ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED INSTALLATION OF AN ABOVEGROUND DIESEL TANK IN MURURWANI, OTJOZONDJUPA REGION

PREPARED FOR: NDUME TRADING CC

MAY 2022

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EXECUTIVE SUMMARY

The proponent, Ndume Trading cc has appointed Namib Enviro Consultants cc to conduct an Environmental Impact Assessment, establish Environmental Management Plan, and to assist with the application of the Environmental Clearance Certificate for the proposed installation and operation of an above ground diesel storage tank project's construction, operation, and decommissioning phases on a commercial farm number 1032 B, Otjozondjupa Region.

The main activities of the proposed project will be to establish an above-ground tank with a capacity of 23 000 litres (23 m³) with dispenser pump. The proposed project is a listed activity that requires an environmental study, according to the Environmental Management Act No.7 of 2007 and it's Environmental Impact Assessment Regulation of 2012. As a result, an environmental assessment for the planned project is required to guarantee the environment and general public in the near surroundings of the proposed project area are protect.

Purpose of the scoping report

As required by Namibia's Environmental Assessment Policy of 1995, the Environmental Management Act No. 7 of 2007, Government Notice No. 29 of 2012 (Listed Activities), and Government Notice No. 30 of 2012 (Listed Activities), the proponent hired Namib-Enviro Consultants to conduct an environmental scoping assessment for the proposed installation of an aboveground petrol tank (EIA Regulations).

By producing a selection of strategic options for the above-ground tank construction, this environmental scoping assessment will help to prevent or mitigate negative outcomes. The overall purpose of this Environmental scoping report is to foresee, minimize, and/or manage possibly major negative development impacts that could:

- Fixing it in the future will be extremely costly.
- Put the lives, livelihoods, and health of current and future generations in jeopardy
- Cause irreplaceable resource losses and a reduction in future well-being opportunities;
- Assist in the quest for strategies to optimize the benefits of development.

Alternatives considered

According to the Environmental Management Act (EMA) and EIA regulations, alternative sites, alternative projects, and alternative designs should be taken into account during planning phase to see if they would achieve better environmental and social economic benefits.

Project alternative

There was no project alternative since, according to the impact assessment of the biophysical and socio-economic components covered in depth in this report, the planned project development of an above ground tank installation is suitable for the location investigated. This is only true, however, provided the development is planned and managed in accordance with the mitigation measures indicated in this document and the Environmental Management Plan (EMP).

No-go alternative

If the project's operations were not carried out, the estimated environmental repercussions from the proposed tank placement would not occur, but the project's social and economic benefits would not be realized. During the development and operational phases, there would be no time to explore the overall character of the surrounding area, as well as a diversity of career prospects.

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1. INTRODUCTION

1.1 Project background

Ndume Trading Enterprises cc is a Namibian owned business entity based in Walvis Bay. The proponent intends to establish and run a local diesel facility in farm 1032 B along B8 road between Rundu and Grootfontien.

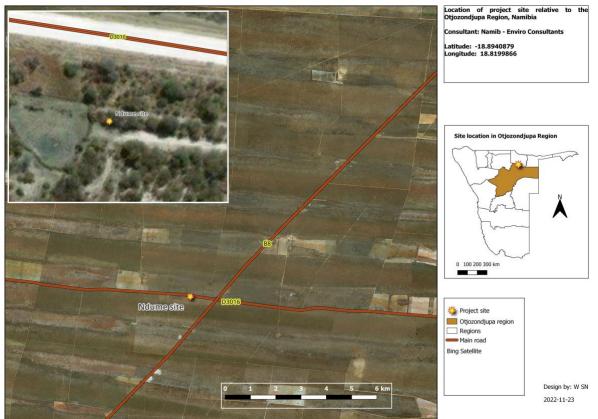
The proposed project will be to establish an above-ground tank with a capacity of 23 000 litres (23 m3) with dispenser pump. The proposed project is a listed activity that requires an environmental study, according to the Environmental Management Act No.7 of 2007 and it's Environmental Impact Assessment Regulation of 2012. As a result, an Environmental Impact Assessment for the planned project is required to guarantee the environment and general public protection.

The proposed project will also include the following facilities:

- Truck port with secure parking area;
- Small shop where drivers can procure food, refreshments and basic commodities;
- Restaurant offering sit-down food and refreshment offerings; and
- Ablution facilities.

Farmers and general commercial entrepreneurs of Rundu and Grootfontain areas, and motorist travelling between Katima Mulilo and Walvis Bay will benefit from this project since the majority find it hard to travel long distance to source fuel at existing filling stations at Rundu. In addition, the proposed project will also open up opportunities, necessitating the need for transportation services and accompanying infrastructure such as fuel stations, car wash, take away and garages.

1.2 Project location



The proposed aboveground petroleum tank infrastructure will be located 16 km before Mururani Gate, in farm 1032 B along B8 road between Rundu and Grootfontien (146 km from Rundu and 112 km from Groofontein) in Otjozondjupa Region.

1.3 Terms of reference

The EIA procedure for the planned project has been carried out in accordance with the EMA No. 7 of 2007 and its EIA Regulations. The EIA procedure included the steps listed below, which are detailed in this document:

- Give a full description of the proposed activity
- List all laws and regulations that apply to the proposed project
- A summary of the methodology used to conduct the EIA in accordance with Namibia's legal environmental framework
- Determine the sensitivity of existing environmental (both biophysical and socioeconomic) conditions in the area
- Provide details of the proposed project activities to Interested and Affected Parties (I&APs) and appropriate authorities, as well as a reasonable chance for them to participate in the process

- Evaluate the development's possible environmental and social implications, as well as the significance of those impacts
- Outline management and mitigation actions in the form of an Environmental Management Plan (EMP) to reduce and/or mitigate potential negative consequences

This assessment's project involves the following:

- Identification and assessment of potential (negative) implications of proposed project activities on the receiving environment, including the local community.
- Provide mitigating actions to avoid or mitigate all of the observed consequences.

The major goal of this research is to apply for an ECC in accordance with the Environmental Management Act's requirements (Act No 7 of 2007).

2. DESCRIPTION OF EXISTING PROJECT ACTIVITIES

2.1 Project description

The planned project aims to reach out to a diverse group of individuals from many walks of life, as well as to ease the local motorists and farmers fuel shortages. The proposed installation project will also serve tourists and residents of the surrounding areas, as well as long-distance motorists. During the construction phase, the area will be closed to the public. Only construction and management staff will have access to the construction area/site, which will be enclosed by a barbed wire fence.

2.2 Environmental Protection Measures

This study serves as the Environmental Impact Assessment, which is submitted to MEFT for approval as a document that contains a thorough project description as well as the Policy, Legal, and other Operational Frameworks that the proponent must follow. During and after the tank is installed, environmental audits will be undertaken on a regular basis. Employees will be safe, and the general public's health will be secured.

2.3 Proposed project activities

The following is a description of the activities related with the planned diesel tank installation construction, operating, and rehabilitation stages that have been examined as potential sources of impact in the impact assessment:

- The fencing off the project site
- Ablution facilities
- Water and power supply (use of water from the existing boreholes and power to existing power grid)

Construction, operation, and possible decommissioning are the three phases of the project. The following are the activities that are included in all phases:

Construction Phase:

- Transport and installation of storage tanks and other necessary equipment.
- Installation of fuel pipelines, as well as the development and installation of dispensing pump islands.
- Installation of the electrical supply.

Operational Phase:

- Road transport tankers will be used to fill storage tanks.
- Fuel will be dispensed into automobiles and other containers that have been authorized.

Decommissioning Phase:

Removal of all infrastructure that will not be reused during future land usage; and land rehabilitation.

2.3.1 Accessibility

The site can be accessed through the existing B8 Rundu and Grootfontain road.

2.4 Solid waste and sewer management

2.4.1 Waste Management

Waste containers will be provided for each section to keep waste temporarily before it is delivered to the central solid waste collection facility. According to Ministry of Health Standards, the solid waste collection centre for the entire station will be strategically positioned and covered on top and on the sides to protect from weather and scavengers.

2.5 Fire Fighting Protection

The proponent must guarantee that there are methods and procedures in place for water storage and supply in the event of a fire, as well as a fire foam system to protect fire-prone regions. To avoid fire triggering items being used in or around the facility, notices prohibiting smoking and cell phone usage must be prominently displayed in the forecourt.

2.6 Lighting

Within the facility, and in the vicinity of the area, lighting will be provided along the entire length of the internal road network. This will be done so that vehicle routes and directions are easily observable at all times of the day and night.

2.7 Implementation Strategy

The project will begin with the marking of the project area, followed by fencing and the onsite construction/installation of the tank. The project will entail the removal of overburden and the excavation of a trench for the fuel tank. The majority of the labour will be done manually.

3. LEGAL FRAMEWORK

3.1 Introduction

This section examines the legal framework in which the petrol tank project's proponent must operate in order to meet environmental management criteria. This involves an emphasis on national and international legal compliance during the development, operational, and decommissioning phases of the project. The Proponent shall be guided by all applicable policy, regulatory, and other criteria in operating the project in compliance with best practices and environmental management requirements. 3.2 Compliance to the Environmental Management Plan (EMP) to the Environmental Act A list of activities that require an Environmental Clearance Certificate (ECC) is provided in Section 27 of the Environmental Management Act 2007 (Act No. 7 of 2007) (EMA). The EMP should be compliant with the Environmental Management Act (EMA), Act No. 7 of 2007, and the 2012 EIA requirements (Government Notice: 30).

3.3 Listed activities

According to the Environmental Management Act of 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment Regulation (Government Notice No. 30 of 2012), the proposed project triggers the following activities, which are prohibited without an Environmental Clearance Certificate, necessitating an EIA Scoping Exercise.

activity	Applicability
Activity 9.5 Storage and handling of	Construction of filling stations or any other
dangerous good	facility for the underground and
	aboveground storage of dangerous goods,
	including petrol, diesel, liquid, petroleum,
	gas or paraffin.
Activity 10.1 (a) Infrastructures	Oil, water, gas and petrochemical and other
	bulk supply pipelines.

Table 1 Listed activities

3.4 Legal requirements

As shown in Table 2 below, there are other legal and policy documents and guidelines that must be taken into account while conducting an EIA in addition to the EMA and the Environmental Assessment Policy. It is the proponent's duty to see to it that the fuel storage facility complies with all other national development plans and the law.

Table 2 Applicable environmental legal framework and their relevance to the project

Legislation/policy	Provision	Relevance to the project
The Constitution of	The articles 91(c) and 95(i) commits	Ecological sustainability
the Republic of	the state to actively promote and	should guide operations of
Namibia (1990)	sustain environmental welfare of the	fuel service station
	nation by formulating and	operations.
	institutionalising policies to	

	accomplish the Sustainable	
	objectives.	
Environmental	Dromotos Custoinable development	Environmental Distantion
	Promotes Sustainable development and Environmental Conservation	Environmental Protection
Assessment Policy (1995)		
(1393)	emphasize the importance of Environmental assessments as a key	
	tool towards environmental	
	Sustainability.	
Environmental	Requires that projects with	All formal requirements as
Management Act	significant environmental impact are	per the act will be duly
No. 07 of 2007	subject to an environmental	identified and adhered to.
	assessment process (Section 27).	The Project will follow this
		act accordingly and consider
		all aspects inclusive of the
		assessment process and
		acquire environmental
		clearance.
EIA Regulations	Details requirements for public	
2007	consultation within a given	
	environmental assessment process.	
	Details the requirements for what	
	should be included in a Scoping	
	Report.	
Petroleum Products	Regulation 3(2)(b) states that "No	A Petroleum Retail License
and Energy Act	person shall possess or store any fuel	should be applied for and
(No. 13 of 1990)	except under authority of a licence or	obtained from the Petroleum
Regulations (2001)	a certificate, excluding a person who	Affairs Division of the
	possesses or stores such fuel in a	Ministry of Mines and
	quantity of 600 litres or less in any	Energy (MME).
	container kept at a place outside a	
	local authority area	

	The sector large in heating Devit 2. The	
South African	The petroleum industry Part 3: The	
National Standard	installation, modification, and	
(SANS) 10089-3	decommissioning of underground	
(2008	storage tanks, pumps/dispensers and	
	pipework at service stations and	
	consumer installations.	
Soil Conservation,	Makes provision for the prevention	Monitor and apply the soil
1969 (Act 76 of	and control of soil erosion	conservation mechanisms
1969) and the Soil		
Conservation		
Amendment Act		
(Act 38 of 1971)		
The Water Act 54 of	The Act was formulated to	Projects of this type are
1956	consolidate and amend the laws	usually associated with
	relating to the control, conservation	activities that may directly
	and use of water for domestic,	affect water conservation,
	agricultural, urban and industrial	management and use
	purposes; tomake provision for the	therefore, requires the
	control, in certain respects, of the use	implementation of water
		-
of sea water for certain purposes; for		conservation techniques.
	the control of certain activities on or	
	in water in certain areas.	
Forest Act 12 of	1 1	Forestry permits maybe
2001	environment and the control and required for vegetation	
Forest Act	management of forest. Relevant	clearing
Regulations 2015	sections:	
	Approval required for the clearance	
	of vegetation on more than 15	
	hectares (Section 23, subsection 1	
	(b)).	
Public Health Act	Advocates for Public Health	Personal Protective
(Act	and safety	Equipment (PPE)
No. 36 of 1919)		

The Occupational	Advocates for employee	In the working context		
Safety and Health	and public safety, health	"SAFETY" implies "free		
Act		from danger"		
No. 11 of 2007		nom dunger		
National Solid	The Strategy ensures that the future Waste management plans			
Waste Management				
U	directions, regulations, funding and action plans to improve solid waste			
Strategy				
	management are properly co-			
	ordinated and consistent with			
	national policy, and to facilitate co-			
	operation between stakeholders			
Pollution Control	The bill aims to "prevent and	The Project should make it		
and Waste	regulate the discharge of pollutants	mandatory that all their site		
Management Bill	to the air, water and land" Of	waste produced as a result of		
	particular reference to the Project is:	their activities, directly or		
	Section 21 "(1) Subject to sub-	indirectly is managed in a		
	section (4) and section 22, no person	manner that do not cause		
	shall cause or permit the discharge of	environmental threat and risk		
	pollutants or waste into any water or	both to the surroundings and		
	watercourse."	the local communities.		
	Section 55 "(1) No person may			
	produce, collect, transport, sort,			
	recover, treat, store, dispose of or			
	otherwise manage waste in a manner			
	that results in or creates a significant			
	risk of harm to human health or the			
	environment."			
Road Traffic and	The Act provides for the	The Proponent will be		
Transport Act, No.	establishment of the Transportation	required to obtain all the		
22 of	Commission of Namibia; for the	relevant permits (access		
1999	control of traffic on public roads, the	road) in order to undertake		
	licensing of drivers, the registration	activities involving road		
	and licensing of vehicles, the control			

	and regulation of road transport	transportation or access onto
	and regulation of foad transport	transportation of access onto
	across Namibia's borders; and for	existing roads.
	matters incidental thereto.	
Labour Act 11 of	Empowers the minister responsible	All contractors involved in
2007	for labour to publish regulations	the project and transportation
	pertaining to health and safety of	of the tanks are required to
	labourers (S135). Details	complying with this Act and
	requirements regarding minimum	its regulations.
	wage and working conditions (S39-	
	47).	

4. DESCRIPTION OF THE CURRENT ENVIRONMENT

4.1 Introduction

According to the findings of the 2011 Namibia Population and Housing Census, Otjozondjupa had 143 903 residents. 54 percent of the people in the area, or the majority, resided in rural areas. There were 33 192 households, with 4.2 people on average living there.

Otjozondjupa Region is located north-west of Omaheke Region and is one of the largest regions in the country. Outstanding features in the Otjozondjupa Region include the Waterberg Plateau Park. Additionally, the area is well-known for its farming, with cattle rearing being particularly prevalent in the Okahandja and Otjiwarongo regions. The six regions that Otjozondjupa borders are the southeast, Khomas to the south, Erongo to the southwest, Kunene to the northwest, Oshikoto to the north, and Kavango to the northeast. The seven constituencies that make up the region are Grootfontein, Otavi, Okakarara, Otjiwarongo, and Omatako (NSA, 2012).

4.2 Climate conditions

Rainfall in the Otjozondjupa Region, which ranges from 300 to 600 mm and increases from the south-west to the north-east, is primarily semi-arid. In addition to the zone of increased rainfall brought on by orographic uplift over the Grootfontein-Otavi-Tsumeb hills, rainfall normally rises from south to north. The amount of rain each year also fluctuates significantly, which has a significant impact on the availability of pastures, carrying capacity, rates and types of livestock offtake, meat prices, and the economic viability of farms (Mendelson, 2006).

4.3 Geology, Hydrology and Soil

The area is located on the western margin of a large sand basin, and this sand greatly influences the region's vegetation, animals, agricultural, and mineral possibilities. A typical Kalahari Sands savanna dominates the eastern two-thirds of the area. The region normally has access to groundwater, and the water is generally of acceptable quality. There are various locations with higher yielding aquifers, including the vicinity of Grootfontein (Mendelson, 2006)

4.4 Flora and Fauna

The northern Kalahari, thorn bush savannah, and the Karstveld are the three main biomes. A serious threat to the region's ecosystem is bush encroachment (MET, 2011). The area have more broad-leaf deciduous trees in the north and more thorny species in the south. Thorny species abound in the western regions, which have shallower, rockier soils. Due to bush encroachment, these places are the most deteriorated in the nation. Farmers avoid fires in regions where cattle are raised, and since there isn't much grass to burn anyway due to intensive grazing, this problem is mostly and directly caused by a lack of fires in these areas.

Compared to parks or other parts of the country, freehold farms have a greater diversity of animals. This is partly because freehold farmers value and utilize wildlife. Due to hunting, inadequate levels of protection, and the deficient nutrient quality of the Kalahari Sands, which cover practically all of the communal lands, there are low concentrations of species in the eastern communal regions.

4.6 Socio-economic

The Otjozondjupa region had a 71.5 percent labour force participation rate and 22% of the population was unemployed, according to the 2011 Population and Housing Census. Males had

a higher percentage (76.2%) than females did (66.5 percent). Urban areas had a greater rate of labour force participation (73.3%) than rural areas did (69.0 percent). The largest sector was agriculture, forestry, and fishing (30.9%), followed by public administration, defence, and mandatory social security (12.2 percent). The majority of workers (36.7%) in the Otjozondjupa Region found employment in the private sector. Men dominated commercial farming.

5. IMPACT ASSESSMENT METHODOLOGY

5.1 Assessment of impact

The magnitude and temporal and spatial scales of the project, as well as the specific activities involved with the project, are used to determine the significance of an impact. At all times, the evaluation of the environmental effects of development operations should attempt to be objective and unbiased. Environmental assessment processes, on the other hand, can be prone to the subjectivity that comes with attempting to quantify significance. The significance of an impact is determined by the impact's spatial and temporal scale, as well as its intensity.

The extent, magnitude, and duration of each effect would be addressed. When determining the significance of an impact, these criteria would be applied both when the most efficient

mitigation measures were in place and when there was no mitigation at all. The whole range of feasible and practical mitigation methods would be represented by the mitigation detailed in the scoping report.

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Table 3	(riteria	tor	assessing	impacts
1 4010 5	Criteria	101	abbebbing	mpacts

Criteria	Category	Description
	National	Beyond a 10 Km radius of the site
	Regional	Within a 5 Km radius of the centre of the site
Criteria for ranking Spatial (extent) impact	Local	Within a 2 Km radius of the the centre of the site
	Site specific	On site or within the boundaries of the property
-	Zero	
	High	Natural and/ or social functions and/ or processes are severely altered
Criteria for ranking the	Medium	Natural and/ or social functions and/ or processes are notably altered
magnitute of impacts	Low	Natural and/ or social functions and/ or processes are slightly altered
	Very low	Natural and/ or social functions and/ or processes are negligibly altered
	Zero	Natural and/ or social functions and/ or processes remain unaltered

	Zero	Zero time	
	Short term	Up to 18 months	
Criteria for ranking the	Medium term	0-5 years (after operation)	
duration of impact	Long term	5-10 years (after operation)	
	Permanent	More than 10 years (after operation)	
	Definite	Estimated greater than 95 % chance of the	
		impact occurring	
	Very likely	Estimated 50 to 95% chance of the impact	
		Occurring	
Probability	Fairly likey	Estimated 5 to 50 % chance of the impact	
		Occurring	
	Unlikely	Estimated less than 5 % chance of the	
		impact occurring	
	Zero	Definitely no chance of occurrence	
	Certain	Wealth of information on and sound understanding of the environmental factors potentially influencing the impact	
	Sure	Reasonable amount of useful information	
Confidence		on and relatively sound understanding of	
		the environmental factors potentially	
		influencing the impact	
	Unsure	Limited useful information on and	
		understanding of the environmental factors	

		potentially influencing this impact
Reversibility	Irreversible	The activity will lead to an impact that is permanent
	Reversible	The impact is reversible, within a period of 10 years.

5.2 Environmental Mitigation

Mitigation strategies should be developed for each impact analysed in order to lessen and/or prevent undesirable effects. To guarantee their implementation during the course of the proposed activity, these mitigation measures are also included in the Environmental Management Plan (EMP). To lessen and/or minimize negative effects, mitigating measures should be identified for each impact analysed. To guarantee their implementation during the course of the proposed activity, these mitigation measures are also included in the Environmental Management Plan (EMP).

6. ENVIRONMENTAL IMPACT ASSESSMENT

6.1 Overview

This chapter will analyse possible environmental and socio-economic consequences based on the current environmental and social structure of the project operations on ground. Namib-Enviro Consultants will adopt an Environmental Management Plan (EMP) in accordance with Namibian environmental regulations and international methodologies in hopes of preventing, minimize, and mitigate any negative consequences while promoting good outcomes.

6.2 Identified potential impacts6.2.1 Direct and indirect effectsSocioeconomic impacts

The proposed project will create employment opportunities to people within the project region as it is targeting to employ at least 15 people, during both construction and operation phases, thus generating wealth and improve livelihoods. Besides direct employment, the project will:

- Improve efficiency in production as the farmers will be able to access fuel commodities and related products within a closer distance,
- Revenue generation that will contribute to the national income through tax on profits and VAT (Value Added Tax) collections.
- Reduced accidents through the provision of safe parking place for long distance drivers.
- Access to fuel products to the general bulk users alike.

6.2.2 Cumulative and Irreversible effects **Impacts of construction activities**

During the construction phase, sources of negative environmental impacts will emanate from the site preparation activities including excavation of soils, and other geological formations, levelling of landscape and the subsequent construction activities.

The biophysical environment will be negatively impacted by the actions listed above in many ways. The ensuing disturbance of the exposed topsoil, which could lead to soil erosion and siltation, will have immediate detrimental consequences. The combined effect of site preparation and construction activities on the site has the potential to cause soil erosion. Continued soil loss may occur as a result of development on the altered site, particularly during the construction period when the earth is exposed. Rainwater washing away soil can have serious ecological repercussions. At the location, however, this is not expected. If proper building processes are not followed, there may be negative repercussions linked to visual intrusion, pollution, and negative socio-economic implications (including safety and health dangers), among other negative aspects.

Table 4 Identified potential impacts and their mitigation measures

Impacts due to the	Measurement	Rating	Mitigation
installation of the			
tank			
	Duration	Permanent	If possible rehabilitate the site after
	Extent	Site specific	construction

Landscape	Magnitude	Low	
alternation: digging and excating	Probability	Fairly likely	
and excating	Reversible	Reversible	
	Duration	Medium	Reintroduction/replanting
Vegetation: Flora	Extent	Site specific	endemic or noninvasive plants at the site upon ceasing of the project.
· ·g················	Magnitude	Low	the site upon cousing of the project
	Probability	Definite	
	Reversible	Reversible	
	Duration	Permanent	Use existing access roads
Access roads:	Extent	Site specific	
establishment of road tracks	Magnitude	Low	
	Probability	Very likely	
	Reversible	Reversible	
			If an oil spill occurs, collect the
	Duration	Short-term	contaminated soil, store in drums or appropriate structures and
	Extent	Local	dispose at approved waste disposal
Oil spills: soil	Magnitude	Low	site;
pollution (oil leakeges from	Probability	Definite	
leakeges from machinery)	Reversible	Reversibility	Ensure all vehicles / machinery are
			well service, install drip trays and conduct regular leak inspection
	Duration	Short tarm	_
	Duration	Short-term	
Pollution: noise and	Extent	Local	Use dust suppression measures to
dust (extraction and	Magnitude	Medium	mitigate dust impacts

transportation of the sand and cocrete)	Probability	Definite	Provide dust masks and ear muffs
	Reversible	Reversible	to machinery operators
Socio-economic environment: development and employment opportunities	Duration Extent Magnitude Probability Reversible	Long and short-term National & local Medium Definite Reversibility	Employ local labour as far as possible Establish on the job training and other capacity development training programs

7. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

This Environmental Management Plan (EMP) was prepared as part of the Scoping Report for the planned aboveground petrol tank development facility by the proponent as part of the Environmental Assessment. The content has been adapted in accordance with the Environmental Management Act of 2007 (Act No. 7 of 2007) Regulation No. 30 of 2012, listing No. 8(j) (aa) (bb) (cc). The goal is to develop management strategies to address the environmental consequences indicated in the Scoping Report.

The Environmental Management Plan for impacts related with the proposed installation of the aboveground petrol tank is described in this section. Environmental projects must be managed in a methodical, planned, and documented manner, according to the EMP. The Environmental Management Plan outlined below summaries the organizational structure, planning, and monitoring for environmental preservation at the proposed project site development.

7.1 Listed activities

An Environmental Clearance Certificate (ECC) is required for Listed Activities, and an Environmental Impact Assessment (EIA) is also required. The MET: DEA is devoted to promoting environmental management principles as the governmental institution responsible for the management and conservation of its natural resources. The Environmental Protection Agency (EPA) publishes a list of operations that require an EIA, and the proposed fuel tank is one of the specified activities or activities that cannot be carried out without an ECC. The goal of project activities that are described is to guarantee that the environmental implications are thoroughly examined.

The planned fuel storage tank's continuation would result in a number of Listed Activities as defined by the Environmental Management Act, 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2011). The following Table 5 is the listed activities induced by the proposed project.

Listed activity	Applicability	Operation of the activity
Activity 9.4 Storage and	The storage and handling of a	The project involves the
handling of dangerous	dangerous goods, including	handling and storage of
goods	petrol, diesel, liquid petroleum	dangerous goods.
	gas or paraffin, in containers	
	with a combined capacity of	
	more than 30 m^3 at any location.	
Activity 9.5 Storage and	Construction of filling stations	Installation of an
handling of dangerous	or any other facility for the	aboveground petrol tank.
goods	underground and aboveground	
	storage of dangerous goods,	
	including petrol, diesel, liquid,	
	peroleum, gas or paraffin.	

Table 5 List of activities in the EIA regulation concerning the proposed project

7.2 Roles and responsibility in EMP implementation

7.2.1 Environmental Management Plan administration

The management and staff, including the construction team, shall be required to familiarize themselves with the content of the document while the project Manager shall be tasked with the overall responsibility for the implementation thereof once the development is operational.

7.2.2 Environmental Awareness Training **Installation phase**

The owner and construction company shall ensure that all his/her staff are aware of the importance and implications of the EMP and the need to commit to the relevant provisions contained in the document.

Operational phase

The operational phase shall require that roles and responsibilities for all employees need to be established while the reasons and importance of mitigation measures shall be clearly explained, and this shall be an ongoing process. The positive socioeconomic and biodiversity impacts involve a number of external stakeholders and these relationships require close and regular interventions. Before commencement of business, the management shall send all its key personnel for training in handling dangerous and hazardous goods.

Table 6 Roles and responsibility in EMP implementation

Roles	Environmental responsibilities				
Project Manager	Enforce	the	EMP	implementation	to
	contractors and all project workers.				

Environmental Control Officer	 Implement, review and update the EMP. Ensure all reporting and monitoring required under EMP is undertaken, documented and distributed as needed Conducts environmental audit at work site with the support of environmental consultant. Ensure materials being used on site are environmental friendly and safe.
The Department of Environmental Affairs	 Approve the EMP and any amendments to the EMP. Review and approve environmental reports submitted as part of EMP implementation.
Environmental Consultant	 Conduct and monitor actions required by the EMP if required Conducts environmental audit at work site Ensure materials being used on site are environmental friendly and safe.
Site/Project Engineers	 Control and monitor actions required by the EMP. Ensure documented procedures are followed and records kept on site.

	- Ensure any complaints are passed onto the management within 24 hours of receiving the complaint.
Labour	 Follow requirements as directed by site engineers. Report any potential environmental issues to site engineer/project manager, indicating spilt oil, excess waste, excessive dust generation, dirty water running off the site and other possible non-conformances. Compliance with the environmental specifications and enforce adherence. Maintain a record of activities relevant to environmental
	management.

7.3 Scope of the Environmental Management Plan

Namib-Enviro Consultants carried out and prepare the EMP according to a set of guidelines. Because of the importance of involving Interested and Affected Parties (I&APs) in environmental studies, the EMP ensures that I&APs concerns are addressed, as consultations were central to every step, such as MEFT's approval of the clearance process, which included local communities and nearby farm owners.

7.3.1 Scoping exercise

The scoping exercise aimed to identify and screen all relevant concerns associated to project development, as well as determine whether any detrimental consequences occurred that could render the proposed project ecologically unacceptable as soon as possible.

7.3.2 Existing environmental conditions

Environmental and socioeconomic data from the surrounding areas were collected, processed, and analyzed to determine the current environmental conditions in the project area. The results of the analysis are reported in the sections below. Secondary data for the paper came from previous biological, zoological, botanical, and socioeconomic research conducted in the area.

7.3.3 Analysis of potential environmental impact

An assessment of the proposed project's environmental consequences and benefits in terms of the biophysical and socioeconomic environment, as well as an analysis of the impacts' scope, duration, intensity, and significance, has been carried out.

7.3.4 Formulation of possible mitigation measures

Based on the analysis of findings, a number of measures and plans for mitigating the identified possible adverse environmental impacts of the project are proposed. Further, the report proposes measures and plans for enhancing positive environmental impacts of the project. And wherever possible, the costs and benefits of these environmental measures are quantified.

7.4 Stakeholder consultation

The public will be notified via newspaper advertisements and a notice placed at the project location (the proponent's farm). The project will have a 14-day comment period following the publication of the newspaper advertisements.

7.5 Monitoring

Environmental monitoring will involve measurement of relevant parameters, at a level of details accurate enough, to distinguish the anticipated changes. Monitoring aims at determining the effectiveness of actions to improve.

Negative impacts	Mitigation measures	Responsible person	Monitoring			
	Construction phase					
Oil spillage	ge Ensure NO oil spillage Contractor Supervising and		Inspection/Obs			
Noise	occurs	Environmental	ervation			
Dust	Ensure use of Manual	expert				
Soil	labour and hand tools					
	Operation	phase				
General maintenance	Oil Spillage	Ensure use of appropriate	Proponent -			
of the fuel storage	Possible asphyxiation of	PPEs for tank cleaners	routine			
tank, regular	tank cleaners	including oxygen masks.	inspection			
cleaning	cleaning Generation of waste					
of the tank	materials, e.g. paints,	record keeping system.				
	painting accessories					

Table 7 Management strategies to address the environmental impacts of the proposed project

Generation of Solid	If not properly	Ensure solid waste is	Proponent
waste	managed, could create	collected regularly by	
	hazardous conditions	professional waste	
	for those within the	handlers and disposed of at	
	vicinity of the project	the designated dumping	
	site.	sites.	
Generation of	If not properly	Ensure the sewage waste	Proponent
sewerage, waste	managed, could	water is collected and	
water	compromise sanitary	disposed of into the	
	hygiene of the	properly constructed septic	
	development result in	tanks.	
	closure of the facility		
	Decommissior	ning phase	
Site closure and	Oil spillage	Clean and treat all oil	Contractor
demolition of the site	Noise	contaminated areas and	Environmental
office, and all other	Dust	tools, and dispose at an	expert
associated	Solid waste	authorised dumping site.	
infrastructure	Soil destruction	Implement an appropriate	
		re-vegetation programmed	
		to restore the site to its	
		original status.	

8. PUBLIC PARTICIPATION

8.1 Overview

It is a norm that public consultation is required by legislation (EMA No. 7 of 2007) to be included in an EIA process, it is a major element of the EIA. By incorporating Interested and Affected Parties, public consultation ensures sound decision-making. As a result, the Public Participation Process (PPP) has been constructed to give I&APs the opportunity to learn more about the proposed project, provide input through document/report reviews, and raise any issues of concern during the PPP process.

8.2 Identification of Interested and Affected Parties (I&APs)

The EIA team identified I&APs and key stakeholders of the proposed project after the scoping process. The actions for public engagement in this EIA process have been incorporated into the overall approach of the EIA background information. I&APs were given the opportunity to register with the EIA team, and a separate database was built to store all of their names and correspondence information. It takes twenty-one (21) days for I&APs to be registered.

8.3 Distribution of Background Information Document (BID)

The BID gave a synopsis of the proposed project, as well as the project proponent and the entire EIA procedure to be followed.

8.4 Public Announcement

Notification of the start of the EIA process for the project was advertised in two Namibian national newspapers, Republiek and Confidente, in accordance with Section 21 (2)(c) of the EMA Act No. 7 of 2007. (Appendix). The advertisements essentially informed the public about the project and the EIA study, as well as inviting them to participate. In addition, the newspaper advertisements asked I&APs to register.

9. CONCLUSIONS

The EIA procedure for the proposed installation of the above ground petrol tank development was carried out in accordance with the EIA Regulations published in Government Notice No. 30, in accordance with Section 56 of the Namibia Environmental Management Act, 2007. (Act No. 7 of 2007).

Businesses are regarded advantageous and vital in relation to the proposed mitigation measures that will be implemented throughout the construction phase, the development's contribution to society, and the fact that the project is economically and environmentally sound. The proposed development, in our opinion, is a timely enterprise that will contribute to the proponent's timely investment as well as the government's aim to tax fuel in Namibia.

As a result, Namib-Enviro Consultants came to the following conclusions and made the following recommendations:

The detected possible negative consequences linked with the proposed project and related activities were deemed to be of medium magnitude. The project can move on with its implementation as long as the mitigating measures outlined are followed. Nonetheless, major attention should be directed toward minimizing the occurrence of consequences that would impair the environment as a whole. As a result, by properly executing the recommended management action steps and conducting ongoing monitoring as advised below, these impacts can be reduced. As a conclusion of this report's observations it is recommended that the development be approved because the local public is very enthusiastic and eager to see progress in their neighbourhood.

As a result, it is recommended that the project site's petrol tank construction and operations be given an Environmental Clearance Certificate, provided that the proponent adhere to the the provided EMP.

REFERENCES

Mendelsohn, J. (2006). A digest of information on key aspects of Otjozondjupa and Omaheke's geography. RAISON.

Mendelsohn, J., & el Obeid, S. (2006). A digest of information on key aspects of Kavango's geography and sustainable development prospects. Research and Information Services of Namibia.

MET. (2011). Let's Act to Adapt: Dealing with Climate Change A community information toolkit on adaptation. Integrated Environmental Consultants Namibia .

NSA. (2012). *Otjozondjupa 2011 Census Regional Profile:* . Windhoek: Namibia Statistic Agency.

APPENDICES Appendix A. Newspaper Adverts

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