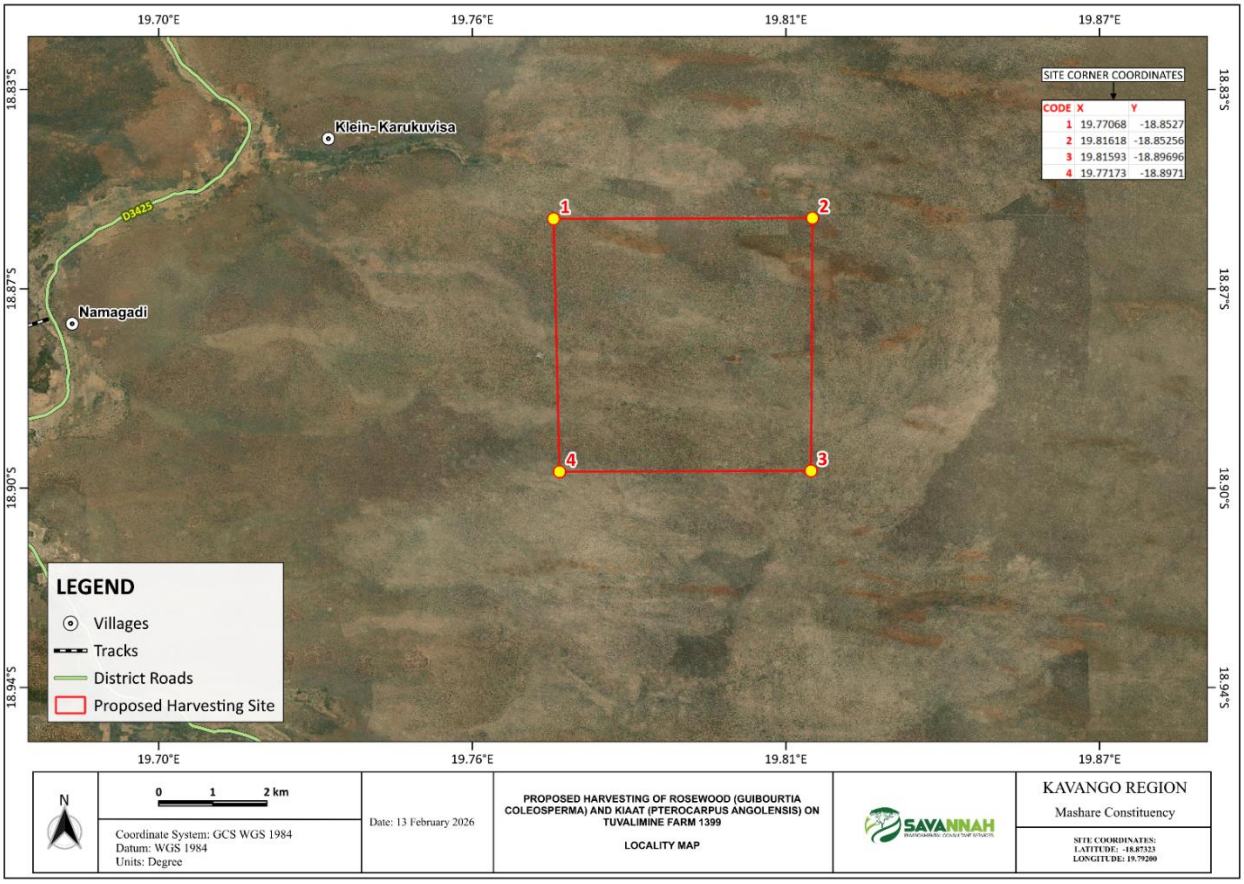

Figure 1 The location of the proposed project

Section 27 (1) of the Environmental Management Act (EMA) (No. 7 of 2007) and its 2012 Environmental Impact Assessment (EIA) Regulations, provides a list of activities that may not be carried out without an EIA undertaken and an ECC obtained.The proposed activity is among the activities listed that may not occur without an ECC. Therefore, no individuals or organizations may carry out the proposed activities without an ECC being granted.

1.2 The Need for an ESA and Environmental Clearance Certificate (ECC)

The proposed activity is listed under the Environmental Impact Assessment (EIA) Regulations of 2012, promulgated in terms of the Environmental Management Act (EMA), No. 7 of 2007, and may not be undertaken without an Environmental Clearance Certificate (ECC).

In accordance with the Environmental Management Act, No. 7 of 2007, and the Environmental

Impact Assessment Regulations (Government Gazette No. 4878, GN No. 30 of 2012), the proposed project triggers the following listed activities:

(4) The clearance of forest areas, deforestation, afforestation, timber harvesting or any other related activity that requires authorisation in terms of the Forest Act, 2001 (Act No. 12 of 2001) or any other applicable law;

(9.2) Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.

Accordingly, the proposed harvesting project may not legally commence without the successful completion of the ESA/EIA process and the issuance of an Environmental Clearance Certificate by the Environmental Commissioner.

The purpose of the Environmental Scoping Assessment and subsequent issuance of the ECC is to ensure that the proposed harvesting activities are undertaken in an environmentally responsible, socially equitable and economically sustainable manner. This will be achieved through the identification of potential impacts, implementation of appropriate mitigation measures, and the application of effective environmental management systems to minimise adverse impacts while maximising socio-economic benefits.

1.3 Terms of Reference, Scope of Works and Appointed EA Practitioner

There were no formal Terms of Reference (ToR) provided to Savannah Environmental Consultant Services by the Proponent. Thefore consultant, instead, relied on the requirements of the Environmental Management Act (No. 7 of 2007) (EMA) and its EIA Regulations (GN. No. 30 of 2012) to conduct the study.

The EIA project is headed by Ms. Aili Iipinge a qualified and experienced EAP. The consultation and reporting process are being carried out by Ms. Aili Iipinge ,her resume is presented as an appendices.

1.4 Motivation for the Proposed Project

Rural communities in the Kavango East Region remain highly dependent on subsistence agriculture and natural resource utilisation for livelihoods and household income. Limited access to diversified income streams, formal employment opportunities and infrastructure development continues to constrain socio-economic development in communal and small-scale farming areas.

Indigenous timber resources, particularly Rosewood (Guibourtia coleosperma) and Kiaat (Pterocarpus angolensis), represent high-value species with significant economic potential. However, unmanaged and illegal harvesting practices have contributed to woodland degradation, loss of ecological integrity, and long-term resource depletion. This project is motivated by the need to transition from informal and unsustainable extraction practices towards a regulated, legally compliant and ecologically sustainable harvesting system.

The proposed project seeks to create a structured community-based forestry model that integrates sustainable harvesting principles, legal compliance, traceability systems and reinvestment of revenues into local development. Revenue generated from timber harvesting is intended to support essential farm and community infrastructure, including fencing, water supply systems, agricultural improvements and livelihood diversification initiatives.

The project further responds to national objectives for sustainable natural resource management, biodiversity conservation, and rural development, as articulated in Namibia's environmental governance framework and forestry policies. By promoting responsible forest utilisation, regeneration monitoring and long-term resource planning, the project contributes to the conservation of woodland ecosystems while supporting socio-economic development.

Accordingly, the proposed harvesting initiative represents a balanced development intervention that addresses livelihood needs, conservation priorities and governance objectives, and provides a sustainable pathway for integrating indigenous forest resources into formal rural economic systems.

2 PROJECT DESCRIPTION

2.1 Project Overview

The proposed project entails the regulated harvesting, processing and commercial utilisation of rosewood (Pterocarpus angolensis) and kiaat (Baikiaea plurijuga) within designated commercial small-scale farming units in the Kavango East Region, Namibia. The activity is intended to operate as a controlled, legally compliant forestry operation aligned with national forest management objectives, sustainable utilisation principles, and biodiversity conservation requirements.

The project will be implemented as a structured forestry harvesting programme rather than ad hoc extraction, incorporating formal permitting, ecological screening, traceability systems, community participation and regulatory oversight. The harvesting will be limited to approved trees meeting minimum diameter thresholds, legal species classification, and ecological sustainability criteria, as defined by the Forest Act, 2001 (Act No. 12 of 2001) and relevant forestry regulations and guidelines.

The project forms part of a broader strategy to formalise timber utilisation, reduce illegal logging pressures, strengthen governance within the forestry sector, and create regulated livelihood opportunities for local communities in the Kavango East Region.

2.2 Project Location and Spatial Context

The proposed harvesting activities will occur within designated commercial small-scale farming units in the Kavango East Region, under the jurisdiction of relevant Traditional Authorities, Regional Council structures and forestry governance institutions.

The project area is characterised by:

- Semi-arid to sub-humid woodland ecosystems
- Miombo and Baikiaea, Burkea and Pterocarpus-dominated woodland formations
- Communal land tenure systems
- Mixed land-use patterns including subsistence agriculture, grazing, settlement areas and natural woodland conservation zones

Specific operational zones will be demarcated through field verification, ecological screening, traditional authority consultation and forestry permitting processes prior to harvesting activities.

2.3 Nature and Components of the Proposed Activity

The project comprises the following core components:

a) Resource Identification and Inventorying

Systematic field surveys to identify harvestable rosewood and kiaat trees, including:

- Species verification
- Diameter at breast height (DBH) measurement
- Tree health assessment
- Spatial mapping and tagging
- Exclusion of protected, juvenile, seed and ecologically critical trees

b)Selective Harvesting Operations

Controlled, low-impact selective harvesting using approved methods that minimise ecological disturbance, including:

- Directional felling
- Limited machinery use
- Manual extraction where feasible
- Protection of surrounding vegetation
- Soil disturbance minimisation

c) Timber Processing and Handling

Primary processing activities including:

- On-site log preparation
- Temporary storage
- Transport to approved processing or storage facilities
- Compliance with phytosanitary and transport regulations

d) Transportation and Logistics

Transport of timber through approved routes using licensed operators, with:

- Load documentation
- Permit verification
- Chain-of-custody documentation
- Traceability systems

e) Rehabilitation and Site Management

Post-harvest site management including:

- Natural regeneration facilitation
- Assisted regeneration where required
- Soil stabilisation
- Access route rehabilitation
- Long-term woodland recovery measures

2.4 Project Phases

The project will be implemented in structured phases:

Phase 1: Planning and Authorisation

- Environmental Scoping Assessment (ESA)
- Environmental Clearance Certificate (ECC) application
- Forestry permitting
- Stakeholder consultation
- Traditional Authority approvals
- Community engagement

Phase 2: Baseline Surveys and Demarcation

- Ecological baseline assessments
- Tree inventorying
- Spatial mapping
- Harvest zone demarcation
- Conservation exclusion zones

Phase 3: Operational Harvesting

- Selective harvesting
- Controlled extraction
- Timber handling and storage
- Transport operations

Phase 4: Rehabilitation and Monitoring

- Site rehabilitation
- Regeneration monitoring
- Compliance auditing
- Environmental performance monitoring

2.5 Scale and Intensity of Operations

The project will operate at a **controlled, regulated scale**, based on:

- Annual harvesting quotas
- Forestry permit conditions
- Regeneration capacity
- ecological carrying capacity
- biodiversity sensitivity
- community land-use patterns

The scale of harvesting will be adaptive and responsive to monitoring results, ensuring that extraction rates remain within sustainable ecological thresholds.

2.6 Required Infrastructure

The project will utilise limited and low-impact infrastructure, including:

- Temporary access tracks
- Mobile sawmill for processing of logs into planks
- Chainsaws for felling live trees
- 4x4 Tractor to compile log to central point
- 1519 4x4 Truck to transport planks

- Temporary log storage areas
- Signage and demarcation markers
- Monitoring and control points

No permanent industrial processing infrastructure is proposed within sensitive woodland areas.

2.7 Workforce and Community Participation

The project will prioritise:

- Local employment
- Community participation
- Skills development
- Forestry stewardship training
- Community-based monitoring roles
- Traditional authority involvement

This approach supports socio-economic development while strengthening community ownership of sustainable forest resource management.

2.8 Alignment with National Development and Conservation Objectives

The project supports national objectives relating to:

- Sustainable natural resource management
- Biodiversity conservation
- Climate resilience
- Rural economic development
- Illegal logging prevention
- Forest governance strengthening
- Community-based natural resource management (CBNRM)

The project is designed to function as a regulated forestry model that integrates conservation, economic development and governance within a single operational framework.

Other aspects of the proposed site includes:

2.8.1 Accessibility to Site

The site is accessible via the existing roads . Thus where possible, the layout of these roads would be designed to coincide with the existing dirt tracks. The design of the new access point would be undertaken by a professional engineer to ensure the safety of road users.

2.8.2 Services and Infrastructure

- **Power supply:** The Portable sawmill used to process logs into planks will use About 200 to 400 liters of petrol per day.
- **Fuel (diesel for tractor, 1519 truck and chainsaws and petrol for portable sawmill):** The fuel required for equipment will be stored in a tank mounted on a mobile trailer. Drip trays will be readily available and monitored to ensure that accidental fuel spills are cleaned up as soon as they have been detected/observed. Fuel may also be stored in a bunded diesel bowser on site, and in jerry cans placed on plastic sheeting to avoid unnecessary contamination of soils.

2.8.3 Waste Management

- **Sewage Management:**
  Mobile chemical ablution facilities will be provided on-site. Sewage waste will be managed and disposed of in accordance with the manufacturer's instructions to ensure compliance with health and environmental standards.
- **Solid Waste Management:**
  Adequate waste bins and containers will be made available at all sites and campsites. Collected waste will be stored safely and transported for disposal at the nearest approved waste management facility.

2.8.4 Health and Safety Measures

- All project personnel will be provided with adequate and appropriate Personal Protective Equipment (PPE).
- A minimum of twenty well-stocked first aid kits will be available on-site at all times.
- Fire extinguishers will be readily available in vehicles, at harvesting sites, and at campsites to mitigate risks of accidental fire outbreaks.

3 PROJECT ALTERNATIVES

Alternatives are defined as the “different means of meeting the general purpose and requirements of the activity” (EMA, 2007). This section highlights the different ways in which the project can be undertaken and identifies alternatives that may be the most practical, but least damaging to the environment.

Once the alternatives have been established, these are examined by asking the following three questions:

- What alternatives are technically and economically feasible?
- What are the environmental effects associated with the feasible alternatives?
- What is the rationale for selecting the preferred alternative?

3.1 Types of Alternatives Considered

3.1.1 The "No-go" Alternative

The “no action” alternative implies that the status quo remains. Should the proposal be discontinued, none of the potential impacts (positive and negative) identified would occur. If the proposed project is to be discontinued, the current land use for the proposed site would remain unchanged.

This no-go option is considered and a comparative assessment of the environmental and socio-economic impacts of the “no action” alternative, is undertaken to establish what benefits might be lost if the project is not implemented.

Alternatives are defined as the different means of achieving the objectives of a proposed activity while minimising environmental, social and economic impacts, in accordance with the Environmental Management Act (No. 7 of 2007). This section outlines the feasible alternatives for the proposed rosewood and kiaat harvesting project and provides a structured assessment of options in terms of technical feasibility, environmental sustainability, regulatory compliance and socio-economic viability. The alternatives analysis provides the basis for identifying the preferred project option and justifying the proposed development approach.

3.1 Types of Alternatives Considered

3.1.1 The "No-Go" Alternative

The no-go alternative assumes that the proposed harvesting project is not implemented and that no commercial harvesting of rosewood and kiaat takes place on the identified farm units. Under this option, the current land-use practices, woodland conditions and livelihood systems would remain unchanged.

This alternative would avoid all direct environmental impacts associated with harvesting activities, including vegetation removal, soil disturbance, habitat modification and increased access pressures. However, it would also result in the loss of potential socio-economic benefits, including regulated income generation, employment creation, skills development, community infrastructure investment and the formalisation of forestry governance systems.

Furthermore, the no-go option does not address existing risks associated with illegal and unregulated timber harvesting, which often leads to uncontrolled forest degradation, biodiversity loss and long-term resource depletion. The no-go alternative is therefore retained for comparative assessment purposes but is not considered to be developmentally or environmentally optimal in the long term.

3.1.2 Harvesting Area (Spatial Location) Alternative

Alternative harvesting areas were considered within the Kavango East Region, including different commercial small-scale farming units and woodland zones under traditional authority jurisdiction. Site selection was informed by ecological sensitivity, woodland composition, species distribution, land-use patterns, accessibility, community governance structures and regulatory feasibility.

The selected farm units in the Mashare and Ndiyona Constituencies were identified as the preferred spatial alternative due to:

- Presence of target species populations (rosewood and kiaat)
- Existing community land-use systems
- Traditional Authority governance structures
- Accessibility for controlled operations
- Potential for community-based management integration
- Reduced pressure on formally protected conservation areas

This option represents the most socially acceptable, ecologically manageable and institutionally feasible spatial alternative for regulated harvesting.

3.1.3 Harvesting Method Alternatives

Different harvesting approaches were assessed, including:

- Clear-felling systems
- Block harvesting
- Selective harvesting
- Community-based low-impact extraction

Clear-felling and block harvesting methods were rejected due to their high ecological impact, habitat destruction potential, soil degradation risks and incompatibility with sustainable forestry principles.

Selective harvesting was identified as the preferred alternative, as it allows for controlled removal of approved trees while maintaining woodland structure, biodiversity integrity, regeneration potential and ecological connectivity. Selective harvesting minimises canopy disruption, soil disturbance and habitat fragmentation, making it the most environmentally sustainable operational model.

3.1.4 Technology and Equipment Alternatives

Alternative harvesting technologies were assessed, including:

- Heavy mechanised logging equipment
- Semi-mechanised systems
- Manual and low-impact harvesting tools

Heavy mechanised systems were excluded due to their high soil compaction risk, vegetation damage potential, erosion impacts and infrastructure disturbance. The preferred option is a low-impact, semi-mechanised harvesting system that integrates manual techniques with limited machinery use, allowing operational efficiency while maintaining environmental protection.

3.1.5 Operational Scale Alternatives

Alternative operational scales were considered, including:

- Large-scale commercial extraction
- Medium-scale regulated harvesting
- Small-scale community-based harvesting

Large-scale extraction models were rejected due to ecological sustainability risks and governance challenges. The preferred option is a controlled, small- to medium-scale regulated harvesting model based on annual quotas, regeneration capacity, ecological thresholds and adaptive management principles.

3.2 Services and Infrastructure Alternatives

Supporting infrastructure alternatives were assessed to ensure minimal environmental disturbance and long-term sustainability. The service infrastructure alternatives are presented below.

Table 1: Service infrastructure alternatives for tree harvesting activities

Category	Alternatives Considered	Justification for Selected Alternative
Access Routes	• New access roads • Use of existing tracks	Existing tracks and pathways will be used to minimise vegetation clearance, soil disturbance and habitat fragmentation.
Storage Areas	• Permanent depots • Temporary log storage areas	Temporary log storage areas were selected to avoid permanent land transformation and long-term visual impacts.
Camps and Facilities	• Permanent camps • Mobile temporary camps • Off-site facilities	Mobile temporary facilities were selected to allow full site rehabilitation after operations.
Transport Systems	• Heavy transport fleets • Controlled licensed transport	Controlled licensed transport ensures traceability, compliance and reduced infrastructure pressure.
Fuel Storage	• Permanent tanks • Mobile bunded storage	Mobile bunded storage reduces pollution risk and long-term site contamination.

3.3 Preferred Alternative and Rationale

The preferred project alternative is a **regulated, selective, community-based harvesting model** implemented within approved commercial small-scale farm units, using low-impact harvesting methods, controlled operational scales, limited infrastructure development and adaptive management systems.

This alternative is preferred because it:

- Minimises environmental disturbance
- Protects woodland structure and biodiversity
- Maintains ecological regeneration capacity
- Supports legal compliance and traceability
- Strengthens community governance
- Promotes sustainable livelihoods
- Aligns with national forestry and environmental policies

The preferred alternative represents the most balanced option between environmental protection, socio-economic development and regulatory compliance, and provides a sustainable framework for indigenous timber resource utilisation in the Kavango East Region.

4 LEGAL FRAMEWORK: LEGISLATION, POLICIES, AND GUIDELINES

This section outlines the relevant legal frame works that the proponent should consider once the ECC of the proposed project is issued .The legislations included or identified in this document, need to be honored by the proponent, during the course of the project. The legal requirements provided here are those that are required for the proposed project are presented in table 3 below.

Table 2 Regulatory framework applicable to the project

Legislation Required	Custodian Organ of State	Aspect of the Project Regulated
Constitution of the Republic of Namibia (1990)	Government of the Republic of Namibia	Undertake Environmental Assessment to protect the environment and maintain ecological process.
Environmental Management Act No. 7 of 2007 & EIA Regulations (2012)	MEFT – Department of Environment, Forestry and Agriculture (DEAF)	Requires environmental clearance, public participation, impact assessment, and implementation of mitigation measures via an EMP.
Pollution Control and Waste Management Bill	MEFT and relevant authorities	The proponent is required to minimize air, water, noise, dust pollution, and waste arising from the harvesting operations.
Water Act No. 54 of 1956	MAWLR – Department of Water Affairs	Water must be used sparingly, regulation of waste water and effluents, and prevention of water pollution by project activities.
Water Resources Management Act No. 11 of 2013	MAWLR	Water must be used sparingly, regulation of waste water and effluents, and prevention of water pollution by project activities.
Forestry Act No. 12 of 2001	MEFT	Section 15, subsection 2d-… “confer the rights, subject to the management plan, to manage and use forest produce and other natural resources of

		the forest, to graze animals and to authorise others to exercise those rights and to collect and retain fees and impose conditions for the use of the forest produce or natural resources;" . The proponent is granted the right to utilize forest and other natural resources for his own benefit.
Soil Conservation Act No. 76 of 1969	MAWLR	Prevent soil erosion and degradation resulting from site clearing, and traffic movement.
Petroleum Products and Energy Act No. 13 of 1990 & Regulations (2001)	MIME – Petroleum Affairs Division	During harvesting operations fuel will be commonly used by chainsaws, portable sawmill, tractor and 1519 truck. Hydrocarbons must be handled with care by the proponent so it does not pollute the environment.
National Heritage Act No. 27 of 2004	Ministry of Education, Arts and Culture (MEAC)	The pronent must protect archaeological and heritage resources during the harvesting operation.
Public Health Act No. 36 of 1919	Ministry of Health and Social Services (MoHSS)	The proponent should ensure the harvesting site is off limits from the public to avoid injury or fatalities.
Labour Act, 2007	Ministry of Labour, Industrial Relations and Employment Creation (MLIREC)	The proponent must follow the labour laws to prevent any misunderstandings during the operation. Safe and conducive environment is the responsibility of the proponent.
Hazardous Substances Ordinance No. 14 of 1974	MoHSS	Harvesting operations must comply with the legal requirements.
National Solid Waste Management Strategy	MEFT & Local Authorities	Guides waste minimisation, recycling, storage, and disposal of harvesting and operational waste.

4.2 Other Application International Statutes (Treaties and Conventions) and Policies

The other international statutes, such as policies, standards, and conventions that may govern the project activities, are provided under Table 4.

Table 3 Other international treaties and conventions governing the proposed activities on the site

Statue	Relevant Provisions	Implications for the Project / Requirements
The United Nations Convention to Combat Desertificatio n (UNCCD) 1992	Address land degradation in arid regions to contribute to the conservation and sustainable use of biodiversity and the mitigation of climate change. The convention's objective is to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas to support poverty reduction and environmental sustainability, United Nations Convention.	The project activities should not be undertaken in such that contributes to desertification.
Convention on Biological Diversity 1992	Regulate or manage biological resources important for the conservation of biological diversity, whether within or outside protected areas, to ensure their conservation and sustainable use. Promote the protection of ecosystems, natural habitats, and the maintenance of viable populations of species in natural surroundings.	The removal of vegetation cover and destruction of natural habitats should be avoided and, where not possible, minimized.

Stockholm Declaration on the Human Environment, Stockholm (1972)	It recognizes the need for: “a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment.	Protection of natural resources and prevention of any form of pollution.
Equator Principles	A financial industry benchmark for determining, assessing, and managing environmental and social risk in projects (August 2013). The Equator Principles have been developed in conjunction with the International Finance Corporation (IFC) to establish an International Standard with which companies must comply to apply for approved funding by Equator Principles Financial Institutions (EPFIs). The principles apply to all new project financings globally across all sectors.	These principles are an attempt to: ‘…encourage the development of socially responsible projects, which subscribe to appropriately responsible environmental management practices with a minimum negative impact on project-affected ecosystems and community-based upliftment and empowering interactions.’

5 ENVIRONMENTAL BASELINE

The proposed project will be undertaken within defined environmental and social settings. Establishing the pre-project baseline conditions provides essential background information on the current state of the environment and allows for future projections of potential changes following the proposed activities on site. This process further assists the Environmental Assessment Practitioner (EAP) in identifying environmentally sensitive features that require protection through the implementation of appropriate mitigation measures and monitoring actions.

The baseline information presented in this report is derived from multiple sources, including published studies and technical reports related to the Onyaanya constituency , in Oshikoto region .Additional data was obtained by the Consultant during the site visit, ensuring that both secondary literature and primary field observations inform the environmental assessment.

5.1 Regional Context

The proposed rosewood and kiaat harvesting areas are located within the **Kavango East Region of north-eastern Namibia**, forming part of the broader **Kavango–Zambezi Transfrontier Conservation Area (KAZA TFCA) landscape**, one of the largest conservation and biodiversity corridors in southern Africa (KAZA Secretariat, 2014; Government of the Republic of Namibia, 2015). The region is characterised by extensive communal land tenure systems, traditional governance structures, and mixed subsistence–commercial land-use practices dominated by agroforestry, livestock grazing and woodland resource utilisation (MET, 2014; Mendelsohn et al., 2002). Traditional Authorities exercise legally recognised jurisdiction over land allocation and natural resource governance in accordance with the Traditional Authorities Act (Act No. 25 of 2000) (GRN, 2000).

5.2 Climate and Meteorological Conditions

The Kavango East Region experiences a **sub-humid to semi-arid climate**, with rainfall concentrated in the summer season between November and March. Mean annual rainfall ranges between **500 mm and 650 mm**, making the region one of Namibia's higher rainfall zones (Mendelsohn et al., 2002; MET, 2014). Mean annual temperatures range between **20°C and 25°C**, with summer maxima frequently exceeding **35°C**, and winter minima rarely dropping below **5–8°C** (Schneider & Coetzee, 2004). High evapotranspiration rates create moisture-limited

ecological systems, making vegetation regeneration highly dependent on rainfall variability and seasonal climatic stability (FAO, 2006).

5.3 Topography and Geomorphology

The project area lies within the **Kalahari Basin geomorphological province**, characterised by flat to gently undulating terrain, low relief landscapes and extensive sandy plains (Mendelsohn et al., 2002). The geomorphology is dominated by **aeolian Kalahari sands**, forming broad flat surfaces, shallow depressions and ephemeral drainage lines (Schneider & Coetzee, 2004). These landforms are ecologically fragile and highly susceptible to compaction, erosion and surface disturbance when subjected to mechanical activities (FAO, 2006).

5.4 Soils and Land Capability

Soils are predominantly **arenosols derived from Kalahari sands**, characterised by low clay content, low nutrient availability, poor organic matter content and limited water-holding capacity (FAO, 2006; Mendelsohn et al., 2002). These soils are highly vulnerable to compaction, erosion and degradation when vegetation cover is removed or heavy machinery is used (FAO, 2006). Sustainable land use in such systems is dependent on maintaining woodland cover, minimising soil disturbance and preserving organic matter inputs.

5.5 Vegetation and Floral Communities

The region supports **broad-leafed deciduous woodland ecosystems**, dominated by **Baikiaea plurijuga (Teak)** and **Miombo-type woodlands**, with key species including *Pterocarpus angolensis*, *Guibourtia coleosperma*, *Burkea africana*, *Terminalia sericea*, *Schinziophyton rautanenii*, *Brachystegia* spp. and *Julbernardia* spp. (Mendelsohn et al., 2002; Burke, 2004).
Rosewood (*Pterocarpus angolensis*) and Teak (*Baikiaea plurijuga*) are slow-growing, late-maturing hardwood species with long regeneration cycles, making them ecologically vulnerable to over-exploitation (Botha, 2006; De Cauwer et al., 2018). These species play critical roles in canopy structure, carbon sequestration, habitat provision and woodland stability (MET, 2014).

5.6 Faunal Environment and Biodiversity

The Kavango woodland ecosystems support diverse faunal assemblages including mammals, reptiles, amphibians, birds and invertebrates (Mendelsohn et al., 2002). The region forms part of wider wildlife movement corridors linked to the KAZA TFCA, making habitat integrity critical for biodiversity conservation (KAZA Secretariat, 2014). Woodland disturbance can result in habitat fragmentation, species displacement and disruption of ecological connectivity (MET, 2014).

5.7 Hydrology and Water Resources

Surface water resources are predominantly **seasonal**, consisting of ephemeral drainage lines and shallow depressions, while groundwater provides the main permanent water source for communities (Schneider & Coetzee, 2004). Vegetation cover plays a key role in regulating infiltration, runoff, erosion and groundwater recharge processes (FAO, 2006). Woodland degradation increases sedimentation risks, surface runoff and hydrological instability (MET, 2014).

5.8 Land Use and Human Environment

Land use is dominated by communal systems including subsistence farming, livestock grazing, settlement development and woodland resource utilisation (MET, 2014; Mendelsohn et al., 2002). Forests provide essential ecosystem services and livelihood resources, including fuelwood, construction materials, wild foods and medicinal plants (Botha, 2006).

5.9 Socio-economic Conditions

The Kavango East Region is characterised by high rural population density, limited formal employment opportunities and strong dependence on natural resource-based livelihoods (NSA, 2022). Community-based natural resource management and sustainable forestry are recognised as important mechanisms for poverty alleviation, livelihood diversification and rural development (MET, 2014).

5.10 Cultural Heritage and Traditional Governance

Traditional Authorities play a central role in land allocation, resource governance and cultural heritage protection (GRN, 2000; MET, 2014). Forests and trees have cultural, spiritual and traditional medicinal significance, and woodland areas may contain sacred sites, ancestral landscapes and culturally protected areas (Government of the Republic of Namibia, 2015).

5.11 Environmental Sensitivity Summary

The receiving environment is characterised by ecologically sensitive woodland systems, fragile sandy soils, slow-regenerating hardwood species, high biodiversity value, community dependence on forest resources, and regional conservation importance. Sustainable harvesting therefore requires strict regulatory control, adaptive management, regeneration protection and long-term ecological monitoring to prevent irreversible environmental degradation (MET, 2014; De Cauwer et al., 2018).

6 PUBLIC CONSULTATION PROCESS

Public consultation is an important component of an Environmental Assessment (EA) process. It provides potential Interested and Affected Parties (I&APs) with an opportunity to comment on and raise any issues relevant to the project for consideration as part of the assessment process, thus assisting the Environmental Assessment Practitioner (EAP) in identifying all potential impacts and what extent further investigations are necessary. Public consultation can also aid in the process of identifying possible mitigation measures. Public consultation for this scoping study has been done in accordance with the EMA and its EIA Regulations.

6.1 Pre-identified and Registered Interested and Affected Parties (I&APs)

Relevant and applicable national, regional, and local authorities, local leaders, and other interested members of the public were identified. Pre-identified I&APs were contacted directly, while other parties who contacted the Consultant after project advertisement notices in the newspapers, were registered as I&APs upon their request.

6.2 Communication with I&Aps

Regulation 21 of the EIA Regulations details the steps to be taken during a public consultation process and these have been used in guiding this process. Communication with I&APs with regard to the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing brief information about the proposed works was compiled and emailed to pre-identified I&APs, and upon request to all new registered I&APs;
- Notices for the Environmental Scoping Assessment of the proposed project were published in Windhoek observer and New Era newspapers briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns.
- A consultation meeting was scheduled and held with the affected landowners .
- All comment and concerns received via email were recorded .

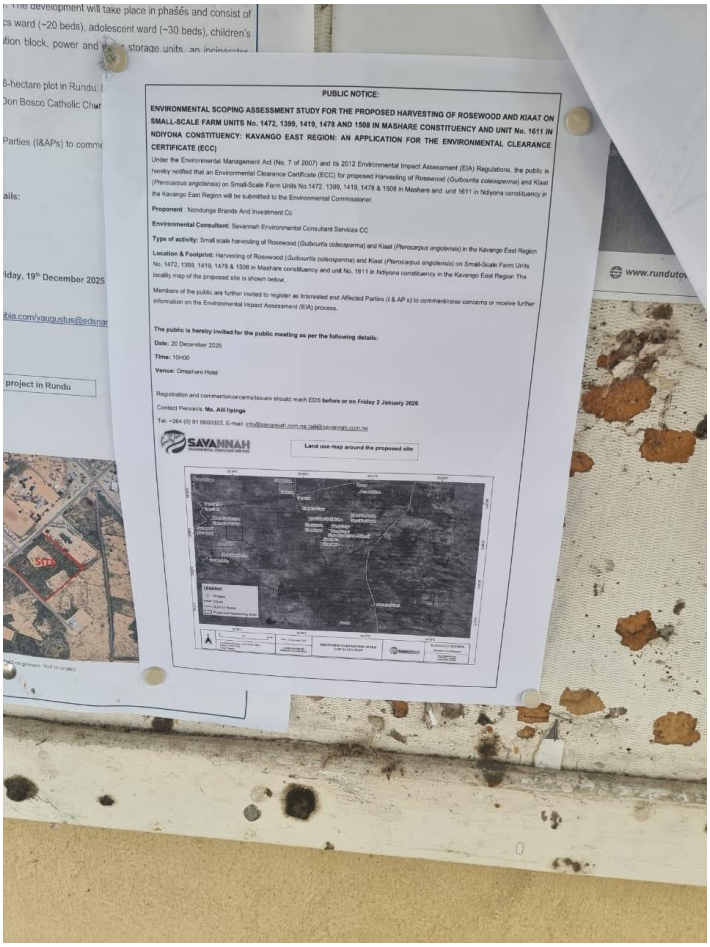

Figure 2 EIA public notice placed in Rundu

Figure 3: EIA consultation meeting held in Rundu

6.3 Feedback and Issues Raised by the Stakeholders (I&APs)

Some key issues were raised by I&APs during the consultation period, and these issues have been recorded and incorporated in the Scoping Report and EMP. The key issue is presented bellow:

1. Destruction of dirt roads by 4x4 1519 truck.

7 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION MEASURES

7.1 Impact Identification

Proposed developments/activities are usually associated with different potential positive and/or negative impacts. For an environmental assessment, the focus is placed mainly on the negative impacts. This is done to ensure that these impacts are addressed by providing adequate mitigation measures such that an impact's significance is brought under control, while maximizing the positive impacts of the development. The potential positive and negative impacts that have been identified from the prosposed activities are listed as follow:

Positive impacts (although temporary):

- Employment creation.
- Strengthen local socio-economic resilience by reinvesting revenues into farm infrastructure, fencing, and water systems.
- Provide small-scale farmers with sustainable economic returns through legal timber extraction.

Potential negative (adverse) impacts:

- Temporary disturbance to soil and vegetation
- Dust and noise generation,
- Waste generation,
- Occupational health and safety risks,
- Visual impacts, and
- The potential for soil or water contamination from accidental spills.

7.2 Impact Assessment Methodology a

7.2.1 Impact Assessment Methodology

The Environmental Assessment process primarily ensures that potential impacts that may occur from project activity are identified and addressed with environmentally cautious

approaches and legal compliance. The impact assessment method used for this project is following Namibia's Environmental Management Act (No. 7 of 2007) and its Regulations of 2012, as well as the International Finance Corporation (IFC) Performance Standards.

The identified impacts were assessed in terms of scale/extent (spatial scale), duration (temporal scale), magnitude (severity), and probability (likelihood of occurring), as presented in Table 6.

To enable a scientific approach to the determination of the environmental significance, a numerical value is linked to each rating scale. This methodology ensures uniformity and that potential impacts can be addressed in a standard manner so that a wide range of impacts are comparable. It is assumed that an assessment of the significance of a potential impact is a good indicator of the risk associated with such an impact. The following process will be applied to each potential impact:

- Provision of a brief explanation of the impact,
- Assessment of the pre-mitigation significance of the impact; and
- Description of recommended mitigation measures.

The recommended mitigation measures prescribed for each of the potential impacts contribute towards the attainment of environmentally sustainable operational conditions of the project for various features of the biophysical and social environment. The following criteria (in Table 6) were applied in this impact assessment:

Table 4: Criteria used for impact assessment (extent, duration, intensity, and probability)

The Criteria used to assess the potential negative impacts.				
The extent or (spatial scale) - extent is an indication of the physical and spatial scale of the impact.				
Low (1)	**Low/Medium (2)**	**Medium (3)**	**Medium/High (4)**	**High (5)**
The impact is localized within the site boundary: Site only	The impact is beyond the site boundary: Local	Impacts felt within adjacent biophysical and social environments:	Impact widespread far beyond the site boundary: Regional	Impact extends to the National or over international boundaries

		Regional		
Duration- Duration refers to the timeframe over which the impact is expected to occur, measured over the lifetime of the project				
Low (1)	**Low/Medium (2)**	**Medium (3)**	**Medium/High (4)**	**High (5)**
The Criteria used to assess the potential negative impacts.				
Immediate mitigating measures, immediate progress	The impact is quickly reversible, and short- term impacts (0-5 years)	Reversible over time; medium-term (5-15 years)	Impact is long-term	Long-term; beyond closure; permanent; irreplaceable or irretrievable commitment of resources
Intensity, Magnitude/severity - Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. This is a qualitative type of criteria.				
H-(10)	**M/H-(8)**	**M-(6)**	**M/L-(4)**	**L-(2)**
Very high deterioration, high quantity of deaths, injury or illness / total loss of habitat, total alteration of ecological processes, extinction of rare species	Substantial deterioration,death, illness or injury, loss of habitat/diversityor resource,severe alteration, or disturbance of important processes	Moderate deterioration,discomfort, partial loss of habitat/biodiversity or resource, moderate alteration	Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species numbers	Minor deteriorati on, nuisance or irritation, minor change in species/habitat/diversity or resource, no or very little quality deterioration.
Probability of occurrence - Probability describes the likelihood of the impacts occurring. This determination is based on previous experience with similar projects and/or based on professional judgment.				

Low (1)	Medium/Low (2)	Medium (3)	Medium/High (4)	High (5)
Improbable;low likelihood; seldom.No known risk or vulnerability to natural or induced hazards.	Likely to occur from time to time. Low risk or vulnerability to natural or induced hazards	Possible,distinct possibility, frequent. Low to medium risk or vulnerability to natural or induced hazards.	Probable if mitigating measures are not implemented. Medium risk of vulnerability to natural or induced hazards.	Definite (regardless of preventative measures), highly likely, continuous. High risk or vulnerability to natural or induced hazards.

7.2.2 Impact Significance

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact "without mitigation" is the main determinant of the nature and degree of mitigation required. As stated in the introduction to this chapter, for this assessment, the significance of the impact without prescribed mitigation actions was measured.

Once the above factors (Table 7-1) have been ranked for each potential impact, the impact significance of each is assessed using the following formula:

SP = (magnitude + duration + scale) x probability

The maximum value per potential impact is 100 significance points (SP). Potential impacts were rated as high, moderate, or low significance, based on the following significance rating scale (Table 7).

Table 5 : Impact significance rating scale

Significance	Environmental Significance Points	Color Code
High (positive)	>60	H
Medium (positive)	30 to 60	M
Low (positive)	<30	L
Neutral	0	N
Low (negative)	>-30	L
Medium (negative)	-30 to -60	M
High (negative)	>-60	H

For an impact with a significance rating of high, mitigation measures are recommended to reduce the impact to a low or medium significance rating, provided that the impact with a medium significance rating can be sufficiently controlled with the recommended mitigation measures. To maintain a low or medium significance rating, monitoring is recommended for a period to enable the confirmation of the significance of the impact as low or medium and under control.

The assessment of the project phases is done for both pre-mitigation (before implementing any mitigation) and post-mitigation (after mitigations are implemented). The objective of the mitigation measures is to first avoid the risk, and if the risk cannot be avoided, the mitigation measures to minimize the impact are recommended. Once the mitigation measures have been applied, the identified risk will be of low significance.

7.2.3 Description and Assessment of Potential Impacts

The potential impacts of the proposed project activities are described and assessed in Table 6. The management and mitigation measures in the form of management action plans are provided in the Draft EMP.

Assessment of Potential Negative Impacts

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Positive Impacts											
Job creation	The proposed harvesting activities will generate short-term employment opportunities for members of the local community for the duration of the project. Employment includes both skilled and semi-skilled positions, such as chainsaw operators, portable sawmill machine operators, general labourers, and support staff.	L / M- 2	L / M - 2	L / M - 4	L – 1	L - 8	M / H - 4	H - 5	M - 6	H - 5	H - 75

Commercial Small-Scale Farm Owner Compensation	The provision of financial compensation to affected landowners will result in a positive socio-economic impact through the generation of additional income. Such compensation is expected to enhance household cash flow, strengthen financial resilience, and contribute to improved livelihoods for participating farmers	L / M- 2	L / M - 2	L / M - 4	L – 1	L - 8	M / H - 4	H - 5	M - 6	H - 5	H - 75
Agro-Silvo-Pastoral Integration	Removing specific mature trees can improve light penetration for understory crops or grass for grazing. Controlled harvesting allows for better integration of crops, trees, and livestock.	L / M- 2	L / M - 2	L / M - 4	L / M - 2	L - 16	M - 3	M / H - 4	L / M - 4	M / H - 4	M - 44
Negative (Adverse) Impacts											

Physical disturbance to the site soils	Site establishment and vehicular activity may result in localized soil compaction and increased erosion vulnerability due to vegetation removal. These impacts are anticipated to be short-term and confined to the project footprint during the preparation and harvesting phases.	M - 3	M / H - 4	L / M - 4	M / H - 4	M – 44	L / M - 2	L / M - 2	L / M - 4	L / M - 2	L - 16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance

Impact on the sensitive Biodiversity: Fauna and Flora	Fauna: If activities such as site clearing are not carefully conducted, this would result in land degradation. The degradation would lead to habitat loss for a diversity of fauna and flora onsite.	M: -3	M: -3	M: -6	M / H: 4	M: -48	L / M: - 2	L / M: -2	L / M: -4	L / M: 2	L: -16

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	Flora: Vegetation will be affected by land clearing for access roads and the installation of project equipment. Clearing will be restricted to designated routes, kept to a minimum, and will avoid protected tree species. The impact is expected to be localized, site-specific, and manageable.										

Interaction with local communuty – Alcohol abuse, HIV/AIDS spreading	Skilled workers (chainsaw operators, portable sawmill operators, tractor and 1519 truck operators will be sourced from Rundu. Engagement between the workforce and the local community presents a recognized public health risk, particulary the potential transmission of HIV/AIDS, as is common in development projects that involve an influx of skilled labour from other areas. The remote location of the sites and the subsequent increase in disposable income of the workers may attract	M: -3	M: -3	M / L: -4	M / H: 4	M: -48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

	females from nearby farms, thereby increasing the risk of contraction.										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Biodiversity conservation – illegal hunting	Workers will be housed on temporary campsites on each of the commercial small-scale farming units during the duration of the project. Food (maize meal and tinned fish) will be provided by the proponent to the workers, however, hunting of wildlife is part of the African cultural practice but the workers	M - 3	M - 3	M - 6	M / H - 4	M – 48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

	may be not be aware of the law protecting wildlife.										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Soil and Water Resources Pollution	The proposed activities present potential pollution risks from lubricants, fuel, and wastewater, which may contaminate soils and potentially groundwater if not properly managed. The primary pollution sources include hydrocarbons (oil) from vehicles, machinery, and equipment, as well as wastewater or effluent generated by related	M: -3	M: -3	M: -6	M / H: 4	M: -48	L / M: - 2	L / M: -2	L / M: -4	L / M: 2	L: -16

	activities. However, it should be noted that the scale and extent/footprint of the activities where potential sources of pollution will be handled are relatively small. Therefore, the impact will be moderately low.										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
Waste Management: Sewage and Solid Waste	Waste types such as solid, wastewater, and possibly hazardous will be produced onsite .If the generated waste is not disposed of responsibly, land pollution may occur around the site. If solid waste such as paper and plastics is not properly stored or just thrown into the environment (littering), these may be consumed by wild animals in the area,	M: -3	M: -3	M / L: -4	M / H: 4	M: -40	L - 1	L - 1	L - 2	L / M - 2	L - 8

	which could be detrimental to their health. Improper handling, storage, and disposal of hydrocarbon products and hazardous materials at the site may lead to										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	soil and groundwater contamination in the case of spills and leakages.										

Occupational and Community Health and Safety Risks	Project personnel (workers) involved in the project activities may be exposed to health and safety risks. The use of heavy equipment, especially during felling and processing and the presence of hydrocarbons on sites may result in accidental fire outbreaks. This could pose a safety risk to the project personnel and locals, too.	M - 3	M - 3	M - 6	M / H - 4	M – 48	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12
Vehicular Traffic Safety	The existing local road network will serve as the primary conduit for all project-related vehicular movement. While the mobilization of equipment and supplies during the pre-harvest	M - 3	M / H - 4	L / M - 4	M / H - 4	M - 44	L / M - 2	L / M - 2	L - 2	L / M - 2	L - 12

	and harvesting phases will result in a marginal increase in traffic volume, the operational fleet is strictly limited to one heavy-duty truck and two medium-capacity support vehicles. Given that works are phased, intermittent, and temporary in nature, the associated traffic impact is characterized as low-intensity and short-term										

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance

Noise and vibration from harvesting	Noise and vibrations generated during timber felling and processing present potential physiological risks to on-site personnel and may cause behavioral disturbances in local livestock and surrounding communities.	M - 3	M - 3	M - 6	M / H - 4	M – 48	L - 1	L / M - 2	L - 2	L / M -2	L - 10

Impact	Impact Description	Impact Assessment									
		Pre-mitigation Rating					Post-mitigation Rating				
		Extent	Duration	Intensity	Probability	Significance	Extent	Duration	Intensity	Probability	Significance
	To ensure compliance with occupational health and environmental standards, The proponent will implement stringent acoustic controls and vibration-limiting measures throughout the project lifecycle.										

Archaeological and Heritage Resources	The area within the site has LOW Archaeological significance, and this is based on the surface walk- over conducted, which recorded only a few graves.	M / H - 4	M - 3	M - 6	M - 3	M – 39	L - 1	L / M - 2	L - 2	L / M -2	L - 10

8 RECOMMENDATIONS AND CONCLUSION

8.1 Recommendations

The potential impacts of the proposed project activities were identified and assessed, and appropriate mitigation measures were recommended for implementation by the Proponent, their contractors, and project-related employees for significant adverse (negative) impacts rated as medium. These mitigation measures aim to reduce the impact severity to an acceptable level and prevent or minimize any negative effects on the environment, local communities, and cultural resources.

The concerns raised by registered Interested and Affected Parties (I&APs) were carefully considered, incorporated into this report, and addressed through the recommended management and mitigation measures. Most potential impacts were rated as medium in significance, but the effective implementation of these measures will minimize their severity, reducing the rating to low. To ensure this outcome and maintain low impact ratings, the Proponent, or their appointed Environmental Control Officer (ECO), should monitor the implementation of the proposed management and mitigation measures.

The Environmental Consultant is confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by effective implementation of the recommended management and mitigation measures, and with more effort and commitment put towards monitoring the implementation of these measures.

It is, therefore, recommended that in the case of ECC issuance for this project, the proposed activities may be granted an ECC, provided that:

- All the management and mitigation measures provided herein are effectively and progressively implemented.
- All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits for harvesting, marketing and transporting of rosewood and kiaat planks, and service provision agreements and ensure compliance with these specific legal requirements.
- Transparency in communication and continued engagement with landowners (for land access before and during the project activity), as well as other stakeholders, should be maintained before and throughout the project.

- The Proponent, their project workers, or contractors comply with the legal requirements governing their project and its associated activities and ensure that project permits and or approvals required to undertake specific site activities are obtained and renewed as stipulated by the issuing authorities.
- The EMP implementation onsite should be checked and done by the responsible team member onsite (Environmental Control Officer), and audited by an Independent Environmental Consultant on a bi-annual basis to compile Environmental Monitoring (Audit) Reports. These reports are to be submitted to the Environmental Commissioner at the DEAF. This will be required by the Environmental Commissioner (as part of the ECC conditions).

Conclusion

In conclusion, to maintain the desirable rating and ensure that the potential impacts are under control, the implementation of management and mitigation measures should be monitored by their Environmental Control Officer (ECO) and audited by an Independent Environmental Consultant on a bi-annual basis. The monitoring of this implementation will not only be done to maintain the reduced impacts' rating or maintain a low rating, but also to ensure that all potential impacts that might arise during implementation are properly identified in time and addressed immediately.

9 REFERENCES

Atlas of Namibia. (2023). *Namibian soils and agriculture*. Retrieved from https://atlasofnamibia.online

Booth, P. (2011). Environmental Conceptual Site Model Exercise: Source – pathway – receptor. WSP Global: Semantic Scholar.

Conservation Tourism Namibia. (2023). *Central & West | Conservation Tourism in Namibia*. Retrieved from https://conservationtourism.com.na/where-to-go/central-and-west

Curtis, B., & Mannheimer, C. (2005). *Tree Atlas of Namibia*. National Botanical Research Institute of Namibia.

FAO. (2006). *World Reference Base for Soil Resources*. Food and Agriculture Organization of the United Nations.

Kambinda, W. N. (2014). Hydrogeological Investigation of the Naukluft Mountains, Southwest Namibia. University of Namibia Repository. Available at: repository.unam.edu.na

Mendelsohn. (2002). *The Atlas of Namibia: A Portrait of the land and its people.* pg 14 -18

Mendelsohn, J. (2003). Atlas of Namibia: A Portrait of the Land and its People. Windhoek: The Ministry of Environment and Tourism of Namibia.

Ministry of Mines and Energy of Namibia. (n.d.). *Geology of Namibia*. Retrieved from mme.gov.na

Moll, Eugene (2013). Watter Boom is dit?. ISBN 978-1-77007-832-1.

Meteoblue (2023). Meteoblue Weather: Simulated historical climate & weather data for Khorixas Area. Available from https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/epukiro_namibia_3357647 . Accessed 10 July 2023

UNESCO. (n.d.). Namib Sand Sea. Retrieved from https://whc.unesco.org/en/list/1430/

Goscombe, B., Gray, D., & Armstrong, R. (2012). Geological evolution and tectonic framework of the Kaoko Belt, Namibia. Journal of African Earth Sciences, 64, 1–46.

Miller, R. M. (2008). The Geology of Namibia. Geological Survey of Namibia, Ministry of Mines and Energy.

Trumbull, R. B., et al. (2008). The Lofdal carbonatite–syenite complex, Namibia: A rare-earth element deposit in the Pan-African Damara Belt. Lithos, 103(3–4), 408–423