

ENVIRONMENTAL IMPACT ASSESSMENT TO OBTAIN AN ENVIRONMENTAL CLEARANCE FOR THE MATERIALS RECOVERY FACILITY OF RENT-A-DRUM ON ERF 1307, OSHAKATI, OSHANA REGION

2022

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GREEN EARTH Environmental Consultants

Project Name:	ENVIRONMENTAL IMPACT ASSESSMENT TO OBTAIN AN ENVIRONMENTAL CLEARANCE FOR THE MATERIALS RECOVERY FACILITY OF RENT-A-DRUM ON ERF 1307, OSHAKATI, OSHANA REGION
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EXECUTIVE SUMMARY

Green Earth Environmental Consultants were appointed by the Proponent, Rent-A-Drum, to conduct an Environmental Impact Assessment to obtain an Environmental Clearance for the operations of the Materials Recovery Facility (MRF) of Rent-a-Drum on Erf 1307, Oshakati, Oshana Region. The land within the immediate vicinity of the project site is predominately characterized by industrial, business, and institutional activities. In terms of the Regulations of the Environmental Management Act (No 7 of 2007) an Environmental Impact Assessment must be done to address the following 'Listed Activities':

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

- The construction of facilities for waste sites, treatment of waste and disposal of waste.
- The import, processing, use and recycling, temporary storage, transit or export of waste.

The key characteristics/environmental impacts of the proposed project are as follows:

Operational activities:
Receiving, sorting, baling, packaging, and storage of waste
Offloading, loading, and parking of vehicles
Cleaning of vehicles and equipment
Handling (receiving and dispensing) of petroleum products
Storage of petroleum products
Filling of vehicles
Safety and security activities
Administrative activities

Impact on environment:	Nature of impact:
Reduction of waste to be dumped on landfill	Positive for Oshakati and Namibia.
site.	
Recycling of waste, adding value to waste	Waste is reworked into useable
and manufacturing of new products	materials, to be reused.
Creation of employment and transfer of	Positive as employment is created
skills.	during operations which also result
	in the transfer of skills which is
	important in the current economic
	climate.
Lengthening of the lifespan of the municipal	Positive as the landfill site will last
landfill site.	longer with less land required for
	dumping of waste.
Limit plastic and paper to be blown into the	Waste blown into the neighbouring
immediate environment of the landfill site.	land is limited and reduced.
Dust and noise from the vehicles	Mitigated as the facility is accessed
transporting and collecting waste.	via a tar and paved road. Vehicles

	and a second
	only operates during the day. Site
	is located far away from residential
	areas.
Fire hazards associated with storage and	The unlikely event of a fire from
handling of products.	operations or products stored
ů i	onsite will have a limited impact on
	neighbouring properties. The site is
	also equipped with fire hydrants
	······································
	inspected by the Fire Department.
Impact on traffic.	Limited as the site is in the
	industrial area however the major
	arterials in the town can easily be
	accessed.
Cultural/Heritage.	No items of archeologic value or
	graves were observed during the
	site visit.
Visual impact.	Low as the facility is located in the
	industrial area. The waste recycling
	operations take place in a large
	warehouse and the site is
	surrounded by walls, therefore
	-
	activities are not visible from the
	outside.
Impact on groundwater, surface water and	The impact will be negative in case
soil.	of spilling of petroleum products
	during handling and storage, the
	risk is mitigated through the
	installation of spilling control
	infrastructure and equipment.
Health and safety.	Low if mitigated during operation.
	0 01

The environmental impacts during the operational phase of the proposed project:

IMPACTS DURING OPERATIONAL PHASE			
Aspect	Impact Type	Significance of impacts Unmitigated	Significance of impacts Mitigated
Ecology Impacts	-	L	L
Dust and Air Quality	-	М	L
Groundwater Contamination	-	L	L
Waste Generation	-	М	L
Failure of Reticulation Pipeline	-	L	L
Fires and Explosions	-	L	L
Safety and Security	-	М	L

IMPACT EVALUATION CRITERION (DEAT 2006):				
Criteria	Rating	Rating (Severity)		
Impact Type	+	Positive		
	0	No Impact		
	-	Negative		
Significance of	L	Low (Little or no impact)		
impacts	М	Medium (Manageable impacts)		
	Н	High (Adverse impact)		

The negative impacts associated with the project are the impact on the vegetation, the natural drainage systems, noise and dust during construction and operation, the danger of residents and visitors being injured during construction, the transmission of diseases from people or to people involved in construction and the loss of land. However, mitigation measures will be provided that can control the extent, intensity, and frequency of these named impacts in order not to have substantial negative effects or results.

The type of activities that will be carried out on the site will not negatively affect the amenity of the locality and the activities do not adversely affect the environmental quality of the neighbouring erven or areas. None of the potential impacts identified are regarded as having a significant impact to the extent that the proposed project should not be allowed. However, the operational activities further on need to be controlled and monitored by the assigned subcontractors and the proponent.

The Environmental Impact Assessment which follows upon this paragraph was conducted in accordance with the guidelines and stipulations of the Environmental Management Act (No 7 of 2007) meaning that all possible impacts have been considered and the details are presented in the report. Based upon the conclusions and recommendations of the Environmental Impact Assessment Report and Environmental Management Plan following this paragraph, the Environmental Commissioner of the Ministry of Environment, Forestry and Tourism is herewith requested to:

- 1. Accept the Environmental Impact Assessment;
- 2. Approve the Environmental Management Plan;
- 3. Issue an Environmental Clearance for the operations of the Materials Recovery Facility (MRF) of Rent-a-Drum on Erf 1307, Oshakati, Oshana Region and for the following "listed activities":

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

- The construction of facilities for waste sites, treatment of waste and disposal of waste.
- The import, processing, use and recycling, temporary storage, transit or export of waste.

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LIST OF ABBREVIATIONS

CAN	Central Area of Namibia
EC	Environmental Clearance
ECO	Environment Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
HDPE	High Density Polyethylene
I&APs	Interested and Affected Parties
LDPE	Low Density Polyethylene
LLDPE	Linear Low-Density Polyethylene
MEFT	Ministry of Environment, Forestry and Tourism
PET	Polyethylene Terephthalate
SQM	Square Meters
UBC	Used Beverage Cans

1. INTRODUCTION

The Proponent, Rent-A-Drum, appointed Green Earth Environmental Consultants to conduct an Environmental Impact Assessment and develop an Environmental Management Plan to obtain an Environmental Clearance for the operations of the Materials Recovery Facility (MRF) of Rent-a-Drum on Erf 1307, Oshakati, Oshana Region.

The Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) stipulates that an Environmental Impact Assessment (EIA) report and management plan is required as the following 'Listed Activities' are involved:

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

- The construction of facilities for waste sites, treatment of waste and disposal of waste.
- The import, processing, use and recycling, temporary storage, transit or export of waste.

The Environmental Impact Assessment below contains information on the proposed project and the surrounding areas, the proposed activities, the applicable legislation to the study conducted, the methodology that was followed, the public consultation that was conducted, and the receiving environment's sensitivity and any potential ecological, environmental, and social impacts.

2. TERMS OF REFERENCE

To be able to implement the proposed project, an Environmental Impact Assessment and Environmental Clearance is required. For this environmental impact exercise, Green Earth Environmental Consultants followed the terms of reference as stipulated under the Environmental Management Act.

The aim of the environmental impact assessment was:

- To comply with Namibia's Environmental Management Act (2007) and its regulations (2012).
- To ascertain existing environmental conditions on the site to determine its environmental sensitivity.
- To inform I&APs and relevant authorities of the details of the proposed development and to provide them with an opportunity to raise issues and concerns.
- To assess the significance of issues and concerns raised.
- To compile a report detailing all identified issues and possible impacts, stipulating the way forward and identify specialist investigations required.
- To outline management guidelines in an Environmental Management Plan (EMP) to minimize and/or mitigate potentially negative impacts.

The tasks that were undertaken for the Environmental Impact Assessment included the evaluation of the following: climate, water (hydrology), vegetation, geology, soils, socio economic impact, cultural heritage, groundwater, sedimentation, erosion, biodiversity, sense of place, socio-economic environment, health, safety and traffic.

The EIA and EMP from the assessment will be submitted to the Environmental Commissioner for consideration. The Environmental Clearance will only be obtained (from the DEA) once the EIA and EMP has been examined and approved for the listed activity.

The public consultation process as per the guidelines of the Act has been followed. The methods that were used to assess the environmental issues and alternatives included the collection of data on the project site and surrounding area, info obtained from the proponent and the Ministry of Environment, Forestry and Tourism and identified and affected stakeholders. Consequences of impacts were determined in five categories: nature of impact, expected duration of impact, geographical extent of the event, probability of occurring and the expected intensity.

All other permits, licenses or certificates that are further on required for the operation of the proposed project still needs to be applied for by the proponent.

3. NEED AND DESIRABILITY

The establishment of the Rent-A-Drum recycling facility in Oshakati can be motivated in terms of the need and desirability for such a facility as well as the suitability of the site.

Need and desirability

- Oshakati, Ondangwa, Ongwediva and the surrounding smaller towns are faced with various challenges related to waste management activities and processes because of the ever-growing population and business activities within the Town. These Town Councils' waste management strategy is subject to the Solid and Hazardous Waste Management regulations of the Local Authorities Act, 1992 and managed under the guidance of these regulations. These Councils' waste management strategies are aligned by the waste management hierarchy which favours waste prevention and minimization first, recycling and reuse in second place and disposal only as the last resort. Rent-A-Drum is one of the licensed Waste Management Contractors which is assisting the Councils in their solid waste management by focusing on the recycling and reuse of waste through the activities of the Rent-A-Drum recycling plant, which is located on Erf 1307, Oshakati.
- The operation of the Recycling Plant also supports the following principles which govern the Waste Management Policy:
 - Integrated waste management hierarchy. The creation of waste should be avoided through the prevention and minimization thereof ahead of recycling treatment and disposal. The establishment of collection points for the disposal of pre-sorted waste by Rent-A-Drum supports this principle which prevents that reusable item becomes waste or that it is made obsolete through further pollution.
 - <u>The polluter pays principle.</u> According to this principle whoever creates the waste should be responsible for managing such waste in terms of GREEN EARTH Environmental Consultants 11

cost and rehabilitation of the natural environment caused by pollution. The Rent-A-Drum recycling initiative puts the burden on the generator of the waste (household or business) to pre-sort the waste and to dispose it in dedicated containers in order to simplify sorting and reuse and to prevent reusable items becoming waste.

- Duty of care. This concept requires the generator of the waste to be responsible for the waste from the point of generation all the way to the point of safe disposal. The Rent-A-Drum recycling initiative creates the opportunity for creators of waste to take responsibility for that waste by sorting it where it is generated and by disposing of it responsibly by putting it in special dedicated containers as supplied by Rent-A-Drum.
- <u>Best practical environmental option.</u> This waste management initiative utilizes the options which are the most beneficial at the least cost and the least damage to the environment both in the long and short term especially by focusing on recycling plastic, glass and paper which is currently the main sources of pollution in the Oshakati.
- The action of collection, sorting, baling and disposal of the waste materials is very labour intensive and plays a major role in creating jobs especially for untrained or uneducated people where the need for job creation is at its highest.
- Recycling of waste creates opportunities for further processing and manufacturing in Namibia which will create more employment and add value to the Country's economy.
- Recycling of waste will reduce the burden on the landfills and dumping sites of the Town as less material will end up there.

Suitability of the site

- Erf 1307, Oshakati is ideally suited for this purpose. It is relatively far away from any residential areas, although near enough so that it can be reached by people working there. The site is fenced in, and the plant is located within a large warehouse which means that the activities are not visible from outside. The current operation, although it is still small, is clean and odour free. The only noise generated on the site is that of the trucks delivering materials and removing product to and from the site.
- The Erf is large enough to allow for the future expansion of operations if required.
- The Erf has a safe access and is within easy reach of all the Town's neighbourhoods and Townships.
- The intended use had been advertised and no objections were received which is an indication that the intended use is supported by the public and neighbours in general.

According to the information mentioned above, it is believed that there is a need and desirability for the project. The proposed project is desirable as the study area is suitable for the proposed operations, the activities will have a limited impact on the bio-physical environment, enough water is available for construction and proper accesses can be provided to the proposed operations.

Determining what the impact of the operations would be are broken down into different categories and environmental aspects and dealt with in the Environmental Management Plan (EMP). As per the ISO 14001 definition: *an environmental aspect GREEN EARTH Environmental Consultants* 12 is an element of an organization's activities, products and/or services that can interact with the environment to cause an environmental impact e.g., land degradation or land deterioration among others, that will cause harm to the environment.

All concerns and potential impacts raised during the public participation process and consultative meetings were evaluated. Predictions were made with respect to their magnitude and an assessment of their significance was made according to the following criteria:

The Nature of the activity: The possible impacts that may occur are that water will be used in the construction and operational phases, wastewater will be produced that will be handled either by the Council or by the proponent, land will be used for the proposed activities, a sewage system will be constructed, and general construction activities will take place, namely the building of infrastructure.

The Probability of the impacts to occur: The probability of the above-named impacts to occur and have a negative or harmful impact on the environment and the community is small since the Environmental Management Plan will also guide these activities. Water will still be used, and wastewater produced, however guidelines will be set that will ensure the impact is minimum.

The Extent of area that the project will affect: The specific project will most likely only have a small impact on the proposed project site itself and not on the surrounding or neighbouring land except for noise, traffic, roads, electricity and dust and there may be a visual impact because of the size of the proposed development. Therefore, the extent that the project will have a negative impact on is not extensive.

The Duration of the project: The duration of the project is uncertain. Water will still be used, and waste produced on a continuous basis and the structures that were constructed will remain and may be visually unpleasing to surroundings.

The Intensity of the project: The intensity of the project is mostly limited to the site however for the above-named items/processes where the intensity of the project will be felt outside the borders of the project site.

According to the information that was present while conducting the Environmental Impact Assessment for the construction and operation of the project, no high-risk impacts were identified and therefore it is believed that the operations will be feasible in the short and long run. Most of the impacts identified were characterized as being of a low impact on the receiving and surrounding environment and with mitigation measures followed, the impacts will be of minimum significance or avoided.

4. BACKGROUND INFORMATION ON RENT A DRUM

The following information was obtained from *Rent-A-Drum (Pty) Ltd*:

Since its establishment Rent-A-Drum and has grown into the biggest private recycling enterprise of its kind in Namibia. Rent-A-Drum is the leading organization in waste management and recycling in Namibia and offers the most comprehensive services to Namibian corporations, mines, and smaller companies, including the

citizens of the capital city Windhoek, Swakopmund, Walvis Bay, Oshakati, Oranjemund and Rundu (*Rent-A-Drum (Pty) Ltd*).

The company's equipment and resources are supported by an extremely focused, well experienced and committed management team who constantly aim to source more cost-effective and environmentally friendly solutions (*Rent-A-Drum (Pty) Ltd*).

Rent-A-Drum's mission is to drive the change of community standard for waste management and future environmental sustainability. Zero waste to landfill is their vision to guide people in changing their lifestyle and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use (*Rent-A-Drum (Pty) Ltd*).

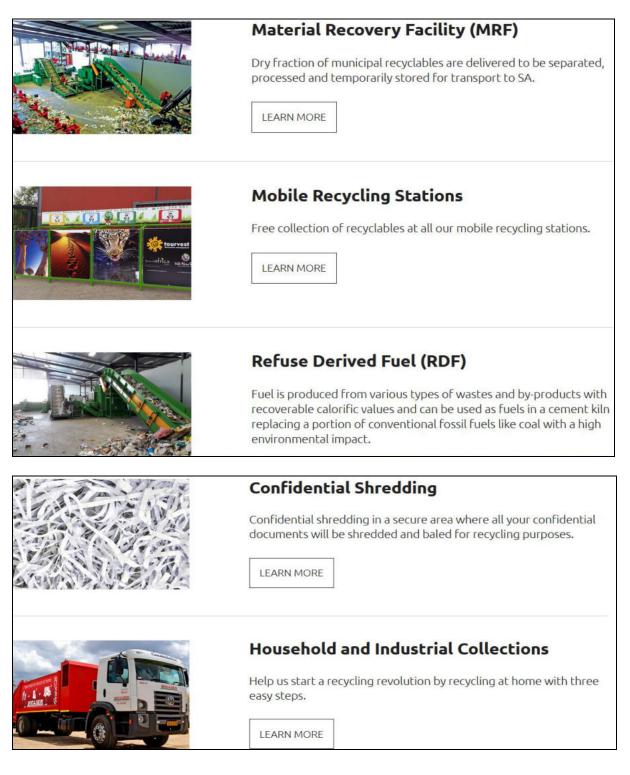
The company has a strong environmental and safety focus and aims to reduce and control pollution and incidents to the absolute minimum.

Rent-A-Drum sort and bale the following recyclables at their Material Recovery Facility launched in 2010: cans aluminium, used beverage cans (UBC) steel, food and aerosol cans, carton boxes, super mix paper, newspaper and tetra pack, glass bottles, polyethylene terephthalate (PET) bottles and mix high density polyethylene (HDPE) bottles, low density polyethylene (LDPE) plastics and Linear Low-Density Polyethylene (LLDPE) clingwrap plastic. Rent-A-Drum dispatch an average of 2500 tons of recyclables per month to South Africa where the process of recycling it back into new products begins (*Rent-A-Drum (Pty) Ltd*).

Rent-A-Drum's expertise and services also extends to several areas in Waste Management such as deep collection systems, wheelie bin services, cleaning & sanitizing, skip removals, on site waste management, clean-ups and cargo spills, destructions, waste audits, event waste management, landfill management, rehabilitation and hazardous waste that includes – medical waste, fat trap, grease & sewage maintenance, bioremediation, and demolition (*Rent-A-Drum (Pty) Ltd*).

Rent-A-Drum facts:
Rent-A-Drum generates employment for over 500 Namibian employees.
 96% of their staff is from disadvantage groups.
They have a 100% Namibian Workforce and 42% of their workforce are women.
Over 80 waste collecting and removal vehicles.
• Branches in Windhoek, Swakopmund, Walvis Bay, Husab Mine, Rossing
Mine, Langer Heinrich Mine, Oshakati, Rundu and Oranjemund.
• First and only Material Recovery Facility in Namibia – launched in 2010 in the
capital city, Windhoek.
First Refuse Derived Fuel Plant in Namibia inaugurated on 15 March 2017.
Second Material Recovery Facility in Namibia – Installed in Swakopmund in
August 2019.
Rent-A-Drum recycles an average total of 1,800 tons per month.
• They sort 22 different commodities before baling and dispatching the different
commodities to different recycling plants in South Africa.

See below the different divisions that Rent-A-Drum has:



5. BACKGROUND INFORMATION ON PROJECT

5.1.SITE INFORMATION (LOCALITY, SIZE AND ZONING)

The project site is located on Erf 1307, Industrial Area, Unit 11 and 12, Oshakati, Oshana Region. The MRF consists of a building which accommodates the processes and machinery for receiving, separating and/or processing of different recyclable materials from waste collected straight from households and businesses and the parking and movement of vehicles. See below locality of the Project Site:

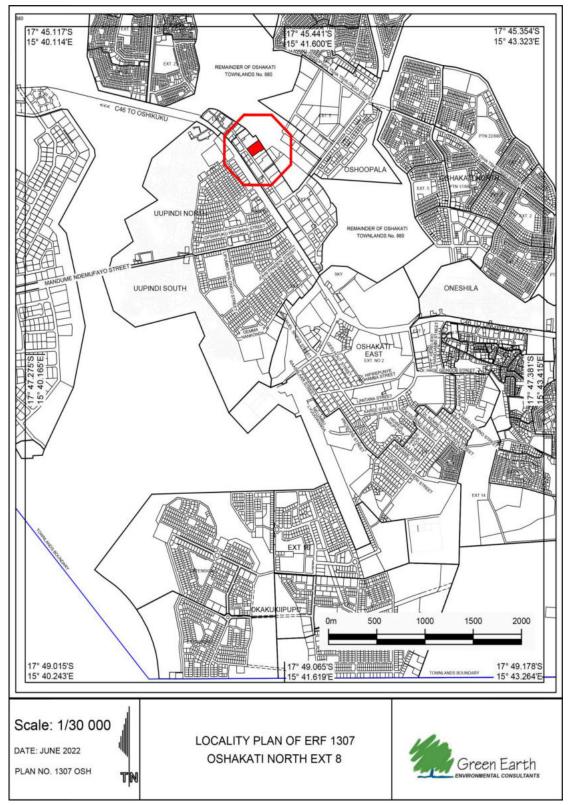


Figure 1: Locality of Project Site

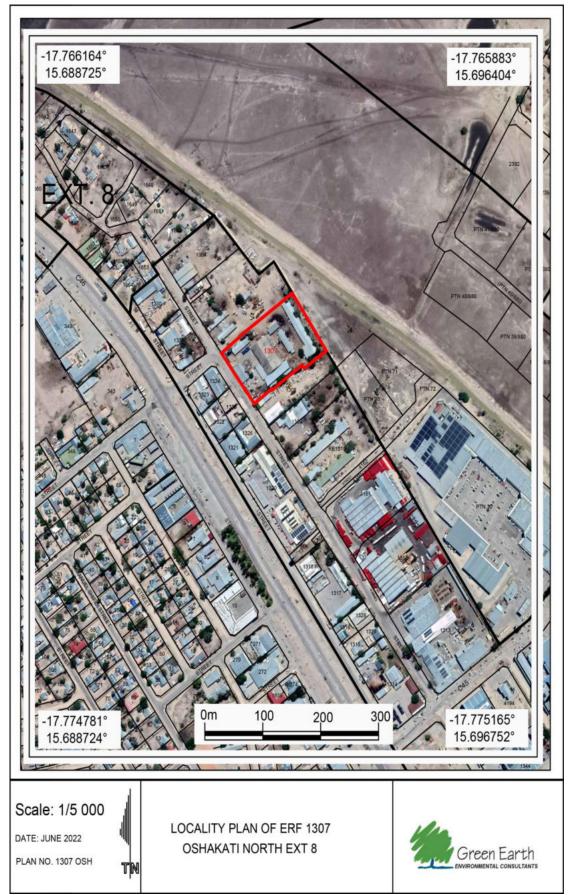


Figure 2: Locality of Erf 1307, Oshakati

5.2. PROPOSED PROJECT

The Oshakati Rent-A-Drum branch opened in 2012. They have currently 24 people working in the MRF with people who source recyclable waste in the various towns. The MRF consists of a building which accommodates the processes and machinery for receiving, separating and/or processing of different recyclable materials from waste collected straight from households and businesses and the parking and movement of vehicles.

The project site is owned by NIDA. See attached copy of the lease agreement between NIDA and Rent-A-Drum. The warehouse 321.55m² in extent.

- The infrastructure on the site consists of one large, corrugated building with a built-up office and storage room.
- There are also two offices that deal with administration.
- There is a glass area where glass is processed.
- The parking of vehicles is at the front of the building.
- Main gate in front of the building was installed by Rent-A-Drum and there is an alarm inside the building with beams in the front yard.

Type of vehicles that are used on site:

4 x Vehicles
1 x 2.5 Diesel Toyota Bakkie
1 x Trailer
1 x Forklift (Rental)
1 x Skip Truck
1 x Compactor Truck

- The total volume of product going in and out of the site is 260 ton per month.
- Products are being collected from businesses and from the dump sites (buy back Centre collectors).
- Total volume of product per month:

Plastic = 70 x ton
Papier = 150 x ton
Glass = 35 x ton
Metal = $5 \times ton$

- All products are being sorted, then baled per commodity and then sent to Namibian and South African Recyclers.
- The majority products are sent to South Africa except for the following:

RDF waste and rubber shavings is sent to Ohorongo Cement - which is
used as alternative to fuel instead of charcoal and wood chips.
LDPE clear and mix plastic goes to Namibia Polymer Recyclers in
Okahandja.
All LDPE wash plant blue and HDPE fish box plastic goes to Okavango
Pipes in Rundu.



Figure 3: Entrance to the operational area



Figure 4: Storage area where products are sorted



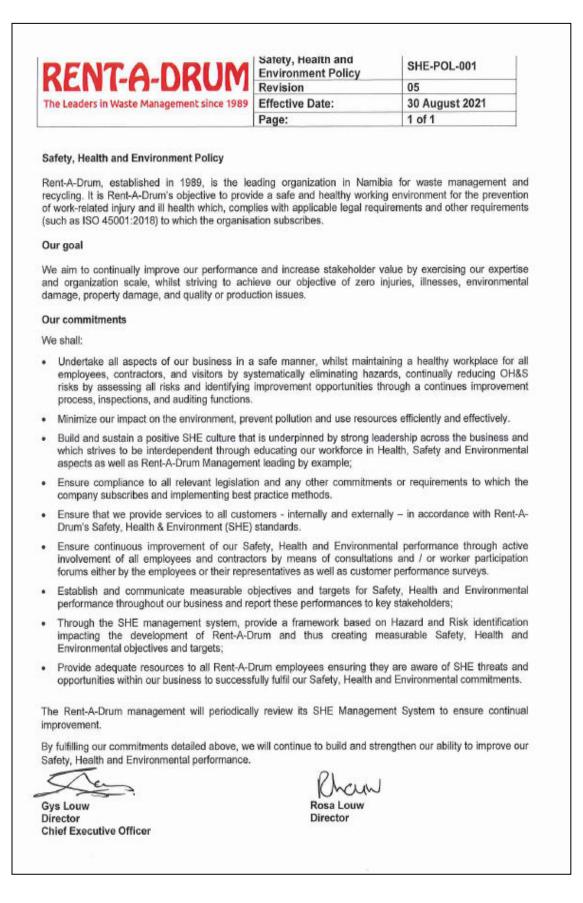
Figure 5: Products that are packed and ready for deposition

The following products are handled / recycled on site:

Products:	Description:	
Plastic	LDPE, HDPE, HDPP Caps & PET.	
Paper	SMX (Super mix white papier), Latex, Tissue broke, K4 carton box, CMW (common mix waste) mixed and cores, magazines and newspapers.	
Glass	Clear furnace, brown, green and mix colours.	
Metals	Aluminum, aerosol, spray bottles & food cans.	
Additional items	RDF waste.	

6. SAFETY, HEALTH AND ENVIRONMENT POLICY

There is a SHE rep onsite. The SHE management is done from Windhoek. The following Safety, Health and Environment Policy was introduced and is being used by Rent-A-Drum:



7. FITNESS CERTIFICATE

See below the application for Fitness and Registration:

Application	OSHAKATI Tel: +264 65 229500 Fax: +264 65 220435	T O W N	COUNCIL 906 Sam Nuyoma Road Private Bag 5530 Oshakati Namibia
Certificate of Fitness	and Registration		
New application	X R	enewal	
(Mark with an "X") NAME OF BUSINES	Rent - A - C)rum (פדא (דד
NAME OF OWNER NAME OF MANAGER POSTAL ADDRESS TELEPHONE OR CEL	GTE Joha P.D bax 1307 LNO 08141244	In Louw 35, Win 190 FAXN	s dhoek 10
E-MAIL ADDRESS		\ <u>\</u>	111-07
-0-0		Maste 1	Nanagement
the intended business and Ownership or Water B	d the following; Two Passport ill Paper and Founding State	Photos, one ID cop ment should be attac	a building plan (ground layout) of y, Rental Agreement or Letter of hed. n: DATE THIS: DAY
OF 20			
Consent of the owner	of registered property		
Property owner's signa	ture		Date 25/04/2022 Date
Applicant's signature	808.0770	AL USE ONLY	Date
Administration/ inspec	tion fee:	AL USE ONLY	··· NB 590.98
Receipt No: Date:	002	Receipt No: Date: 20	10412022 068812007

8. BULK SERVICES AND INFRASTRUCTURE

The bulk services are provided by the following service providers:

8.1.ACCESS REQUIREMENTS

Access to Erf 1307, Oshakati is taken from an existing tared road which links up with all major roads in the Town.

8.2.WATER SUPPLY

Water is supplied directly from Oshakati Town Council via their water reticulation system.

8.3. ELECTRICITY

Electricity is supplied by the electrical distribution network of Nored.

8.4.SEWAGE DISPOSAL

The sewage is connected to the sewer system of Oshakati Town Council.

8.5.SOLID WASTE

Solid waste disposal is handled in accordance with the regulations and done by Rent-A-Drum.

8.6. FIRE PROTECTION

The fire protection on site includes a fire hydrant linked to the Town's water reticulation system as well as portable fire protection equipment as per the stipulations of Oshakati Town Council.

8.7.STORMWATER

The stormwater management on site is provided as per the requirements of Oshakati Town Council.

9. APPROACH TO THE STUDY

The assessment included the following activities:

a) Desktop sensitivity assessment

Literature, legislation, and guidance documents related to the natural environment and land use activities available on the portion and area in general were reviewed to determine potential environmental issues and concerns.

b) Site assessment (site visit)

The proposed project site and the immediate neighbourhood and surrounding area were assessed through several site visits to investigate the environmental parameters on site to enable further understanding of the potential impacts on site.

c) Public participation

The public was invited to give input, comments and opinions regarding the proposed project. Notices were placed in the Republikein and New Era (see Appendix) on two consecutive weeks (30 June and 1 / 7 July 2022) inviting public participation and comments on the proposed project. The closing date for any questions, comments, inputs or information was 22 July 2022. No objections and / or comments were received.

d) Scoping

Based on the desk top study, site visit and public participation, the environmental impacts were determined in five categories: nature of project, expected duration of impact, geographical extent of the event, probability of occurring and the expected intensity. The findings of the scoping have been incorporated in the environmental impact assessment report below.

e) Environmental Management Plan (EMP)

To minimize the impact on the environment, mitigation measures have been identified to be implemented during planning, construction, and implementation. These measures have been included in the Environmental Management Plan to guide the planning, construction and operation of the development which can also be used by the relevant authorities to ensure that the project is planned, developed, and operated with the minimum impact on the environment.

10. ASSUMPTIONS AND LIMITATIONS

It is assumed that the information provided by the proponent (Rent-A-Drum) is accurate. No alternative erven / site for the proposed project were examined. The site was visited several times and any happenings after this are not mentioned in this report. (The assessment was based on the prevailing environmental conditions and not on future happenings on the site.) However, it is assumed that there will be no significant changes to the proposed project, and the environment will not adversely be affected between the compilation of the assessment and the implementation of the proposed activities.

11. LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programs and policies deemed to have adverse impacts on the environment require an EIA according to Namibian legislation. The administrative, legal and policy requirements to be considered during the Environmental Assessment are the following:

- The Namibian Constitution
- The Environmental Management Act (No. 7 of 2007)
- The Oshakati Town Planning Scheme
- Other Laws, Acts, Regulations and Policies

THE NAMIBIAN CONSTITUTION

Article 95 of Namibia's constitution provides that:

"The State shall actively promote and maintain the welfare of the people by adopting, inter alia, policies aimed at the following:

Management 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; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory." This article recommends that a relatively high level of environmental protection is called for in respect of pollution control and waste management.

Article 144 of the Namibian Constitution deals with environmental law and it states:

"Unless otherwise provided by this Constitution or Act of Parliament, the general rules of public international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia". This article incorporates international law, if it conforms to the Constitution, automatically as "law of the land". These include international agreements, conventions, protocols, covenants, charters, statutes, acts, declarations, concords, exchanges of notes, agreed minutes, memoranda of understanding, and agreements (Ruppel & Ruppel-Schlichting, 2013). It is therefore important that the international agreements and conventions are considered (see section 4.9).

In considering these environmental rights, Rent-A-Drum (the Proponent) should consider the following in devising an action plan in response to these articles:

- Implement a "zero-harm" policy at that would guide decisions.
- Ensure that no management practice or decision result in the degradation of future natural resources.
- Take a decision on how this part of the Constitution will be implemented as part of the Proponent's Environmental Control System (ECS).

ENVIRONMENTAL MANAGEMENT ACT (NO. 7 OF 2007)

The Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) of the Environmental Management Act (No. 7 of 2007) that came into effect in 2012 requires/recommends that an Environmental Impact Assessment and an Environmental Management Plan (EMP) be conducted for the following listed activities to obtain an Environmental Clearance Certificate:

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

- The construction of facilities for waste sites, treatment of waste and disposal of waste.
- The import, processing, use and recycling, temporary storage, transit or export of waste.

Cumulative impacts associated with the development must be included as well as public consultation. The Act further requires all major industries and mines to prepare waste management plans and present these to the local authorities for approval.

The Act, Regulations, Procedures and Guidelines have integrated the following sustainability principles. These need to be given due consideration, particularly to achieve proper waste management and pollution control:

Cradle to Grave Responsibility

This principle provides that those who handle or manufacture potentially harmful products must be liable for their safe production, use and disposal and that those who initiate potentially polluting activities must be liable for their commissioning, operation and decommissioning.

Precautionary Principle

It provides that if there is any doubt about the effects of a potentially polluting activity, a cautious approach must be adopted.

The Polluter Pays Principle

A person who generates waste or causes pollution must, in theory, pay the full costs of its treatment or of the harm, which it causes to the environment.

Public Participation and Access to Information

In the context of environmental management, citizens must have access to information and the right to participate in decisions making.

CONCLUSION AND IMPACT

Some of the surrounding erven have been cleared from vegetation and structures have been constructed on the sites or are in the process of being constructed. The proposed activity will thus fit in with the surrounding activities and not have a negative impact on the prevailing environment. It will be ensured that all protected trees and plant species will be retained where possible.

THE OSHAKATI TOWN PLANNING SCHEME

The Oshakati Town Planning Scheme (October 2002) applies to the area as indicated on the scheme maps and corresponds with the Townlands Diagram for Oshakati Town and Townlands. Erf 1307, Oshakati falls within the area of the Scheme. The general purpose of this Scheme is the coordinated and harmonious development of the area of Oshakati (including, where necessary, the reconstruction and redevelopment of any part which has already been subdivided whether there are buildings on it or not) in such a way as will most effectively tend to promote health, safety, order, amenity, convenience and general welfare as well as efficiency and economy in the process of development and improvement of communications, and where it is expedient in order to promote proper planning or development, may provide for the suspending the operation of any provision of law or any bylaw or regulation made under such law, in so far as such provision is similar to or inconsistent with any of the provisions so the Scheme.

According to the Town Planning Scheme, Erf 1307, Oshakati is zoned 'industrial'. The Town Planning Scheme defines 'industrial use' as follows:

CONCLUSION AND IMPACT

The Town Planning Scheme confirms that Erf 1307, Oshakati may be used for waste handling, recycling, storage and processing as per the definition of 'industrial'.

OTHER LAWS, ACTS, REGULATIONS AND POLICIES

The laws, acts, regulations, and policies listed below have also been considered during the Environmental Assessment.

Laws, Acts, Regulations & Policies consulted:				
Electricity Act	In accordance with the Electricity	The Proponent must abide to		
(No. 4 of 2007)	Act (No. 4 of 2007) which provides the Electricity Act.			
	for the establishment of the			
	Electricity Control Board and			
	provide for its powers and			
	functions; to provide for the			
	requirements and conditions for			
	obtaining licenses for the provision			
	of electricity; to provide for the			
	powers and obligations of			
	licenses; and to provide for			
	incidental matters: the necessary			
	permits and licenses will be			
	obtained.			
Pollution	The Pollution Control and Waste	The Proponent must adhere		
Control and	Management Bill is currently in	to the Pollution Control and		
Waste	preparation and is therefore	Waste Management Bill.		
Management	included as a guideline only. Of			
Bill (guideline	reference to the mining, Parts 2, 7			
only)	and 8 apply. Part 2 provides that			
	no person shall discharge or			
	cause to be discharged, any			
	pollutant to the air from a process			
	except under and in accordance			
	with the provisions of an air			

Table 1: Laws. Acts, Regulations and Policies

Water Resources Management Act	pollution license issued under section 23. Part 2 also further provides for procedures to be followed in license application, fees to be paid and required terms of conditions for air pollution licenses. Part 7 states that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances. The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions. Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response plans. The Water Resources Management Act (No. 11 of 2013) stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner. Provides for management and	waste-water discharge permits should be obtained when required.
Solid and Hazardous Waste Management Regulations: Local Authorities 1992	Provides for management and handling of industrial, business and domestic waste.	The Proponent must abide to the solid waste management provisions.
Hazardous Substances Ordinance (No. 14 of 1974)	The Ordinance applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by	The Proponent must abide to the Ordinance's provisions.

	the Minister of Health and Social	
	Welfare. Its primary purpose is to	
	prevent hazardous substances	
	from causing injury, ill-health or	
	the death of human beings.	
Atmospheric	Part 2 of the Ordinance governs	The proponent should adhere
Pollution	the control of noxious or offensive	to the stipulations of the
Prevention	gases. The Ordinance prohibits	Atmospheric Pollution
Ordinance of	anyone from carrying on a	Prevention Ordinance.
Namibia (No.	scheduled process without a	
11 of 1976)	registration certificate in a	
,	controlled area. The registration	
	certificate must be issued if it can	
	be demonstrated that the best	
	practical means are being adopted	
	for preventing or reducing the	
	escape into the atmosphere of	
	noxious or offensive gases	
	produced by the scheduled	
	process.	
Nature	The Nature Conservation	The proposed project
Conservation	Ordinance (No. 4 of 1975) covers	implementation is not located
Ordinance	game parks and nature reserves,	in a demarcated conservation
	the hunting and protection of wild	area, national park or unique
	animals, problem animals, fish and	environments.
	indigenous plant species. The	
	Ministry of Environment, Forestry	
	and Tourism (MEFT) administer it	
	and provides for the establishment of the Nature Conservation Board.	
Forestry Act	The Forestry Act (No. 12 of	No removal of protected tree
I brobily Abt	2001) specifies that there be a	species or removal of mature
	general protection of the receiving	trees should happen. The
	and surrounding environment.	Ministry of Environment,
	The protection of natural	Forestry and Tourism should
	vegetation is of great importance,	be consulted when required.
	the Forestry Act especially	·
	stipulates that no living tree, bush,	
	shrub or indigenous plants within	
	100m from any river, stream or	
	watercourse, may be removed	
	without the necessary license.	
EU Timber	Forest Stewardship Council (FSC)	The Proponent is advised to
Regulation:	came into effect in March 2013,	adhere to the regulation.
FSC (2013)	with the aim of preventing sales of	
	illegal timber and timber products	
	in the EU market. Now, any actor	
	who places timber or timber	
	products on the market for the first	
	time must ensure that the timber	
	used has been legally harvested	
	and, where applicable, exported	

	legally from the country of harvest.	
Labour Act	The Labour Act (No. 11 of 2007)	The proponent and contractor
	contains regulations relating to the	should adhere to the Labour
	Health, Safety and Welfare of	Act.
	employees at work. These	
	regulations are prescribed for	
	among others safety relating to	
	hazardous substances, exposure	
	limits and physical hazards.	
	Regulations relating to the Health	
	and Safety of Employees at Work	
	are promulgated in terms of the	
	Labour Act 6 of 1992 (GN156,	
	GG1617 of 1 August 1997).	
Communal	Communal land is land that	Consent should be obtained
Land Rights	belongs to the State and is held in	from Traditional Authorities,
Ū	trust for the benefit of the	Communal Boards, Chiefs,
	traditional communities living in	Kings, Queens etc. if
	those areas. Communal land	required.
	cannot be bought or sold, but one	
	can be given a customary land	
	right or right of leasehold to a part	
	of communal land in accordance	
	with the provisions of the	
	Communal Land Reform Act	
	(No. 5 of 2002) and Communal	
	Land Reform Amendment Act	
	(No. 13 of 2013). The Communal	
	Land Reform Act provide for the	
	allocation of rights in respect of	
	communal land to establish	
	Communal Land Boards to	
	provide for the powers of Chiefs	
	and Traditional Authorities and	
	boards in relation to communal	
	land and to make provision for	
	incidental matters. Consent and	
	access to land for the proposed	
	project should be requested from	
	the relevant traditional authority	
	through the Regional Council and	
T	Regional Communal Land Boards.	
Traditional	The Traditional Authorities Act	Traditional Authorities should
Authorities	(No. 17 of 1995) provide for the	be consulted when required.
Act (No. 17 of	establishment of traditional	
1995)	authorities, the designation and	
	recognition of traditional leaders;	
	to define their functions, duties	
	and powers; and to provide for	
Public and	matters incidental thereto. The Public and Environmental	The proponent and contractor
Environmental		The proponent and contractor should adhere to the Public
Environmental	Health Act (No. 1 of 2015)	should adhere to the Public

Health Act	provides with respect to matters of	and Environmental Health		
	public health in Namibia. The	Act.		
	objects of this Act are to: (a)			
	promote public health and			
	wellbeing; (b) prevent injuries,			
	diseases and disabilities; (c)			
	protect individuals and			
	communities from public health			
	risks; (d) encourage community			
	participation in order to create a			
	healthy environment; and (e)			
	provide for early detection of			
Coronoviruo	diseases and public health risks.	The property contractor		
Coronavirus (Covid-19)	The current global Coronavirus (Covid-19) pandemic and the	The proponent, contractor and workforce should adhere		
Pandemic	associated State of Emergency	to the restrictions and		
Fandenne	and health restrictions globally	regulations.		
	may result in some delays and			
	logistic disruptions. The pandemic			
	might have an impact on obtaining			
	equipment, specialist workforce			
	mobilisation and implementation of			
	the project. The health restrictions			
	may have an impact on campsite			
	set-up, traveling of			
	personal/workers and building of			
	the infrastructure. The proponent,			
	contractor and subcontractors			
	should adhere to all the			
	international, regional and local Covid-19 health restrictions and			
	protocols.			
National	All protected heritage resources	The National Heritage Council		
Heritage Act	discovered need to be reported should be consulted w			
(No. 27 of	immediately to the National	required.		
2004)	Heritage Council (NHC) and			
	require a permit from the NHC			
	before it may be relocated. This			
	should be applied from the NHC.			
National	No person shall destroy, damage,	The proposed site for		
Monuments	excavate, alter, remove from its	development is not within any		
Act of	original site or export from Namibia:	known monument site both movable or immovable as		
Namibia (No. 28 of 1969) as	(a) any meteorite or fossil; or	movable or immovable as specified in the Act, however		
amended until	(b) any drawing or painting on	in such an instance that any		
1979	stone or a petroglyph known or	material or sites or		
	commonly believed to have been			
	executed by any people who	identified, it will be the		
	inhabited or visited Namibia before	responsibility of the developer		
	the year 1900 AD; or	to take the required route and		
	(c) any implement, ornament or	notify the relevant		
	structure known or commonly	commission.		

Public Health Act (No. 36 of 1919)	believed to have been used as a mace, used or erected by people referred to in paragraph; or (d) the anthropological or archaeological contents of graves, caves, rock shelters, middens, shell mounds or other sites used by such people; or (e) any other archaeological or palaeontological finds, material or object; except under the authority of and in accordance with a permit issued under this section. Under this act, in section 119: "No person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health."	The proponent will ensure that all legal requirements of the project in relation to protection of the health of their employees and surrounding residents is protected and will be included in the EMP. Relevant protective equipment shall be provided for employees in construction. The development shall follow requirements and specifications in relation to water supply and sewerage handling and solid waste management so as not to threaten public health of future residents on this piece of land.
Soil Conservation Act (No. 76 of 1969)	The objectives of this Act are to: Make provisions for the combating and prevention of soil erosion; Promote the conservation, protection and improvement of the soil, vegetation, sources and resources of the Republic;	Only the area required for the operations should be cleared from vegetation to ensure the minimum impact on the soil through clearance for construction.
Air Quality Act (N0. 39 of 2004)	The Air Quality Act (No. 39 of 2004) intends to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.	The proponent and contractor should adhere to the Air Quality Act.
Vision 2030 and National Development Plans	Namibia's overall development ambitions are articulated in the Nation's Vision 2030. At the operational level, five-yearly	The proposed project is an important element in employment creation.

national development plans	
(NDP's) are prepared in extensive	
consultations led by the National	
Planning Commission in the Office	
of the President. Currently the	
Government has so far launched a	
4th NDP which pursues three	
overarching goals for the	
Namibian nation: high and	
sustained economic growth;	
increased income equality; and	
employment creation.	

CONCLUSION AND IMPACT

It is believed the above administrative, legal and policy requirements which specifically guide and governs development will be followed and complied with in the planning, implementation and operations of the activity.

A flowchart indicating the entire EIA process is shown in the *Figure* below.

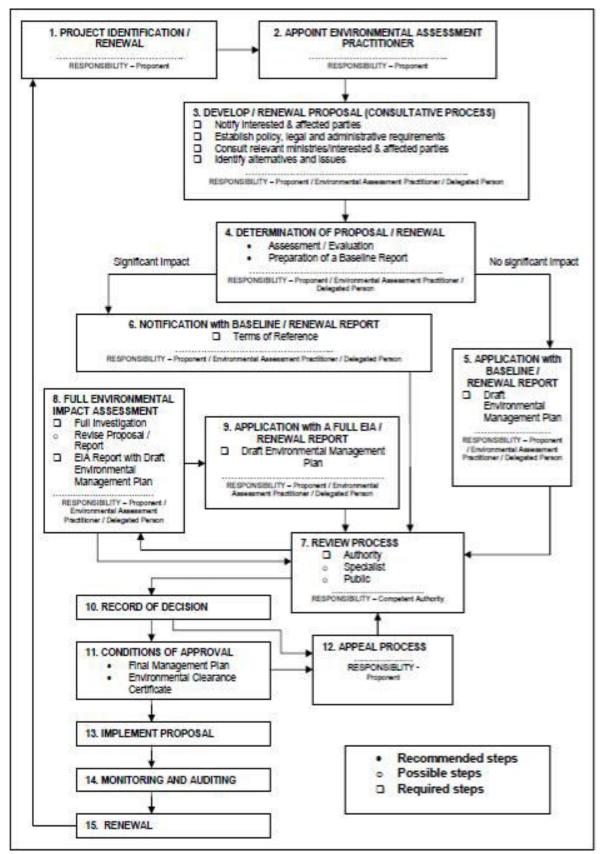


Figure 6: Flowchart of the Impact Process

12. AFFECTED RECEIVING ENVIRONMENT

12.1. BIODIVERSITY AND VEGETATION

Oshakati is located in the Tree and Scrub Savannah Biome which is characterized by woodland vegetation structure type with extremely high green vegetation biomass. However, the project site is located in the build-up area which means that it has been cleared of vegetation and is thus showing evidence of serious human inference namely informal tracks, lacking vegetation and gravel roads.

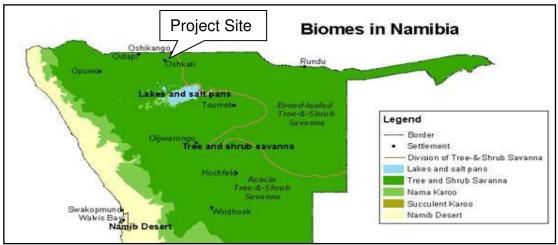


Figure 7: Biomes in Namibia (Atlas of Namibia, 2002)

The proposed construction and operation are expected to have a low impact on the natural environment.

CONCLUSION AND IMPACT

The activities will have a low impact on vegetation, shrubs and trees.

12.2. GEOLOGY AND SOILS

The surface geology of the area consists of formations of the Kalahari Group which has a thickness of up to 30m in the study area. Within the Kalahari Group the following six lithological classifications are recognized: Duricrusts, Kalahari sand, Alluvium and lacustrine deposits, Sandstone, Marl, Basal conglomerate and gravel.

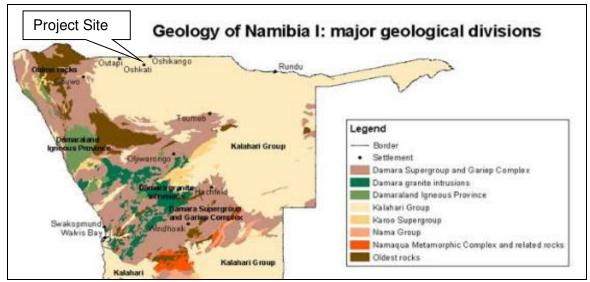


Figure 8: Geology of Namibia (Atlas of Namibia Project, 2002)

CONCLUSION AND IMPACT

The activities will not impact on the geology, soils and geohydrology of the area. The surface drainage canals will be kept open in order that water can flow through.

12.3. SOCIO ECONOMIC ENVIRONMENT

The proposed development will have a positive impact on the socio-economic environment. Apart from the developer's intension to make a profit out of the proposed development, advantages to the area are numerous. The proposed development will create the need for more business activities such as medical care, building maintenance, vehicle maintenance, electrical and additional support for schools and other existing businesses etc.

The proposed project will create jobs during construction and there will also be permanent employment opportunities for people after completion. Full time employment opportunities will be created for domestic workers and other related work. The development will give the area an economic injection which will have a multiplier effect in the community regarding sales and services. The development will also bring in investments and buying power. During construction stages, the building industry will be well supported.

Since the majority of land use in and around the area is characterised by open land, business and industrial use, it will not have a negative impact on the neighbours or the surrounding areas. The socio-economic characteristics of the area in which the project site is located, are in close proximity to existing activities.

CONCLUSION AND IMPACT

The activities will have a positive impact on the community since employment will be created.

12.4. CLIMATE

The area belongs to the tropical climate zone and receives high rainfalls during the rainy season (December to March). High humidity is most often experienced in this region. The project area is located in some of the wettest regions in Namibia with its high annual rainfall of ±700 mm. Rainfall however can also be variable and drought years are common. The hottest months are September, October and November with temperatures of 30°C. The prevailing wind in the area is southeast and eastern winds. The prevailing wind direction is expected to prevent the spread of any nuisance namely noise and smell. Strong winds during certain times of the year may aggravate dust impacts during the construction phase.

CONCLUSION AND IMPACT

The activities will not have an impact on the climate.

12.5. CULTURAL HERITAGE

The proposed project site is not known to have any historical significance prior to or after Independence in 1990. The specific area does not have any National Monuments and the specific site has no record of any cultural or historical importance or on-site resemblance of any nature. No graveyard or related article was found on the site.

13. IMPACT ASSESSMENT AND EVALUATION

The Environmental Impact Assessment sets out potential positive and negative environmental impacts associated with the proposed project site. The following assessment methodology will be used to examine each impact identified, see *Table* below:

Criteria	Rating (Severity)	
Impact Type	+	Positive
	0	No Impact
	-	Negative
Significance of	L	Low (Little or no impact)
impact being	М	Medium (Manageable impacts)
either	Н	High (Adverse impact)

Table 1: Impact Evaluation Criterion (DEAT 2006)

Probability:	Duration:			
5 – Definite/don't know	5 - Permanent			
4 – Highly probable	4 – Long-term (impact ceases)			
3 – Medium probability	3 – Medium term (5 – 15 years)			
2 – Low probability	2 – Short-term (0 – 5 years)			
1 – Improbable	1 - Immediate			
0 - None				
Scale:	Magnitude:			
5 – International	10 – Very high/don't know			
4 – National	8 - High			
3 – Regional	6 - Moderate			
2 – Local	4 - Low			
1 – Site only	2 - Minor			
	0 - None			

The impacts on the receiving environment are discussed in the paragraphs below:

13.1. IMPACTS DURING THE CONSTRUCTION ACTIVITY

Some of the impacts that the project will have on the environment includes water will be used for the construction and operation activities, electricity will be used, a sewer system will be constructed and wastewater will be produced on the site that will have to be handled.

13.1.1. WATER USAGE

Water is a scarce resource in Namibia and therefore water usage should be monitored and limited in order to prevent unnecessary wastage. The proposed project might make use of water in its construction phase and operations.

Aspe ct	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
						Unmitigated	Mitigated
Water	-	2	2	4	2	М	L

Impact Evaluation

13.1.2. ECOLOGICAL IMPACTS

The proposed infrastructure will be constructed in a semi disturbed natural area which is sparsely covered with vegetation. Special care should be taken to limit the destruction or damage of the vegetation. However, impacts on fauna and flora are expected to be minimal. Disturbance of areas outside the designated working zone is not allowed.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
						Unmitigated	Mitigated
Ecology	-	1	2	4	2	М	L

13.1.3. DUST POLLUTION AND AIR QUALITY

Dust generated during the transportation of building materials; construction and installation of bulk services, and problems thereof are expected to be low and site specific. Dust is expected to be worse during the winter months when strong winds occur. Release of various particulates from the site during the construction phase and exhaust fumes from vehicles and machinery related to the construction of bulk services are also expected to take place. Dust is regarded as a nuisance as it reduces visibility, affects the human health and retards plant growth. It is recommended that regular dust suppression be included in the construction activities, when dust becomes an issue.

Impact evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Dust & Air Quality	-	2	2	2	2	М	L

13.1.4.NOISE IMPACT

An increase of ambient noise levels at the proposed site is expected due to the construction activities. Noise pollution due to heavy-duty equipment and machinery might be generated. It is not expected that the noise generated during construction will impact any third parties due to the distance of the neighbouring activities. Ensure all mufflers on vehicles are in full operational order; and any audio equipment should not be played at levels considered intrusive by others. The construction staff should be equipped with ear protection equipment.

Impact evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Noise	-	2	1	4	2	М	L

13.1.5. HEALTH, SAFETY AND SECURITY

The safety, security and health of the labour force, employees and general public are of great importance. Workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). A health and safety officer should be employed to manage, coordinate and monitor risk and hazard and report all health and safety related issues in the workplace.

Safety issues could arise from the earthmoving equipment and tools that will be used on site during the construction phase. This increases the possibility of injuries and the contractor must ensure that all staff members are made aware of the potential risks of injuries on site. The presence of equipment lying around on site may also encourage criminal activities (theft).

Sensitize operators of earthmoving equipment and tools to switch off engines of vehicles or machinery not being used. The contractor is advised to ensure that the team is equipped with first aid kits and that these are available on site, at all times. Workers should be equipped with adequate personal protective gear and properly trained in first aid and safety awareness.

No open flames, smoking or any potential sources of ignition should be allowed at the project location. Signs such as 'NO SMOKING' must be prominently displayed in parts where inflammable materials are stored on the premises. Proper barricading and/or fencing around the site especially trenches for pipes and drains should be erected to avoid entrance of animals and/or unauthorized persons. Safety regulatory signs should be placed at strategic locations to ensure awareness. Adequate lighting within and around the construction locations should be erected, when visibility becomes an issue.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Safety & Security	-	1	2	4	2	М	L

Impact evaluation

13.1.6.CONTAMINATION OF GROUNDWATER

Care must be taken to avoid contamination of soil and groundwater. Use drip trays when doing maintenance on machinery. Maintenance should be done on dedicated areas with linings or concrete flooring. The risk can be lowered further through

proper training of staff. All spills must be cleaned up immediately. Excavations should be backfilled and sealed with appropriate material, if it is not to be used further.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signifi	cance
						Unmitigated	Mitigated
Groundwater	-	2	2	2	2	М	L

13.1.7.SEDIMENTATION AND EROSION

Vegetation is stabilizing the area against wind and water erosion. Vegetation clearance and creation of impermeable surfaces could result in erosion in areas across the proposed area. The clearance of vegetation will further reduce the capacity of the land surface to slow down the flow of surface water, thus decreasing infiltration, and increasing both the quantity and velocity of surface water runoff. The proposed construction activities will increase the number of impermeable surfaces and therefore decrease the amount of groundwater infiltration. As a result, the amount of storm water during rainfall events could increase. If proper storm water management measures are not implemented this will impact negatively on the water courses close to the site.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Erosion and Sedimentation	-	1	2	4	2	М	L

13.1.8.GENERATION OF WASTE

This can be in a form of rubble, cement bags, pipe and electrical wire cuttings. The waste should be gathered and stored in enclosed containers to prevent it from being blown away by the wind. Contaminated soil due to oil leakages, lubricants and grease from the construction equipment and machinery may also be generated during the construction phase.

The oil leakages, lubricants and grease must be addressed. Contaminated soil must be removed and disposed of at a hazardous waste landfill. The contractor must provide containers on-site, to store any hazardous waste produced. Regular inspection and housekeeping procedure monitoring should be maintained by the contractor. Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Waste	-	1	2	4	2	М	L

13.1.9.CONTAMINATION OF SURFACE WATER

Contamination of surface water might occur through oil leakages, lubricants and grease from the equipment and machinery during the installation, construction and maintenance of bulk services at the site. Oil spills may form a film on water surfaces in the nearby streams causing physical damage to water-borne organisms.

Machinery should not be serviced at the construction site to avoid spills. All spills should be cleaned up as soon as possible. Hydrocarbon contaminated clothing or equipment should not be washed within 25m of any surface water body.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Surface water	-	2	2	4	3	М	L

13.1.10. TRAFFIC AND ROAD SAFETY

All drivers of delivery vehicles and construction machinery should have the necessary driver's licenses and documents to operate these machines. Speed limit warning signs must be erected to minimise accidents. Heavy-duty vehicles and machinery must be tagged with reflective signs or tapes to maximize visibility and avoid accidents.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Traffic	-	2	2	4	3	М	L

13.1.11. FIRES AND EXPLOSIONS

There should be sufficient water available for firefighting purposes. Ensure that all fire-fighting devices are in good working order and they are serviced. All personnel have to be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor.

Impact Evaluation Duration Aspect Impact Scale Magnitude Probability Significance Type Unmitigated Mitigated 2 2 4 2 1 Fires and М Explosions

13.1.12. SENSE OF PLACE

The placement, design and construction of the proposed infrastructure should be as such as to have the least possible impact on the natural environment. The proposed activities will not have a large/negative impact on the sense of place in the area since it will be constructed in a manner that will not affect the neighbouring portions and it will not be visually unpleasing.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Nuisance Pollution	-	1	1	2	2	М	L

13.2. IMPACTS DURING THE OPERATIONAL PHASE

13.2.1.ECOLOGICAL IMPACTS

Staff and visitors should only make use of walkways and existing roads to minimise the impact on vegetation. Minimise the area of disturbance by restricting movement to the designated working areas during maintenance and drives.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significa	ance
						Unmitigated	Mitigated
Ecology Impacts	-	1	2	4	2	L	L

13.2.2.DUST POLLUTION AND AIR QUALITY

Vehicles transporting goods and staff will contribute to the release of hydrocarbon vapours, carbon monoxide and sulphur oxides into the air. Possible release of sewer odour, due to sewer system failure of maintenance might also occur. All maintenance of bulk services and infrastructure at the project site has to be designed to enable environmental protection.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Dust & Air Quality	-	2	2	4	4	М	L

13.2.3.CONTAMINATION OF GROUNDWATER

Spillages might also occur during maintenance of the sewer system. This could have impacts on groundwater especially in cases of large sewer spills. Proper containment should be used in cases of sewerage system maintenance to avoid any possible leakages. Oil and chemical spillages may have a heath impact on groundwater users. Potential impact on the natural environment from possible polluted groundwater also exits.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Groundwater contamination	-	2	2	4	2	L	L

13.2.4. GENERATION OF WASTE

Household waste from the activities at the site and from the staff working at the site will be generated. This waste will be collected, sorted to be recycled and stored in on site for transportation and disposal at an approved landfill site.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
						Unmitigated	Mitigated
Waste Generation	-	1	2	2	2	М	L

13.2.5. FAILURE IN RETICULATION PIPELINES

There may be a potential release of sewage, stormwater or water into the environment due to pipeline/system failure. As a result, the spillage could be released into the environment and could potentially be health hazard to surface and groundwater. Proper reticulation pipelines and drainage systems should be installed. Regular bulk services infrastructure and system inspection should be conducted.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
						Unmitigated	Mitigated
Failure of Reticulation Pipeline	-	1	1	4	2	М	L

13.2.6. FIRES AND EXPLOSIONS

Food will be prepared on gas fired stoves. There should be sufficient water available for firefighting purposes. Ensure that all fire-fighting devices are in good working order and are serviced. All personnel have to be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
	,					Unmitigated	Mitigated
Fires and Explosions	-	2	1	4	2	М	L

13.2.7.HEALTH, SAFETY AND SECURITY

The safety, security and health of the labour force, employees and neighbours are of great importance, workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). Workers should be warned not to approach or chase any wild animals occurring on the site. No open flames, smoking or any potential sources of ignition should be allowed at the project location. Signs such as 'NO SMOKING' must be prominently displayed in parts where inflammable materials are stored on the premises.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
						Unmitigated	Mitigated
Safety & Security	-	1	2	4	2	Μ	L

13.3. CUMULATIVE IMPACTS

These are impacts on the environment, which results from the incremental impacts of the construction and operation of the proposed project when added to other past, present, and reasonably foreseeable future actions regardless of what person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. In relation to an activity, it means the impact of an activity that in it may not become significant when added to the existing and potential impacts resulting from similar of diverse activities or undertakings in the area.

Possible cumulative impacts associated with the proposed project include sewer damages/maintenance, vegetation and animal disturbance, uncontrolled traffic and destruction of the natural environment. These impacts could become significant especially if it is not properly supervised and controlled. This could collectively impact on the environmental conditions in the area. Cumulative impacts could occur in both the operational and the construction phase.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	71					Unmitigated	Mitigated
Cumulative Impacts	-	1	3	4	3	L	L

14. ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) provides management options to ensure impacts of the proposed construction are minimised. An EMP is an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the operations are prevented, and the positive benefits of the projects are enhanced.

The objectives of the EMP are:

- ✓ to include all components of the proposed project.
- ✓ to prescribe the best practicable control methods to lessen the environmental impacts associated with the project.
- $\checkmark\,$ to monitor and audit the performance of the project personnel in applying such controls.
- ✓ To ensure that appropriate environmental training is provided to responsible project personnel.

The EMP acts as a document that can be used during the various phases of the proposed project. The contractor as well as the management and staff should be made aware of the contents of the EMP. See Appendix for EMP.

15. CONCLUSION

The EIA has been completed in line with the requirements of the Environmental Management Act, 2007 and Regulations and it is concluded and recommended that the specific site identified namely Erf 1307, Oshakati has the full potential to be used for the proposed activities. The identified environmental and social impacts can be minimized and managed through implementing preventative measures and sound management systems. It is recommended that the environmental performance be monitored regularly to ensure compliance and that corrective measures be taken if necessary.

In general, the construction and operation of the proposed project would pose limited environmental risks, provided that the EMP for the activity is used properly. The EMP should be used as an onsite tool during the construction and operation of the project. Parties responsible for non-conformances of the EMP should be held responsible for any rehabilitation that has to be undertaken. After assessing all information available on this project, Green Earth Environmental Consultants are of the opinion that the proposed project site is suitable for the proposed activities. The accompanying EMP will focus on mitigation measures that will remediate or eradicate the negative or adverse impacts.

16. **RECOMMENDATION**

It is therefore recommended that the Ministry of Environment, Forestry and Tourism through the Environmental Commissioner support and approve the Environmental Clearance for the operations of the Materials Recovery Facility (MRF) of Rent-a-Drum on Erf 1307, Oshakati, Oshana Region and to issue an Environmental Clearance for the following 'Listed Activities':

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

- The construction of facilities for waste sites, treatment of waste and disposal of waste.
- The import, processing, use and recycling, temporary storage, transit or export of waste.

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APPENDIX A: NEWSPAPER NOTICES





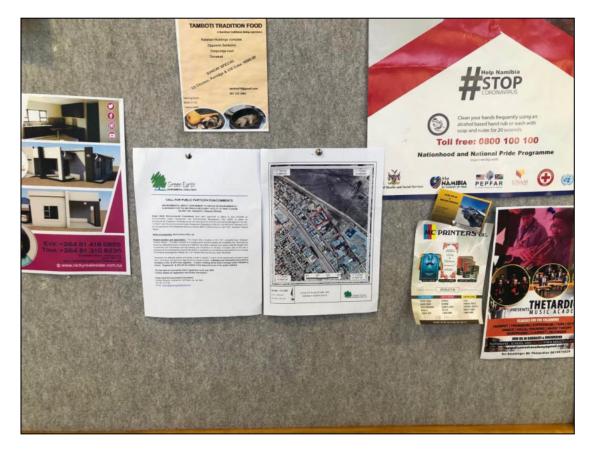




APPENDIX B: NOTICE ON SITE



APPENDIX C: NOTICE ON NOTICE BOARD



APPENDIX D: CURRICULUM VITAE OF CHARLIE DU TOIT

- 1. Position: Environmental Practitioner
- 2. Name/Surname: Charl du Toit
- **3. Date of Birth:** 29 October 1960
- 4. Nationality: Namibian

5.	Education:	Name of Institution	University of Stellenbosch, South Africa
		Degree/Qualification	Hons B (B + A) in Business
			Administration and Management
		Date Obtained	1985-1987
		Name of Institution	University of Stellenbosch, South Africa
		Degree/Qualification	BSc Agric Hons (Chemistry, Agronomy
			and Soil Science)
		Date Obtained	1979-1982
		Name of Institution	Boland Agricultural High School, Paarl,
			South Africa
		Degree/Qualification	Grade 12
		Date Obtained	1974-1978

EAPAN Member (Membership Number: 112)

6. Membership of Professional Association:

7. Languages: Writing Speaking Reading English Good Good Good Afrikaans Good Good Good 8. Employment From То Employer Position(s) held **Record:** 2009 Present Green Earth Environmental Environmental Practitioner Consultants 2005 2008 Elmarie Du Toit Manager Town Planning Consultants 2003 2005 Pupkewitz **General Manager** Megabuild 2003 1995 Agra Cooperative Manager Trade Limited Namibia Chief Agricultural 1989 1995 Consultant Development Corporation Ministry of Agricultural 1985 1988 Agriculture Researcher

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

IMA.

Charl du Toit

APPENDIX E: CURRICULUM VITAE OF CARIEN VAN DER WALT

Environmental Consultant

Carien van der Walt

- 1. Position:
- 2. Name/Surname:
- **3. Date of Birth:** 6 August 1990
- 4. Nationality: Namibian
- 5. Education:

Institution	Degree/Diploma	Years
University of Stellenbosch	B.A. (Degree) Environment and	2009 to 2011
	Development	
University of South Africa	B.A. (Honours) Environmental	2012 to 2013
	Management	

6. Membership of Professional Associations:

EAPAN Member (Membership Number: 113)

7. Languages:

Language	Speaking	Reading	Writing
English	Good	Good	Good
Afrikaans	Good	Good	Good

8. Employment Record:

From	То	Employer	Positions Held
07/2013	Present	Green Earth Environmental Consultants	Environmental
			Consultant
06/2012	03/2013	Enviro Management Consultants Namibia	Environmental
			Consultant
12/2011	05/2012	Green Earth Environmental Consultants	Environmental
			Consultant

9. Detailed Tasks Assigned:

Conducting the Environmental Impact Assessment, Environmental Management Plan, Public Participation, Environmental Compliance and Environmental Control Officer

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engage.

Carien van der Walt

APPENDIX F: LEASE AGREEMENT



APPENDIX G: ENVIRONMENTAL MANAGEMENT PLAN