

THE MUNICIPALITY OF WALVIS BAY
LANDFILL SITE

**ENVIRONMENTAL AUDIT REPORT
FOR THE
RENEWAL OF THE ENVIRONMENTAL
CLEARANCE CERTIFICATE
FOR THE WALVIS BAY REFUSE LANDFILL SITE**

July 2024

Document Control

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Coordinated by	Lovisa Hailaula - Libuku						
Acknowledgement and Contributions by	Nangula Amutenya – Amatsi David Uushona						

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1 INTRODUCTION

Walvis Bay Town forms part of the regional authority of Erongo Region. As with other local authorities in Namibia, the waste disposal sites are entitled to effective management to ensure environmental sustainability. This is in accordance with the Environmental Act, 2007 and its regulations. As part of the process, in June 2021, the Municipality of Walvis Bay`s Landfill site acquired the renewal of the Environmental Clearance Certificate (ECC) after submitting a detailed Landfill site Environmental Management Plan (LEMP) (ECC attached as Annexure A). The LEMP made provisions for the environmental management of its activities and operations. In terms of Environmental Management Act, 2007, the site was declared as a waste disposal site through a government gazette on 1 November 2018.

The recommended management steps and activities within the LEMP were highlighted to provide guidance in the maintenance and achievement of a designated landfill site for the Town. The Walvis Bay Landfill site is a standard facility and classified as a G:M: B General Waste Site in terms of the 2nd Edition of the *South African Minimum Requirements for the Handling and Disposal of Hazardous Waste*.

The ECC is only valid for three years, hence a renewal application is hereby submitted, and the environmental performance audit report is documented in this report.

2 ENVIRONMENTAL AUDIT REPORT

This report provides a summary of progress in accordance with the overall objective of managing the current Walvis Bay Landfill site in line with the approved LEMP.

The following are covered herewith:

2.1 Implementation of the LEMP

Management requirement action: The Municipality of Walvis Bay is solely required to ensure implementation and adherence to the Environmental Impact Assessment Regulations, 2012: Environmental Management Act, 2007.

Progress: The first application for the LEMP approval coupled with the Environmental Clearance Certification was acquired on the 08 May 2018. The entire Draft LEMP fulfils the minimum requirements in terms of clause 8(j) of the national Environmental Impact Assessment Regulations.

2.2 Compaction of waste and cover material

Management requirement action: Daily compaction of waste and cover materials should be done to reduce the volume of waste, thereby increasing the lifespan of waste disposal site.

Progress: Sufficient compaction is maintained with the earth-moving machinery used on the site.

2.3 Contamination of Groundwater

Management requirement action: Contamination through leachates could pollute the underlying ground water. Although not recommended in the *National Solid Waste Management Strategy for Namibia*, the establishment of permanent (capped) groundwater monitoring boreholes, one up-gradient and one down-gradient on the groundwater flow, shall be investigated for feasibility and practically at the landfill site and hazardous waste cells. The boreholes will then be sampled on an ongoing basis.

Progress: No monitoring boreholes has been drilled yet, thus contamination of ground water is not being monitoring.

2.4 Fauna, Flora and Natural Habitat

Management requirement action: All access roads will destroy desert habitat proportional to the surface area.

Progress: The area of any construction and or operation is confined to the smallest possible space. Well defined, single access roads are established, maintained and used throughout.

2.5 Sand Movement

Management requirement action: Mitigate the effects of dune encroachment and wind-blown sand.

Progress: Implementation of dune management strategies such as levelling and gravel covering of areas.

2.6 Negative Impacts on Visual/Aesthetic Appearance of Desert

Management requirement action: Plastic and paper waste material dumped at the Landfill site, should be controlled, to avoid them being dispersed by prevailing winds. Plastic bags and paper visually degrade the natural landscape when blown into the desert and onto roads, they should therefore be mitigated to avoid visual degradation of materials from the Landfill site.

Progress: On this aspect, various activities are being conducted to minimise windblown litter. The activities are highlighted below:

- Waste disposal trucks are equipped with suitable coverage (e.g. heavy netting) to avoid litter being blown into the desert/road during the transportation of waste from all the suburbs to the site.
- Recycling operations are facilitated on the Landfill site.
- Waste is covered systematically immediately after being disposed and once the recycled materials have been removed.
- The work face area is minimized.
- The operating work face area is predominantly north-facing to reduce exposure to the predominantly south/south-west winds.
- A wind-litter catch (approximately 1.5 m high and as wide as the working face area) is placed downwind (noting the two predominant wind direction for windblown waste (e.g. plastics)).

2.7 Impacts Related to Security and Access Control

Management requirement action: To provide adequate access control and security system. This would prevent unauthorized entry and reduce the risk of injury/ damage.

Progress: On this aspect, various activities are being conducted to reduce the risk of injury or damage. The activities are highlighted below:

- Waste pickers are not allowed on the hazardous cell area, and security measures are being put in place to strengthen restricted access.
- Only authorized waste recyclers are allowed on the landfill site.
- 24 hours security has been established and a permit system instituted.
- Suitable signage to warn personnel and visitors of the potential dangers of the hazardous landfill site is erected and maintained.

- No vehicle is allowed to approach any earth moving equipment closer than 30 m without specifically being instructed to do so by the Landfill site operator's staff.

2.8 Negative Impact Resulting from Odour

Management requirement action: To minimise impacts resulting from pungent gases and different odours.

Progress: The following management actions are being done:

- Wet waste trenches are covered once disposed of.
- The surface area of the work faces is minimised
- The exposure time of waste in the air is minimised
- Special cells for odorous compounds with minimum exposure to wind is introduced
- Hazardous waste is treated before disposal
- Waste is covered daily.

2.9 Impacts Related to Workers Health and Safety

Management requirement action: To reduce occupational health and safety risks at the Landfill site.

Progress: The following management actions are being done:

- The various workers for the recycling companies are provided with adequate personal protective equipment and are trained for the use of such activities and ensuring that the equipment is being applied where applicable as well as educating them regarding the risk involved in working with hazardous wastes they are exposed to.
- Suitable signage to caution personnel of the potential dangers of the hazardous Landfill site has been erected.
- The work face is being covered with cover material and compacting daily to reduce vectors of diseases on both the general landfill and hazardous cell.
- The numbers of workers working on the work face is kept at minimum.
- Vectors of disease is being managed through regular spraying, dosing and baiting.

2.10 Landfill Site Rehabilitation and Closure

Management requirement action: After the landfill or a single landfill cell has reached its lifespan, the waste should be covered first by an intermediate cover layer to prevent erosion by wind and water and to enhance aesthetic issues. After the closure, the landfill site is to be managed and controlled to avoid adverse effects on humans and the environment.

Progress: The management recommendations as provided within the approved management plan shall serve guidance. This involves taking into consideration the commitment to regular monitoring and maintenance of site and environment as it is the case during the operation phase.

2.11 Site records and LEMP review process

Management requirement action: In terms of Task 1.1.6: “*Set up monitoring and reporting systems*” of the National Solid Waste Management Strategy, a database system is a critical component of the LEMP as the management plan will refer to operational records and reports, design information and monitoring reports, shall become the site records for the Walvis Bay Landfill Site.

The review period for this landfill site’s LEMP will be on an annual basis, however the main review period will be every three years to coincide with the validity period of the Environmental Clearance Certificate (ECC) or as otherwise specified in the ECC.

Progress: The daily incoming waste loads is recorded at the weighbridge. The amount of waste recycled is also recorded and tabulated monthly. The amount and type of waste received for the past three years are presented in Annexure B of this report.

2.12 Fencing of the Landfill site

Management requirement action: Fence the Landfill site

Progress: The fencing of the Landfill site is to be done in four phases. The following has been done regarding the construction of the fence.

- Phase 1 was 690m and was completed in March 2019. Phase 2 was 170m and was completed in September 2019. See Figure 2 below.
- About 1940m is still to be constructed
- The bid document for the design and construction is done but unfortunately the procurement process is delayed. It is expected that construction will start in next year, 2025. The schedule for the remainder of the fence is depicted in the Figure below.



Figure 1: Completed fence at the entrance of the landfill site, phase 1 and 2

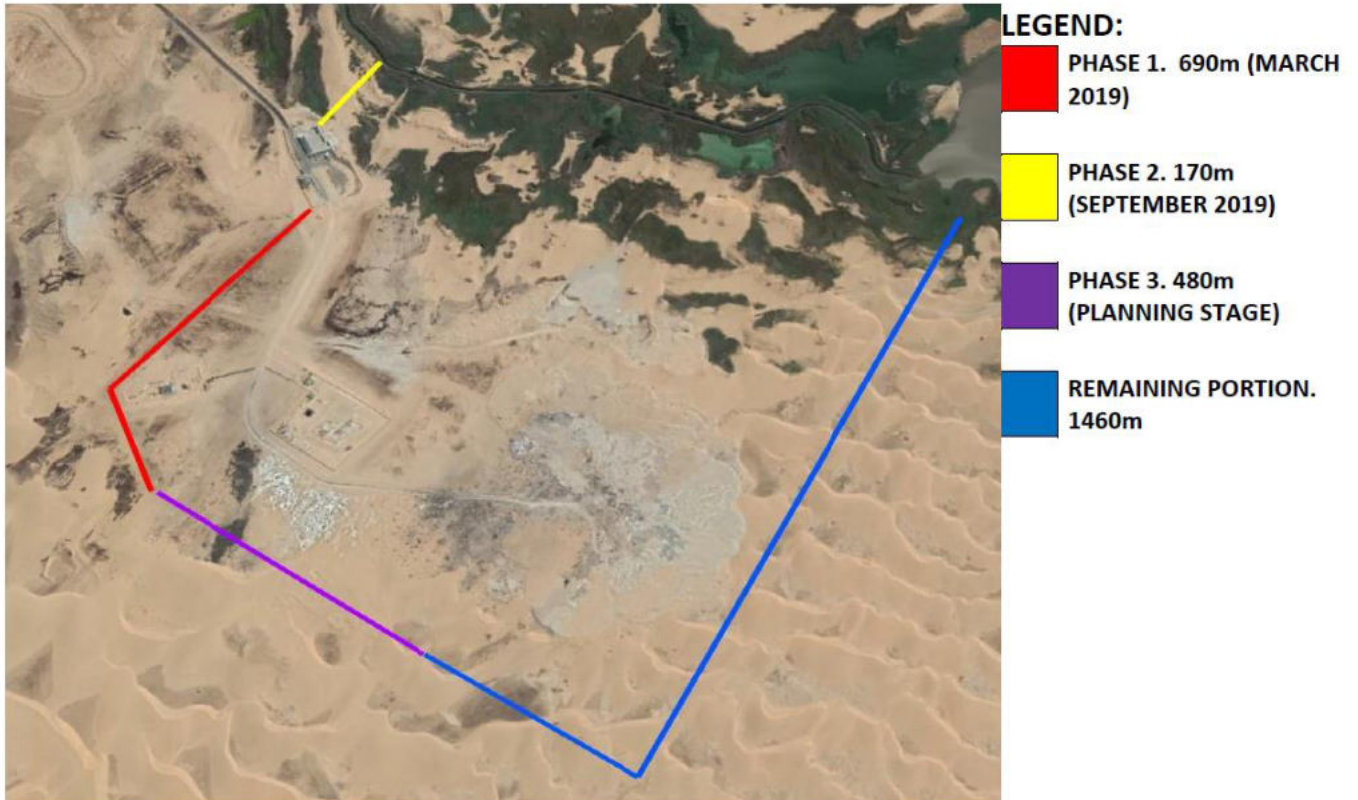


Figure 2: Construction phases of the landfill site fence

3 CONCLUSION

The Municipality of Walvis Bay shall ensure that progressive steps towards the achievement of the recommended actions in the LEMP are attained. This emphasis will be incorporated within the spheres of our organizational effectiveness of sustainability.

The Council is hopeful that the progress mentioned within this document presents our enthusiasm and responsibility for submission towards waste management requirements and adherence to the conditions of our ECC.

ANNEXURE A – ECC ISSUED IN JUNE 2021



REPUBLIC OF NAMIBIA
MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental
Management Act (Act No. 7 of 2007)

TO

Municipality of Walvis Bay
Private Bag 5017, Walvis Bay

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

**OPERATIONS OF THE EXISTING MUNICIPALITY OF WALVIS BAY'S
SOLID WASTE LANDFILL SITE, ERONGO REGION**

Issued on the date: **2021-06-22**
Expires on this date: **2024-06-22**


Private Bag 10306
WINDHOEK, NAMIBIA
25 JUN 2021
ENVIRONMENTAL COMMISSIONER
REPUBLIC OF NAMIBIA

(See conditions printed over leaf)

This certificate is printed without erasures or alterations

Reduce
Reuse
Recycle



CONDITIONS OF APPROVAL

1. This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office
2. This certificate does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from these activities. Instead, full accountability rests with the proponent and its consultants
3. This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project
4. All applicable and required permits are obtained and mitigation measures stipulated in the EMP are applied particularly with respect to management of ecological impacts.
5. Strict compliance with national heritage guidelines and regulations is expected throughout the life-span of the proposed activity, therefore any new archaeological finds must be reported to the National Heritage Council for appropriate handling of such.

**ANNEXURE B – RECORDS OF WASTE RECEIVED OVER THE PAST
THREE YEARS**

SOLID WASTE CLEANING AND REMOVAL

General Cleaning Actions for 2022/23 (No. of bags)															
	20/21	21/22	22/23	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mch	Apr	May	Jun
Contractor- Beaches	1919	2092	2244	165	169	168	171	182	204	201	180	213	175	202	214
Contractor- Roads	1824	2407	2055	219	203	187	196	173	188	194	159	146	133	104	153
Kuiseb Cleaning Contractor	44095	40439	39422	3562	3301	3391	3384	3007	2828	3265	3248	3315	3251	3637	3233
Narraville Cleaning Contract	5047	17714	10574	948	924	955	867	992	703	898	889	871	886	892	749
Solid Waste Street cleaners	20463	19875	19744	1484	1682	1646	1616	1621	1777	1638	1647	1693	1794	1485	1661
Total bags	73348	82527	74039	6378	6279	6347	6234	5975	5700	6196	6123	6238	6239	6320	6010
Dead dogs	73	38	97	8	13	5	8	6	7	8	6	7	15	8	6
Notices	4	0	4	2	0	2	0	0	0	0	0	0	0	0	0
Summons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

COUNCIL REFUSE REMOVAL FOR 2022/23 (Weighbridge data in tonnes)															
	20/21	21/22	22/23	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mrch	Apr	May	Jun
KUISEBMOND	6883	10032	8775	877	822	773	787	604	639	749	699	744	702	775	607
LANGSTRAND	350	422	358	30	26	25	19	29	52	32	30	31	30	24	29
NDF	116	125	139	19	19	17	12	6	5	8	8	12	9	18	6
NARRAVILLE	1417	1325	1338	136	137	127	75	96	102	111	111	112	105	130	97
WBP	4457	4648	3856	380	353	339	290	266	313	326	324	325	334	342	263
	13223	16552	14466	1441	1357	1280	1184	1001	1111	1226	1172	1223	1180	1288	1002

Waste Re-Use, Recycle & Recovering

TOTAL WASTE AND TYPES ENTERING THE LANDFILL SITE (TONNES)															
	20/21	21/22	22/23	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mch	Apr	May	Jun
Black sand	21924	28414	45693	0	2061	3422	2672	5578	6730	5263	5699	4794	2810	3811	2852
Boxes	166	254	370	38	27	13	20	33	29	32	15	50	17	24	74
Building material	13383	20574	14548	1912	2161	2211	1739	949	358	1750	458	1090	704	327	889
Burials	578	1008	699	229	60	37	3	51	26	56	57	39	28	54	59
Cans/Tins	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
Car wrecks	40	25	9	1	1	0	0	1	0	1	0	0	0	0	4
Domestic waste	11495	14980	16475	1739	1254	1182	1031	1060	1030	1510	1617	1602	1470	1564	1417
Garden refuse	2478	2932	2444	305	195	146	197	408	175	284	168	150	96	130	190
Glass	15	15	20	0	0	4	1	1	2	2	2	1	2	1	4
Industrial waste	130624	16758	15677	1190	1249	1310	1450	1497	1155	1698	1410	1043	1032	1551	1093
Metals	5	13	2	0	0	0	0	0	0	1	0	0	0	0	0
Other waste	89	1093	1063	239	181	119	115	63	21	131	7	44	60	23	57
Plastic/Paper	156	537	330	69	42	13	7	15	25	52	13	21	21	3	48
Salt	5713	2798	3024	425	243	47	353	1031	17	44	0	15	0	12	837
Sewage	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Tyres	482	485	580	57	56	55	44	60	50	63	37	67	34	21	39
Wood	77	253	144	16	15	11	3	20	14	20	1	7	6	1	31
	187239	90149	101080	6220	7544	8571	7635	10766	9633	10907	9484	8921	6280	7521	7596

Waste Recycling on Landfill Site:

WASTE RECYCLED (TONNES)															
	20/21	21/22	22/23	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mch	Apr	May	Jun
Carton	2	83	113	0	12	8	27	26	0	0	0	0	0	0	40
Cans	58	110	50	1	4	2	8	10	8	3	2	2	2	4	4
Plastic	25	309	443	17	36	32	48	50	0	0	0	61	62	58	80
Steel	81	149	48	3	4	4	7	9	4	3	2	2	2	7	3
	166	651	654	21	56	45	91	95	11	6	4	65	67	68	126

Waste Incineration:

State Hospitals	21/22	22/23	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Walvis Bay	6686	1480	0	0	0	0	0	840	0	0	320	320	0	0
Swakopmund	1832	1614	320	180	180	0	100	80	140	180	0	180	120	134
Omaruru	140	0	0	0	0	0	0	0	0	0	0	0	0	0
Usakos	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hazardous Waste (Site) Management:

	22/22	22/23	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Generator	13286.5	111509.1	16027.5	4981.6	1711.3	1038	570.6	286	1231.4	807.8	1079.9	1414.0	1711.0	391.6