

**ENVIRONMENTAL PROGRESS AND MONITORING
REPORT FOR OPERATIONS AND MANAGEMENT OF THE
EXISTING TSANDI LANDFILL SITE, OMUSATI REGION**



PREPARED FOR

Tsandi village Council

P.O.BOX 373

Tsandi

PREPARED FOR


Green Gain
Consultants

 +264 81142 2927

 info@greegain.com.na

 <https://www.greengain.com.na>

PERIOD: JULY 2017 TO DECEMBER 2021

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

Tsandi Village Council (TVC) was granted an Environmental Clearance Certificate (ECC) for the establishment, operation, and management of the new landfill site. The ECC was granted on July 2017 and got expired on July 2020.

Green Gain Consultants cc has been appointed as an independent Environmental Consultants by Tsandi Village Council to apply for the renewal of the ECC with the Ministry of Environment, Forestry and Tourism (MEFT). The consultant will also perform the duties of the Environmental Control Officer (ECO) for the operation and management of the existing dumpsite for the next three years, starting on January 2022, thus it is expected to perform the following duties.

- Compile progress reports from July 2017 to December 2021
- Update the Environmental Management Plan (EMP)
- Submit application for the renewal of the ECC to MEFT
- Conduct monthly progress monitoring and compile biannual reports for the next 3 years
- Advise Council on matters regarding the operation of the landfill site and matter of incidental.

As such, this report constitutes a progress report encompassing biannual reports for periods between July 2017 to December 2021. The report provides a summary of issues related to the operation and management of the existing landfill site. It also includes recommendations on matters related to the operations and management of the existing landfill site.

1.2 Locality

The existing Tsandi landfill site is located about 3 km north of the town's Central Business District. It is located within the Tsandi town and townlands No. 988 on the following coordinates -17.726806" S;14.871467" E.

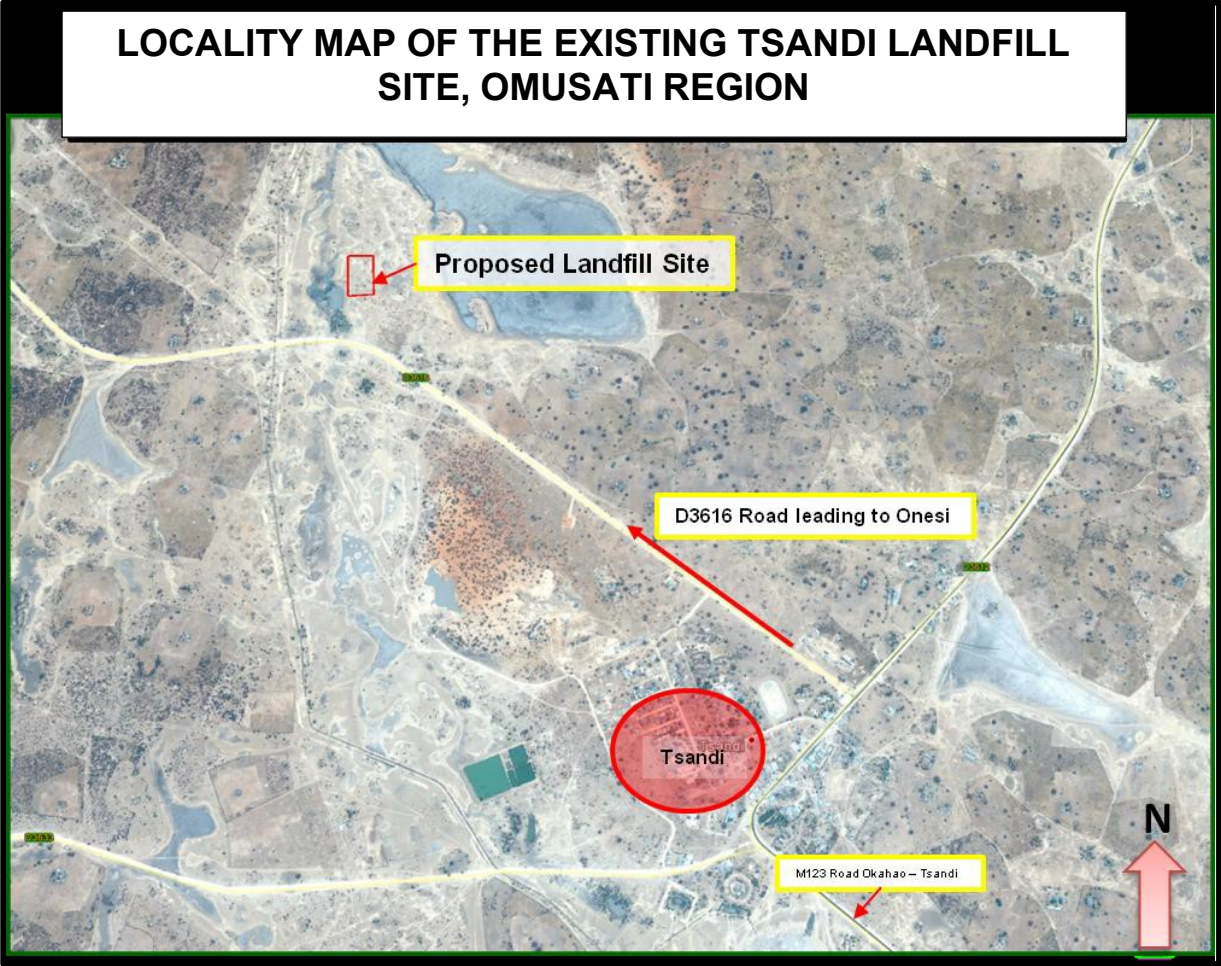


Figure 1: Site locality

1.3 Site establishment

The site was established on the site as identified in the EIA study. The site is properly enclosed in a high jackal-proof fence with lockable gates (Figure 2).



Figure 2: Enclosed site

There is also a guardhouse onsite to ensure access control 24/7.



Figure 3: Guardhouse

1.4 Operation procedure

Access to the is controlled through the presence of a security guard onsite 24/7 who provide registration of people and vehicles. The site is used for the disposal of general household waste originating from houses, institutions, and businesses around town. The site is not gazetted for disposal of hazardous waste, hence all hazardous waste i.e., asbestos, waste oil, etc generated in town is not allowed. Hazardous waste is transported either to Windhoek or Walvis Bay landfill sites.



Figure 4: Site overview

Although the site is having been referred to as the “landfill site” in the EIA study, there is no landfilling is taking place, thus open dumping and burning practices are the main disposal methods used on-site. Given the size of the population of the area, the quantity of waste found on-site is not that huge compares to many other towns around the country (Figure 4).

2. ENVIRONMENTAL MONITORING AND REPORTING

To ensure continual improvement in environmental performance and reduce adversity of potential negative impacts the proponent does keep monitoring certain environmental receptors. The monitoring is done at different intervals as indicated in the table below.

The issue to be monitored	Monitoring objectives	What needs to be monitored	Frequency and Monitoring	Responsibility
Pollution	-Avoid littering, pollution etc.	-litter, spillage, and leakages	Daily	ECO
Soil	-Ensure soil conservation and prevent erosion	-Soil exposure, pollution, contamination, and soil erosion by windy conditions and water	Monthly	ECO-
Air quality	-Ensure air quality	-Dust emission	Daily	ECO
Noise level	-Ensure noise level is at the required standard (85dB)	-Ambient noise level onsite	Daily	ECO
Surface water contamination	Prevent contamination of surface drainage	Stormwater movement	Rainy season/flood incident	ECO
Groundwater contamination	Prevent contamination of groundwater source	Infiltration of contaminated water	Rainy season	TVC/ECO
Implementation of the EMP	-Ensure compliance to this EMP and adherence to the regulative measures	-Adherence to the EMP and legal requirements	Quarterly reports	ECO

3. PROGRESS AND MONITORING RESULTS

3.1 Infrastructure Development

From establishment, the infrastructures present on-site are the *fence, gates, and security guardhouse*.

3.2 Human resources

About 5 employees benefited directly from the operation and management of the landfill site. This includes operators, laborers/waste pickers, security guards.

3.3 Health and Safety

All employees are equipped with Personal Protective Equipment (PPE). No injuries or accidents have been recorded for the period under review. Stray animals and domestic animals are kept away from the site by means of the fence and presence of the security guard.

3.4 Air Quality Management

No dedicated weather station was commissioned or was found to be necessary on-site. Air quality monitoring is done by means of physical observation, especially after the burning of waste. The burning of waste is avoided during windy days.

3.5 Smoke, Noise, and vibration Management

Smoke generated during the burning of waste is minimal, thus burning of waste is done under strict measures. There are hardly heavy earth moving equipment used onsite during site operation, hence noise impact has been kept minimal.

3.6 Biodiversity Management

Vegetation clearance was limited to the development site. The presence of the fence prevents the movement of animals into the site. Organic waste which has the potential to attract birds is often covered with sand.

3.7 Waste management

Litter picking around the site is ensured on weekly basis. No spillage has been experienced thus far. Measures are to be implemented to prevent the surface water of Oshana not to connecting with the waste stream or stormwater onsite.

3.8 Archaeology / Heritage Management

No material of archaeological or heritage importance has been unearthed during the site establishment, hence no impacts in this aspect.

3.9 Traffic Management

Only one designated vehicle is used for transporting of waste to the site from the town CBD, hence traffic impact is minimal.

4. CONCLUSION AND RECOMMENDATION

4.1 Conclusion

It can be concluded that Tsandi landfill site or dumpsite was established in environmentally sound manner and in accordance with the EMP. The appointment of the ECO for the next three years will ensure that the site is operated in accordance with the EMP. The ECO will also ensure that the Tsandi Village Council and the community of Tsandi benefit from the operation of the landfill site.

4.2 Recommendation

The following recommendations have bearings

- **Regulatory Sign Boards:** There is a need to erect a regulatory sign board on the site entrance. The Signboard should display information on the use of the site, contact numbers, penalties for transgression, etc.
- **Erosion works:** There is a need to erect erosion works on the northwest part of the site, to prevent surface drainage from Oshana and nearby drainage lines from connecting with the stormwater onsite.
- **Training:** All personnel involved in the operation and management of the dumpsite will be provided with environmental awareness training.
- **Improved recordkeeping:** The current record book should be expanded to include details of waste generators/disposal, waste types, quantity, etc.
- **Partitioning of the site:** The site needs to be partitioned into different cells/sections to accommodate different types of waste. This will enable the Tsandi village Council to achieve minimal disposal standards and recycling through waste segregation.
- **Waste recycling:** There is a need to promote waste recycling on site. This can be achieved by establishing a recycling stall and promoting waste handlers on site.