

ENVIRONMENTAL SCOPING REPORT FOR THE RECYLING, HANDLING AND STORAGE OF WASTE SOLVENT AT ERF 1015, ONDOTO STREET, WINDHOEK.

ENVIRONMENTAL SCOPING REPORT



Prepared for:

Industrialink cc

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Windhoek

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DOCUMENT DESCRIPTION

PROJECT:	Establishment and operation of a handling, storage and recyling of waste solvent at Erf 1015, Ondoto Street, Windhoek, Khomas region.
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EAP:	Pachyderm Environmental Consultants cc A. M Tsowaseb
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LIST OF ACRONYMS

DEA: Directorate of Environmental Affairs EAP: Environmental Assessment Policy EIA: Environmental Impact Assessments EMA: Environmental Management Act EMP: Environmental Management Plan EMS: Environmental Management System HSEQ: Health, Safety & Environment Quality System I&APs: Interested and Affected Parties IBC: Intermediate Bulk Container ISO: International Standards Organisation MEFT: Ministry of Environment, Forestry and Tourism MSDS: Material Safety Data Sheet PPE: Personal Protective Equipment SABS: South Africa Building Standards SANS: South African National Standards SWM: Solid Waste Management



EXECUTIVE SUMMARY

Industrailink cc that was established to specialize in waste solvent collection, storage and recycling, its office and depot is in Windhoek Namibia. The depot will be used for storage and recycling of waste sovent. The proponent intends to store, and recycle waste solvent on Erf 1015 Ondoto Street, Okuryangava Windhoek in an industrially zoned area.

In terms of the Environmental Management Act, 07 of 2007 all waste management, treatment, handling, and disposal activities may not be carried out without an Environmental Clearance Certificate (ECC) being obtained. Pahyderm Environmental Consultants cc has been appointed to carry out the required Environmental Impact Assessment (EIA) study and apply for the ECC.

The EIA is conducted to determine all environmental, safety, health and socio-economic impacts associated with the construction, operation and decommissioning of the proposed development. Relevant environmental data has been compiled by making use of secondary data and from site visits. Potential environmental impacts and associated social impacts are identified and addressed in this report.

The environmental management plan should be used as an onsite reference document during all phases (planning, construction (care and maintenance), operations and decommissioning) of the facility. National regulations and guidelines must be adhered to and monitored regularly as outlined in the environmental management plan. All monitoring and records kept should be included in a report to ensure compliance with the environmental management plan. Parties responsible for transgression of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. HSEQ training for the fuel facility's staff should be provided regularly in keeping with relevant International Standards of Operation or equivalent, for HSEQ management.

1. INTRODUCTION AND BACKGROUND

1.1 About the proponent

Industrialink cc hereinafter referred to as the proponent is a solvent recycling company, established in 2012 and fully incorporated in terms of the Close Corporation Act of 1988. The company specializes in waste solvent collection and recycling with its head office and depot in Windhoek.

The company collects waste solvent from various sources throughout Namibia. The company provides high-quality service and products in line with ISO 9001:2015 requirements and aims to further align with ISO 14001:2015, and ISO 45001:2018 requirements by 2023.

1.2 Proposed activities

The proponent intends to establish and operate a waste solvent temporary handling and storage facility on Erf 1015 located in Windhoek. Waste solvent collected will be transported to the Windhoek processing facility for refining. The storage facility will only be used for storage, and processing of waste solvent, no sale or clients will be done at the facility.

In terms of the Environmental Management Act, 07 of 2007 all waste management, treatment, handling, and disposal activities may not be carried out without an Environmental Clearance Certificate (ECC) being obtained. Pachyderm Environmental Consultants cc has been appointed to carry out the required Environmental Impact Assessment (EIA) study and apply for the ECC.



1.3 Scope and objectives of the EIA

The scope of the EIA is to determine the potential environment impacts emanating from the construction, operation and potential decommissioning of the facility. Relevant environmental data has been compiled by making use both primary and secondary data, from site visits, relevant stakeholders and Interested and Affected Parties (I&APs) consultations and review of relevant literature and legal instruments. Potential environmental impacts and associated social impacts will be identified and addressed in this report. Appended to this report is also an EMP which upon approval by the authorities will be considered a legal bidding document to guide the planning & design, construction and operation of the proposed development.

The EIA was conducted to determine all environmental, safety, health and socio-economic impacts associated with the operations of the proposed facility. A priority objective is to comply with regulations imposed by the Petroleum Products and Energy Act No. 13 of 1990 and its Regulations to safely collects, handle and recycle waste solvent in line with the best practice environmental standards. This will enable decision makers to make an informed decision regarding The Facility from an environmental perspective.

The aims and objectives of this EIA report are to:

- Evaluate the suitability of the proposed development against the biophysical and socioeconomic of the area.
- To investigate any environmental and socio-economic impacts associated with this project's activities.
- Provide sufficient information to determine whether the proposed operations will result in significant adverse impacts.
- Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels.
- To consult potential Interested and Affected Parties (I&APs) and relevant stakeholders • and to also ensure that their needs and concerns are taken into account.
- Comply with the Environmental Management Act (No.07 of 2007); and
- Provide sufficient information to the Ministry of Environment & Tourism and the Ministry of Mines and Energy, to make an informed decision regarding the proposed Facility.



2. APPROACH AND METHODOLOGY

The environmental impact assessment study was conducted in line with Namibia's Environmental Management Act of 2007 and its Regulations (GN No. 30 February 2012).



The following methods were used to investigate the potential impacts on the social and natural environment due to the construction and operations of the fuel retail facility:

- Baseline information about the site and its surroundings was obtained from existing secondary information as well as from site visits.
- Legal and policy review.
- Gleaning over existing information pertaining to similar developments and issues; and
- As part of the scoping process to determine potential environmental impacts, Interested and Affected Parties (I&APs) are usually consulted concerning their views, comments and opinions and these are included in this report.



3. LEGAL FRAMEWORK

This section provides a review of applicable and relevant Namibian legislation, policies and guidelines regarding the environment which was considered while conducting the EIA for the proposed project.

3.1 Environmental requirements

The establishment and operation of the proposed handling and temporary handling facility will trigger the listed activities as follows.

Table 1: Listed activity

Proposed project activities		Activities triggered	
		Category	Specific activity
•	Waste solvent collection, handling, temporary storage and transportation	2. Waste Management, Treatment, Handling and Disposal	2.1 The operation of facilities for waste site, treatment of waste and disposal of waste
			2.2 The import, processing, use, and recycling, temporary storage, transit, or export of waste
		9. Hazardous substance treatment, handling, and storage	9.4 The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas, paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location
			9.5 Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.



3.2 Legal requirements

To ensure legal compliance and environmental due diligence, the proponent should obtain certain legal authorizations listed in Table 2.

Table 2: Legal authorization

Aspects	Requirements	Authority
Environmental Management	-ECC	MEFT
Municipal Services	-Business Fitness Certificate	City of Windhoek
Petroleum products	-Used Solvent permit	Ministry of Mines and Energy



3.3 Applicable legislations

Table 3: Applicable legislations

LEGISLATION	PROVISION	PROJECT IMPLICATION
Constitution of the Republic of Namibia (1990)	 Articles 91 (c) commands the state to actively promote and sustain the environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include: Guarding against overutilization of biological natural resources, Limiting over-exploitation of nonrenewable resources, Ensuring ecosystem functionality, Protecting Namibia's sense of place and character. Maintain biological diversity. Pursuing sustainable natural resource use. Article 95(i) recites: "The State shall actively promote maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future". 	Through implementation of the environment management plan, the proponent shall be advocating for sound environmental management as set out in the Constitution.
	of social and cultural opportunities.	
Environmental Management Act No. 07 of 2007 and its Regulations (2012)	The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. The Act gives legislative effect to the Environmental Impact Assessment Policy. Moreover, the act also provides procedure for adequate public participation during the environmental assessment process for the interested and affected parties to voice and register their opinions and concern about the proposed project.	An Environmental Impact Assessment is compulsory for listed activities. "The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974." "The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location." "Construction of filling stations or any other facility for the



Water Act 54 of 1956	 The Water Resources Management Act 11 of 2013 is presently without regulations; therefore, the Water Act No 54 of 1956 is still in force: Prohibits the pollution of water and implements the principle that a person disposing of effluent or waste has a duly of care to prevent pollution (S3 (k)). Provides for control and protection of groundwater (S66 (1), (d (ii)). Liability of clean-up costs after closure/abandonment of an activity (S3 (l)). Furthermore, the Act provides provision for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes. In addition, the Act clearly gives provision that pertain with license or permit that required abstracting and using water as well as for discharge of effluent. 	underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin." The protection of ground and surface water resources should be a priority. The main threats will most likely be concrete and hydrocarbon spills during construction and hydrocarbon spills during operation and maintenance. The wastewater from the site should be channeled into the municipal sewage system. No discharge of wastewater into the open environment.
Pollution Control and Waste Management Bill	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. This Bill will license discharge into watercourses and emissions into the air.	All activities shall be conducted within the framework of this Bill
Stockholm Convention on Persistent Organic Pollutants	The convention was adopted in 2001 and entered into force on May 17, 2004. It emphasizes the restriction and elimination of persistent organic pollutants especially the disposal of industrial and medical chemicals. It also provides information for future establishments to re-use, reduce and recycle waste with environmentally friendly technologies e.g., autoclaving.	



	The chemicals targeted by the Stockholm Convention are listed in the annexes A-C of the convention text.	
Atomic Energy and Radiation Protection Act, 5 of 2005.	To provide for adequate protection of the environment and of people in current and future generations against the harmful effects of radiation by controlling and regulating the production, processing, handling, use, holding, storage, transport and disposal of radiation sources and radioactive materials, and controlling and regulating prescribed non-ionising radiation sources; to establish an Atomic Energy Board and to provide for its composition and functions; to establish a National Radiation Protection Authority; to amend the Hazardous Substances Ordinance, 1974 (Ordinance No. 14 of 1974); and to provide for related matters.	License is required for the disposal of the radiation source or nuclear material Amended under hazardous substances ordinance Radioactive waste is presently transported across the borders as there is no disposal facility in Namibia.
	Waste Disposal Regulations	
Basel and Rotterdam Convention, Framework Convention on Climate Change	Agreed to ensure environmentally sound management of hazardous waste and other wastes through the reduction of their movements, to reduce their impacts on human health and the environment. The Basel Convention makes specific reference to control of special waste: sharps, pathological infectious waste, hazardous chemical waste, and pharmaceutical waste and includes the following waste categories:	
	 Clinical wastes from hospitals, health centres, and clinics. 	
	Wastes from the production and preparation of pharmaceutical products.	
	 Pharmaceutical waste. Waste from the production, formulation. 	
	and use of biocides and Phyto- pharmaceuticals.	
	Namibia has accepted the principle that the only legitimate transboundary shipments of hazardous waste are exported, where the country lacks the facilities or expertise to dispose of the waste categories. This applies to the transportation of radioactive waste from Namibia to South Africa. Because suitable facilities are not available in	



	Namibia, provided that the radioactive waste is labelled, temporarily stored, and transported according to the United Nations recommended standards.	
Petroleum Products and Energy Act No. 13 of 1990 and its Regulations	Under this Act "petroleum product" is defined as any petroleum fuel and any lubricant, whether used or unused, and includes any other substance which may be used for a purpose for which petroleum fuel or any lubricant may be used;	
	The Act aims to: provide measures for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance of a price therefor; for control of the furnishing of certain information regarding petroleum products; and for the rendering of services of a particular kind, or services of a particular standard, in connection with motor vehicles; for the establishment of the National Energy Fund and for the utilization thereof; for the establishment of the National Energy Council and the functions thereof; for the imposition of levies on fuel; and to provide for matters incidental thereto.	
Hazardous Substances Ordinance (No. 14 of 1974)	To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances; to provide for the division of such substances into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.	
	3. (1) The Minister may, subject to the provisions of subsections (2) and (3), by notice in the Gazette, declare any substance or mixture of substances which, in the course of customary or reasonable handling or use, including ingestion, might, by reason of its toxic, corrosive, irritant, strongly sensitizing or flammable nature or because it generates pressure through	



	decomposition, heat or other means, cause injury, ill-health or death to human beings, to be a Group I or a Group II hazardous substance In some countries, oil or mixtures that would qualify as hazardous waste are products that are off specification typically contain arsenic (5 ppm) cadmium (2 ppm), chromium (10 ppm) and lead (100 ppm), as well as have a minimum flash point of 100 degrees F and total halogens of more than 4,000 ppm.	
Soil Conservation Act 76 of 1969	Prevention and combating of soil erosion, conservation, improvement and manner of use of soil and vegetation, and protection of water sources.	Removal of vegetation cover is to be avoided and minimized at all costs.
National Heritage Act 27 of 2004	The Act provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage Register; and to provide for incidental matters.	Any material of cultural, heritage or archaeological importance shall be reported in accordance with this Act
Labour Act (No 11 of 2007)	135 (f): "the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;" (Ministry of Labour and Employment Creation)	Contractors, Sub-contractor shall be guided by this Act when recruiting or handling employment related issues
	Noise Control Regulations It is essential to ensure that before any development project is approved and undertaken, an assessment or evaluation of expected noise level is done.	Noise generation should be minimized to the satisfactory of neighboring residents
Urban and Regional Planning Act No. 5 of 2018	The Act and Regulations combine the Townships Board and Namibia Planning Advisory Board (NAMPAB) into one to be known as the Urban and Regional Planning Board and delegate the decisions on town planning applications to Local Authorities. However, an LA can only make decisions after the MURD has declared a Local Authority as an Authorised Planning Authority (APA).	A Consent Letter from the Municipality will be obtained



Public and Environmental Health, 2015	Provides a framework for a structured more uniform public and environmental health system, and for incidental matters Deals with Integrated Waste Management including waste collection disposal and recycling; waste generation and storage; and sanitation.	The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	Governs the control of noxious or offensive gases. Prohibits scheduled process without a registration certificate in a controlled area. Requires best practical means for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.	According to the Ordinance, the Local Authority shall control and prevent atmospheric air pollution or emission of noxious or offensive gases by smoke.
South African National Standards (SANS)	The Petroleum Products and Energy Act prescribes SANS standards for the construction, operations and decommissioning of petroleum facilities. SANS 10089-3:2010 is specifically aimed at storage and distribution of petroleum products at fuel retail facilities and related structures. Provide requirements for spill control Infrastructure amongst other specifications.	The Proponent should adhere to the SANS throughout the phases of the retail fuel facility.



4. PUBLIC PARTICIPATION PROCESS

Consultation with the public forms an integral component of an environmental assessment investigation and enables Interested and Affected Parties (I&APs) to comment on the potential environmental impacts associated with the proposed development and to identify additional issues which they feel should be addressed.

The identified I&APs includes adjacent property owners, local authority officials, local businesses, and the residents. Refer to Appendix B for proof of the public participation processes and registered I&APs.

4.1 Public notifications

The scoping and EIA process of the project was advertised in two separate local newspapers; Namibian Sun (14 December 22) and New Era Newspapers(14 December and 8 December 22). Public notices were also displayed at the the development site, a notice was also posted on the consultants social media page. Public advertisements provided brief information about the proposed project and the EIA process, as well as an invitation for registration and also an invitation to the public meeting.

4.2 Background Information Document (BID)

The background information document was compiled in English, no stakeholders registered as interested parties, and the documents were not forwarded to anyone.

4.3 Public meeting

No public meeting was held, as no party registered as interested and or affected parties.



5. PROJECT DESCRIPTION

5.1 Locality

The proposed development site (Erf 1015) is located in the Okuryangava location in Windhoek and is accessible via Ondoto Street. The site is located on the following coordinates -22.5113789" S; 17.05" E.

The area is zoned as 'industrial' by the city of Windhoek, the size of the warehouse is $200m^2$, the total size of the entire facility is $11374m^2$,



Figure 1: Locality

5.2 Surrounding land uses

The site is located in the busy industrial area consisting mainly of a panel beating garage, built it and other shops.



Figure 3; Site surrounding

5.3 Existing infrastructure The site (Erf 1015) is enclosed in a boundary wall with a lockable entrance, with 24 hour security.

5.4 Proposed Developments to existing structure

In order to operate the facility in line with the legal framework in Section 5 and industry's good standards and best practices, the following standards will be ensured during the site establishment/development.

i). Placement of infrastructure

The proposed site layout will be approved by the city of Windhoek.

ii). Fire detection system

As depicted in Figure 6, there will be a fire detection system as part of the emergency response plan for the site. The fire detection system will be semi-automated and semi-manual operated to enable quick reaction to fire incidents.

iii). Solvent trap system

There will be oil trap installed on site to intercept the wastewater from the site drainage system. The solvent trap will be able to reduce the quantity of solvemt contaminant in the wastewater before discharged into the municipal sewage system.

5.5 Description of the operation phase

i) Source and types of waste solvent

The waste solvent products will be collected from various sources such as industrial enterprises and cleaners.

• Ethanol will be main solvent at the recycling facility.

ii). Collection methods

Solvent will be collected, and stored in 200 litre oil/fuel drums.

ii). Facility operation procedures

The operation of the proposed facility will entail the following process

- Receiving of waste solvent collected around the city
- Sorting, handling of waste solvent
- Temporary storage of waste solvent in 200 lite fuel drums
- Treatment of waste solvent using



Figure 8: Solvent Extraction machine

iii). Waste management

Various activities such as use of sanitary facilities, servicing area and operation of the station in general, will result in the production of a lot of solid and liquid waste. Solid waste (general and hazardous i.e., spills, contaminated items, etc.) will be handed over to a reputable solid waste management operator.

Liquid waste will be generated mainly from the Wash Bay, Ablution facility and accommodation facility. All wastewater generated from the site will be discharged into the municipal sewage system (already available onsite).

v). Emergency response

Twenty-four-hour security service will be on site. All emergency situations i.e., fire, spills, etc., will be handled in line with the emergency response plan outlined in the EMP.

5.6 Decommissioning phase

In case the project stalled, and proponent decide to decommission it a decommissioning and rehabilitation plan should be prepared. All equipment and fixtures including form wood will be dismantled and removed from the site. The contractor will ensure safe dismantling of the scaffolding, form wood used for reinforced concrete beams and columns, temporary store and site office.

5.7 Need and Desirability of the project

The "need" and "desirability" 'for the proposed project are based on the following aspects. The "Need".

The 4th generation of industrialization marks the tipping point in industrialization requiring more green initiatives, effective and innovative industrial waste management solutions (new and existing) to support the growing population and economies especially in developing countries. This comes as a contributive effort to a global commitment to become carbon neutral and hence achieve absolute sustainability by 2045/2050 (Paris agreement of 22 April 2016). Therefore, it is for this reason Industrialink was conceived. It has since been endorsed by a reputable manufacturing company which generate dirty solvents as a by-product of its manufacturing operational processes. It for this simple reason, recycle one ton of their waste solvent and save up to 7 tons greenhouse gas (GHG) emissions.

- To primarily clean and recycle contaminated solvents.
- To create/develop and manufacture organic solvents in the country from several industrial waste and by use of lignocellulosic biomass and others.
- Which will reduce waste disposal of dirty solvents, reduce global energy consumption and pollution from solvent fumes and vapors when incinerated.
- Maximize efficiencies and reduce spending costs on solvent (imports) by 50%.
- Create a supportive economic market for scientific researchers by offering solvent solutions, employment and apprenticeship.
- To ensure improved safety and quality of solvents used in Namibia.

6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1 Socio-economic settings of Windhoek

a). Demography

Windhoek is the capital of Namibia, in the country's central highlands. South of the city, the sprawling Heroes' Acre war memorial commemorates Namibia's 1990 independence. On a hilltop in the city center are the 1890s Alte Feste, a former military headquarters with historical exhibits, and Independence Memorial Museum. Colonial influences are visible in nearby buildings like the sandstone Lutheran Christus.

Windhoek has a population of 431 000 (Namibian Statistics Agency, 2020)



Figure 9: Overview of Windhoek

b). Economic situation

Windhoek accommodates most of Namibia s light industries and manufacturing. Although the basic structure of SME activities in this region is similar to the other central regions, the SME sector as a whole is much bigger in size as compared to the other central regions. In addition it has a complete different profile in terms of sophistication of products and services as well as the Page 32 of 48

level of management.

Manufacturing in the Khomas Region consists chiefly of meat processing, bottling and canning, beer brewing, plastics and refrigeration. Other types of manufacturing that takes place in the Khomas region is aluminum products, beverages, awnings, blinds, canopies, carpets, charcoal, chemicals, clothing, baking and confectionery, limited food production, furniture, steel products, etc.

Some activity in the manufacturing of paints, metal work, plastic packaging, safety clothing and solar power are also taking place. The second most important economic activity is trading. Windhoek has a lively motor trade in new and second hand cars as well as in motor spares. Other retail and wholesale activities abound, while the services sector is healthy. Telecommunication services, transport, tourism and security companies abound in the capital. When you speak to various stakeholders in the region, the general feeling was that agriculture and agro-industry on the one hand and tourism on the other hand remains the sectors that hold the most promising potential for business development. In terms of ancillary services to these sectors, the region holds much potential. It is, however, also true that trade and industry is not developing value-adding industries that could absorb outputs from the primary sectors. Expanding the economic base and developing trade and industry should primarily focus around these sectors. The superior infrastructure is sustained by the regions well developed economic, trade and financial sectors, which presents a great potential for further investment, growth and creation of much needed employment in order to reduce poverty.

Numerous project proposals were made in terms of trade and industrial development for the Khomas Region. The majority of these proposals are however of such a nature that it would be best leaving them for private initiative for further development should they prove to be profitable. Those ideas that will require assistance from central government for further investigation have been listed under the section for future projects.

Windhoek is the country s tourism capital and a number of tour operators operate from Windhoek. It is, however, a sad fact that much of the capital generated through Namibian tourism is not retained in this country and this sector holds enormous economic potential. Trade is in many aspects heavily dependent on the tourist market. The region also holds much possibility for the development of eco-tourism. Windhoek is a well-developed city with excellent infrastructure in most parts and a well-established business sector that can provide for most of the requirements that may come from different sectors of the economy.

6.2 Biophysical settings

Namibia is generally known to be a hot and dry country, but temperatures do vary greatly. Summer is from October to April and day time temperatures can reach up to 4 oC. Average summer temperatures range from 20oC to 34oC. In winter, from June to September, average night time temperatures range from 6°C to 10°C and daytime temperatures range between 18°C and 22°C. The average annual rainfall varies from less than 50 mm along the coast to 350 mm in the central interior and 700 mm in the Caprivi. The rainy season is from October till April1.

Windhoek is located in a semi-desert climatic region which has a low average annual rainfall of 375 mm and a high rate of evaporation (Windhoek City Council, 2013). Rainfall peaks during summer between January and March (Namibia Meteorological Service, 2013) at an average high.

At the peak of summer (December to February), average temperatures vary between 17 and 30°C with average mid-winter temperatures (June to July) varying between 7 and 21°C (Namibia Meteorological Service, 2013). For most of the year (70%) mean wind speeds are below 3.3 m/s and over the year average at 2.5 m/s (Namibia Weather, 2013). Winds favour no specific direction and wind speed increases during August and September which is the windiest period (Namibia Meteorological Service, 2013). Droughts are common, as are floods, and trends depict a pattern of drought approximately once every ten years (Namibia Meteorological Service, 2013).

7. ANALYSIS OF PROJECTALTERNATIVES

According to the EIA Regulations, the Scoping process must look at potential alternatives to any planned development. This section will discuss alternatives to the project, including the no action alternative, as well as the overall area's historical use. The project site is located. We'll talk about these solutions from the socioeconomic and environmental angles.

7.1 No Action

Regarding the proposed project, the No Action Alternative suggests that the current situation is kept. Given the necessity for such a project in the community, there is absolutely no justification for considering this alternative in this circumstance. The land will continue to be underutilized or neglected, which will result in a number of losses for the project's proponent, the community at large, and the Municipality. From a socioeconomic and somewhat environmental standpoint, the option of no project is not favored since if the project is not completed: -

7.2 Alternative site

This choice requires moving the planned project to another location. This implies that if relocation is being considered, the proponent must search for the land. Finding the property needed for the project's size and scope, as well as finalizing any official transactions or leasing agreements, could take a while. It's also important to note that the proponent and the property owner have previously signed a lease. Before the implementation stage, project design and planning would require costs that had already been incurred in the intended development, meaning that everything that had been completed and paid for up to this point would be recorded as a loss to the proponent.

Taking into account that the intended "waste management" operations are comparable in character to the main land use activities

8. ASSESSMENT OF POTENTIAL IMPACTS

8.1 Risk Assessment and Rating

The scoping process has identified potential project impacts during its planning and operation phase and examined each of these issues. In assessing the impact of the proposed development, four rating scales were considered. Each issue identified was evaluated in terms of the most important parameter applicable to environmental management. These include the **extent**, *intensity*, *probability and significance* of the possible impact on the environment. The rating scales used are as follows:

Table 4: Significance rating

CRITERIA	DESRCIPTION									
	National (4)	Regional (3)	Local (2)	Site (1)						
EXTENT	The whole country	Khomas region and neighbouring regions	Within a radius of 2 km of the proposed site	Within the proposed site						
	Permanent (4)	Long-term (3)	Medium-term (2)	Short-term (1)						
DURATION	Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	The impact will continue/last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter.	The impact will last for the period of the construction phase, where after it will be entirely negated	The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase						
	Very High (4)	High (3)	Moderate (2)	Low (1)						
INTENSITY	Natural, cultural and social functions and processes are altered to extent that they permanently cease	Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected						
	Definite (4)	Highly Probable (3)	Possible (2)	Improbable (1)						
PROBABILITY	Impact will certainly occur	Most likely that the impact will occur	The impact may occur	Likelihood of the impact materialising is very low						
SIGNIFICANCE	Is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.									

Table 5: Risk Assessment

Low impact	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.			
Medium impact	Mitigation is possible with additional design and construction inputs.			
High impact	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.			
Very high impact	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a "very high impact" is likely to be a fatal flaw.			
Status	Denotes the perceived effect of the impact on the affected area.			
Positive (+)	Beneficial impact			
Negative (-)	Deleterious or adverse impact.			
Neutral (/)	Impact is neither beneficial nor adverse			
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.				

8.2 Establishment/development Phase

Table 6: Potential impacts during establishment/development phase

ASPECT	POTENTIAL IMPACTS	SIGNIFIC MITIGAT	CANCE RATI ION)	ING (BEFO	RE	SIGNIFICANC MEASURES E (WITH MEASURES)			
		Extent	Duration	Intensity	Probability				
1. BIOPHYSICAL	Soil contamination from spills and leaks from vehicles and machineries.	1	1	1	1	4	 Soil contamination during site establishment is expected to be minimal given the limited number of vehicles to operate onsite. In case of spill, contaminated sand must be cleaned up and disposed of at the landfill site. 		
	Air pollution resulting from fumes from vehicles and machineries	1	1	1	1	4	 This impact is expected to be minimal given the limited number of vehicles to operate onsite. 		
	Waste generation	2	1	1	1	5	 General household waste should be disposed of in the municipal refuse bins for disposal. All empty disinfectants containers should be 		

							 sent to the local recycling companies or properly cleaned before re-use. ✓ Hazardous waste such as used solvent, paints, unused chemicals, etc., should be collected separately and sent to the landfill site.
2. SOCIO-ECONOMIC	Land-use effects Disturbances from traffic movement.	1	1	1	1	4	 The impact is expected to be minimal given the limited number of vehicles to operate onsite. The site is located within a busy heavy industrial area, hence the proposed activities is similar to the surrounding activities.
	Generation of noise and vibration	1	1	1	1	4	 The impact is expected to be minimal given the scale (small) of the project.
	Safety, security, and health hazards.	1	1	1	1	4	 Employees should be equipped with appropriate PPE. Uncovered trenches must be barricaded with a danger tape.

Visual impacts	1	1	1	1	4	~	Remove generated	all	waste and
							disposed o	f regu	ılarly.

8.3 Potential impacts during operational phase

Table 7: Risk Assessment Operational Phase

ASPECT	POTENTIAL IMPACTS	SIGNIFIC	ANCE RATI	NG (BEFO	RE	SIGNIFICAN	MEASURES
		MITIGATI	ON)			CE (WITH	
		Extent	Duration	Intensity	Probability	MEASURES)	
	Contamination of soil from	1	1	1	1	Λ	
1. DIOPHTSICAL	spills and leaks or accidents					4	 The surface area will be covered with impervious materials (paving and mats). All spills and leaks should be contained, and contaminated sand should be collected and disposed of at landfill site. Drivers should be trained on how to handle accidents and spills. Waste oil and other petroleum products should be transported and stored in approved containers.
	Waste solvent may find its way into the municipal sewage system from washing of vehicles and surrounding or through stormwater drainage after rainfall.	1	1	1	1	4	 An oil trap will be installed to intercept wastewater. No intentional discharge of waste oil the sewage system.
	Waste oil is poisonous to animals, birds etc.	1	1	1	1	4	✓ Waste oil will be stored in closed containers.

2. SOCIO-ECONOMIC	Occupational health and	2	1	1	2	6	✓ Inhalation of fumes
	Safety risks						should be prevented.
	-Waste solvent is a Hydrocarbons product, and it contains impurities that are						 Employees will be trained on the nature of their work and on how to handle dangerous goods.
	carcinogenic and highly dangerous to human health. This can occur through inhalation, consumption, or dermal exposure/contact.						 ✓ Employees will be equipped with appropriate Personal Protective (PPE).
	 Injuries can occur due to incorrect lifting of heavy equipment and materials, falling from heights, Close contacts may also occur through moving parts of machines, vehicles, and exposure to hot temperatures. The risk of exposure can be aggravated by factors such as lack of awareness, lack of 						 The health and safety standards specified in the Health and Safety Regulations of the National Labour Act 11 of 1992 should be complied with. All petroleum products should be stored in approved containers i.e., IBC, stainless steel etc.
	Risk of fire (Waste solvent and Petroleum products i.e., chemicals are highly flammable materials, hence the possibility of fire outbreak.	2	1	1	1	5	 Waste solvent must be heated it ignited, hence there is a lower chance of fire outbreak. A fire detection system will be installed. All Employees will be trained on fire and other emergency responses

8.4 Project positive impacts

ASPECT	POTENTIAL IMPACTS	SIGN	IFICANCE RATING	G (BEFORE MIT	IGATION)
		Extent	Duration	Intensity	Probability
1.	Environmental benefits	2	2	2	6
	The proposed project will benefit the environment in a long term due to waste solvent recycling				
	Provision of employment	2	2	2	6
	Creation of job opportunities				
	Provision of waste solvent recycling opportunities	2	2	2	6
	Waste solvent recycler both local and those from across the country will have opportunity to sell their waste oil at this facility.				
	Economic contribution	2	2	2	6
	Generation of income both waste solvent seller and for the proponent				
	Support to other businesses	2	2	2	6
	The facility will provide support to other businesses to recycle waste solvent				

8.5 Decommissioning and Rehabilitation

During the duration of the environmental clearance certificate's validity, decommissioning is not anticipated. If decommissioning happens at any point, the area could need to be renovated. Every piece of infrastructure, including any buildings or subsurface infrastructure, will need to be completely removed during decommissioning. Any contamination on the property needs to be cleaned up. As structures are removed, this phase will have an influence on waste output and noise. Noise levels must be kept within acceptable safety limits, and waste must be contained, disposed of at a facility that has been properly identified and approved, not dumped in the neighborhood.

The EMP for the facility will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures. The proponent should thus consult with the relevant authority, in this case the City of Windhoek prior to any proposed demolition and removal of site infrastructure in order to best mitigate any potential impacts.

9. CONCLUSION AND RECOMMEDATIONS

9.1 Conclusion

Defining the scope of the impact assessment and determining whether any specialized studies were necessary were the goals of the scoping phase of the EIA research. This goal is thought to have been accomplished and properly reported in the scoping report. The implementation of this project won't have many noticeable negative effects because all potential environmental elements have been thoroughly evaluated and the required control mechanisms have been created to meet legal standards. From the study, the following findings can be made.

- The identified negative impacts can successfully be mitigated by following the proposed measures as well as by ascribing to the SANS standards relating to the solvent industry.
- It is assumed that all information provided by the I&APs, Stakeholders as well as by the EAP and its sources is deemed valid and correct at the time it was provided. Since there were no objections received, the project is well received by the potential IAPs, considering their inputs are incorporated in this report.
- The proponent will adhere to the recommendations and mitigations measures contained in this report and in the EMP here attached.

9.2 EAP Recommendations

It is recommended that the proponent.

- Apply mitigations measures to mitigate identified negative impacts as outlined in Section 8 and in the EMP.
- Appoint an Environmental Control Officer or EAP to conduct monitoring and prepare quarterly SHEQ report and submit to MEFT
- Ensure that all legal requirements (permits, certificate etc.) are up to date

It is therefore recommended that this Scoping Report be accepted and that the Environmental Commissioner.

- a) Consider the findings and recommendations of this scoping process with mitigation measures.
- b) Subsequently, consider issuing an Environmental Clearance Certificate to authorize the; Establishment and operation of a handling, storage facility of waste solvent at Erf 1015, Ondoto Street, Windhoek, Khomas region.

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10. **APPENDICES**

Appendix A: Proof of Consultation

Appendix B: CV of practitioner

Appendix C: EMP

Appendix A (Proof of Consultation)



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ber 2022 and only sted candidates be contacted.

otice

INCREASE

LIQUOR NSE NOTICE

te the price for license notice e to N\$460-00 g VAT as from 2023

LATE TE NOTICE

the price for Late otice increase to) including VAT anuary 2023 Notice is hereby given to all potential interested and affected parties that an application will be made to the Environmental commissioner in terms of the Environmental Management Act (No.7 of 2007) for the following.

Project name:

Industrialink Solvent Recycling Duration: 5 months Location: Erf 1015 Ondoto Street, Okuryangava Description:Solvent recycling through distillation. Proponent:Industrialink Investment cc EA practitioner: Pachyderm Environmental consultants cc

In line with the EMA and EIA regulations, all interested and/ or affected parties are hereby invited to submit question/ comments/concerns about this study in writing to: pachyconsultants@gmail.com Due date: 23 December 2022 4. Clerk of the c application w KIATIMA MULIL 5. Date on which a Idoged: 14 DEC Date of meeting of C application wi 11 JANUA Any objection or writ terms of section 28 o to the applicant must t to the Secretary of t reach the Secretary days before the date the Committee at whic



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BASIC INFORMATION

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Physical Address: Opuwo

ID: 90031400574

Nationality: Namibian

Drivers License: Code B

Passport: Valid Namibian Passport

Marital status: Single

ABOUT ME

I am a highly driven, strategic and passionate individual with expertise in various disciplines of environmental management (water, community conservation, environmental education and environmental management).

I can work without supervision, individually or as part of a team. With over 10 years, I can lead a team and manage various projects.

Having been published, and researcher in the Southern African environmental legislation handbook and a registered member of the Environmental Assessment Professional of Namibia, I am well respected by my peers and professional acquaintances. My skills, education and experience

Alton Tsowaseb

0812146730 / 0852146730

EXPERIENCE

1. October 2020 - Current Cluster Coordinator - Integrated Rural Development and Nature Conservation | Opuwo, Namibia

Assist communal conservancies in Northwestern Namibia with various aspects of Natural Resource Management

- Wildlife Management and Monitoring
- · GIS and mapping
- Wildlife management plans
- Environmental education
- Grant proposal applications
- Budget management
- Tourism Development
- Institutional Development
- Anti-Poaching patrols
- Conflict Resolutions
- Environmental Compliance Monitoring
- Training on various aspects of Natural Resource Management
- Project Management
 - January 2013 Current
 Part Time Independent Environmental Consultant Pachyderm Environmental Consultants | Windhoek, Namibia

Part time environmental consultant, successfully obtained three environmental clearance certificates for, sand mining, lodge and cultural village in the region,

- Environmental Management plans
- Public meetings
- Environmental Assessments

will be an asset to any organization.

SKILLS

- Verbal and written communication
- Environmental policy
- Attention to detail
- Problem solving and analysis
- GIS and mapping
- Time management
- Cultural sensitivity

ADDITIONAL INFORMATION

Publications

The Journal of Wildlife
 Management

Title: A first analysis of Aircraft Wildlife Collisions at two major Namibian Airports.

• Researcher on the SADC Environmental Legislation handbook, published in 2012 by the Southern African Institute of Environmental Assessment

Professional Certification

 Registered member of the Environmental Assessment Professionals of Namibia as an emerging environmental manager'

- December 2015 March 2020 Hydrological Technician - Ministry of Agriculture, Water and Land Reform | Windhoek, Namibia
- Groundwater monitoring with win-situ software and equipment
- Collection of water samples for testing
- Borehole pump-testing
- Compliance monitoring
- Provide Technical specifications for groundwater permits
- Borehole sighting
- borehole inspections

 April 2015 - August 2015
 Environmental Educator - Namib Desert Environmental Education Trust, Namibia

Provided environmental education training to school children, youth and adults in Southern Namibia.

- Planning Lessons
- · Implementation of sustainable living programs
- Environmental Education
- Explore use of renewable energy in everyday living

5. February 2012- 2014 Intern- NACSO/WWF in Namibia

Windhoek

Wildlife monitoring, GIS and mapping, Quota Setting, Vegetation monitoring, Training Communities on Natural Resource Management, Update Database and Data Entry, General Office Administration

EDUCATION AND TRAINING

February 2022 (In Progress) Advanced Diploma in Management STADIO NAMIBIA

April 2019 (Completed)

LANGUAGE PROFICIENCY

English: Read, Write and Speak

Damara: Read, Write and Speak

Afrikaans: Read, Write and Speak

SHORT COURSES

- Assessing and valuing Ecosystem Services for Policy Impacts in the context of a Biodiversity Economy (2018)
- law and Trans boundary Water Governance (2019)
- Basics of groundwater modelling
- Basic first aid (2011)
- Defensive Diving (2012)
- Defensive and off-road driving (2016)

Bachelor of Natural Resource Management (Honors) | Natural Resource Management Namibian University of Science and Technology, Windhoek

April 2012 (Completed) **National Diploma** | Natural Resource Management Polytechnic of Namibia, Windhoek

October 2008 (Completed) High School Diploma Concordia College, Windhoek

REFERENCES

- Basilia Shivute_- Operations Manager IRDNC <u>Basilia.shivute@irdnc.org.na</u> +264 81 255 9570
- Sakeus Ihemba- Chief Hydrologist- MAWLR <u>Sakeus.ihemba@mawf.gov.na</u>
- Naftali Eliaser- Chief Warden MEFT +264 81 280 3555